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#### Financial Incentives are tax credits, loans, rebates, and production incentives.

FERC 12 Staff Report – Office of Envorcement. Federal Energy Regulatory Commission [Energy Primer A Handbook of Energy Market Basics, July 2012, <http://www.ferc.gov/market-oversight/guide/energy-primer.pdf#xml=http://search.atomz.com/search/pdfhelper.tk?sp_o=58,100000,0>]

Renewable development is frequently tied to policies promoting¶ their use because of their higher cost relative to¶ other technologies. Financial incentives include tax credits, low-cost loans, rebates or production incentives. Federal funding of research and development (R&D) has played¶ an important role in lowering costs or reducing the time it¶ takes for renewable technologies to become commercially viable.

Congress has passed tax incentives to spur renewable resource¶ investments. Wind, biomass, geothermal, marine¶ and hydrokinetic project developers can receive federal production¶ tax credits (PTC) based on a facility’s production.¶ It is an infl ation-adjusted credit that runs for 10 years from¶ the date a facility goes online. Initially set at 1.5¢/kilowatt¶ hour (kWh), its value in 2010 was 2.1¢/kWh. To qualify, a¶ facility has to be operational before the PTC expires.

**The plan is not a production incentive**

**Doris, 12** – National Renewable Energy Laboratory (Elizabeth, “Policy Building Blocks: Helping Policymakers Determine Policy Staging for the Development of Distributed PV Markets,” Paper to be presented at the 2012 World Renewable Energy Forum, 5/13-5/17, http://www.nrel.gov/docs/fy12osti/54801.pdf)

3.3 Market Expansion

This stage of policy development targets the development of projects and includes both incentives that attempt to distribute the high first costs of distributed technologies and policies that facilitate project installation. The purpose of this category is to increase the installation of individual projects through monetizing the non-economic benefits of distributed generation for the developer. Because the value of those benefits vary in different contexts, these policies can be politically challenging to put in place and technically challenging to design and implement. There is a large body of literature (encompassing the energy field as well as other fields) that discusses the design and implementation of effective market incentives. Specific policy types include:

• Incentives. In the context of this framework, incentives are defined as direct monetary support for specific project development. Incentives, especially in the current economic environment, can be politically challenging to implement and require detailed design to ensure that they are effectively reaching the intended market at levels that spur development without creating over-subsidization. Because of the complications and expense of these types of policies, they are most used and most cost-effective in environments where the market is prepared for project development. There are three primary types of incentives:

• Investment incentives directly alter the first cost of technologies. These incentives can take the form of grants, rebates, or tax incentives, depending on the market needs. Grants are typically applied to larger scale projects and are paid in advance of development, and so target development that would not take place without advance investment. Rebates are most commonly based on equipment purchases and can be applied at the time of purchase or through a post-purchase mechanism. Tax incentives can be deductions or credits, can be applied to entire installations, and are applied after purchase, annually. Tax incentives target development that does not need direct capital investment, but instead prioritizes reduction in pay-back period.

• Production incentives provide payment for electricity produced from the distributed electricity. These are different from net metering because the aim is not to provide the economic value of electricity sold into the grid, but instead, to monetize the indirect benefits of distributed generation and apply that on a production basis to projects. These incentives do not directly remove the challenge of higher first costs, and so are most effective in situations in which those high first costs can be spread over the course of the project lifetime (e.g., where direct priori investment is not a priority). In the last decade, incentives for distributed generation have tended toward the production type, because it assures the public that the investment is resulting in clean energy development (whereas investment incentives have the potential to be invested in projects that do not materialize).

• Feed-in-Tariffs. This incentive type reduces investment risk by providing fixed payments for projects based on the levelized cost of renewable energy generation. This (among other design characteristics) distinguishes feed-in-tariffs from production-based incentives, which are based on monetizing the value of the electricity to the grid or the value to the electricity purchaser.

• Removing Siting Restrictions or Ensuring Broad Market Access. Siting restrictions can be stipulated by local ordinances or home owners associations and designate where solar panels can be placed within the jurisdiction. Twenty-four states currently have laws in place that prevent the restriction of solar facilities on residences (12). Like the current state role in encouraging transparency in permitting policies, these typically legislative policies cost nothing to put in place, but implementation and enforcement can be challenging and costly, depending on the interests of the localities. This is an expansion policy (as opposed to a preparation policy) because the effect of siting restrictions is currently unclear, and to date, market development has not been limited by these types of regulations.

• Streamlined Permitting. Permitting for solar facilities has traditionally been the jurisdiction of localities, but there are some states that also issue permits. In the past two years, both Colorado (13) and Vermont (14) have issued laws regulating state permits for renewable energy systems. Such permitting falls into the market expansion category as a potential follow-on to the development of transparent permitting. However, because of its limited use to date there is little information on effectiveness, potential intended or unintended impacts, or broad applicability, so it is not currently considered a primary policy for developing markets.

#### VOTE NEGATIVE

#### PREDICTABLE LIMITS – the word incentives in the resolution is modified by financial to make it manageable. Going beyond makes the topic unpredictable.

#### GROUND – financial incentives insure the aff has links to market disads and counterplans which are the only core negative ground across bi-directional energies. Holding the line key.

### K

#### Energy production discourse traps us in a democratic-authoritarian bargain

**Byrne and Toly 6** [John Bryne Director Center for Energy and Environmental Policy & Public Policy @ Delaware and Noah Toly Research Associate Center for Energy and Environmental Policy ‘6 in *Transforming Power* eds. Byrne, Toly, & Glover p. 1-3]

From climate change to acid rain, contaminated landscapes, mercury pollution, and biodiversity loss ,2 the origins of many of our least tractable environmental problems can be traced to the operations of the modern energy system. A scan of nightfall across the planet reveals a social dilemma that also accompanies this system's operations: invented over a century ago, electric light remains an experience only for the socially privileged. Two billion human beings-almost one-third of the planet's population-experience evening light by candle, oil lamp, or open fire, reminding us that energy modernization has left intact-and sometimes exacerbated-social inequalities that its architects promised would be banished (Smi l, 2003: 370- 373). And there is the disturbing link between modern energy and war.3 Whether as a mineral whose control is fought over by the powerful (for a recent history of conflict over oil, see Klare, 2002b, 2004, 2006), or as the enablement of an atomic war of extinction, modern energy makes modern life possible and threatens its future. With environmental crisis, social inequality, and military conflict among the significant problems of contemporary energy-society relations, the importance of a social analysis of the modern energy system appears easy to establish. One might, therefore, expect a lively and fulsome debate of the sector's performance, including critical inquiries into the politics, sociology, and political economy of modern energy. Yet, contemporary discourse on the subject is disappointing: instead of a social analysis of energy regimes, the field seems to be a captive of euphoric technological visions and associated studies of "energy futures" that imagine the pleasing consequences of new energy sources and devices.4 One stream of euphoria has sprung from advocates of conventional energy, perhaps best represented by the unflappable optimists of nuclear power who ' early on, promised to invent a “magical fire” (Weinberg 1972) capable of meeting any level of energy demand inexhaustibly in a manner too c heap to meter” (Lewis Strauss, ctted tn the New York Ttmes 1954, 1955). In reply to those who fear catastrophic accidents from the "magical fire" or the prolifera~ ion of nuclear weapons, a new promise is made to realize "inherently safe reactors" (Weinberg, 1985) that risk neither serious accident nor intentionally harmful use of high-energy physics. Less grandiose, but no less optimistic, forecasts can be heard from fossil fuel enthusiasts who, likewise, project more energy, at lower cost, and with little ecological harm (see, e.g., Yergin and Stoppard, 2003). Skeptics of conventional energy, eschewing involvement with dangerously scaled technologies and their ecological consequences, find solace in "sustainable energy alternatives" that constitute a second euphoric stream. Preferring to redirect attention to smaller, and supposedly more democratic, options, "green" energy advocates conceive devices and systems that prefigure a revival of human scale development, local self-determination, and a commitment to ecological balance. Among supporters are those who believe that greening the energy system embodies universal social ideals and, as a result, can overcome current conflicts between energy "haves" and "havenots." 5 In a recent contribution to this perspective, Vaitheeswaran suggests (2003: 327, 291 ), "today's nascent energy revolution will truly deliver power to the people" as "micropower meets village power." Hermann Scheer echoes the idea of an alternative energy-led social transformation: the shift to a "solar global economy ... can satisfy the material needs of all mankind and grant us the freedom to guarantee truly universal and equal human rights and to safeguard the world's cultural diversity" (Scheer, 2002: 34).6 The euphoria of contemporary energy studies is noteworthy for its historical consistency with a nearly unbroken social narrative of wonderment extending from the advent of steam power through the spread of electricity (Nye, 1999). The modern energy regime that now powers nuclear weaponry and risks disruption of the planet's climate is a product of promises pursued without sustained public examination of the political, social, economic, and ecological record of the regime's operations. However, the discursive landscape has occasionally included thoughtful exploration of the broader contours of energy-environment-society relations. As early as 1934, Lewis Mumford (see also his two-volume Myth of the Machine, 1966; 1970) critiqued the industrial energy system for being a key source of social and ecological alienation (I 934: 196): The changes that were manifested in every department of Technics rested for the most part on one central fact: the increase of energy. Size, speed, quantity, the multiplication of machines, were all reflections of the new means of utilizing fuel and the enlargement of the available stock of fuel itself. Power was dissociated from its natural human and geographic limitations: from the caprices of the weather, from the irregularities that definitely restrict the output of men and animals. By 1961, Mumford despaired that modernity had retrogressed into a lifeharming dead end (1961: 263, 248): ... an orgy of uncontrolled production and equally uncontrolled reproduction: machine fodder and cannon fodder: surplus values and surplus populations ... The dirty crowded houses, the dank airless courts and alleys, the bleak pavements, the sulphurous atmosphere, the over-routinized and dehumanized factory, the drill schools, the second-hand experiences, the starvation of the senses, the remoteness from nature and animal activity-here are the enemies. The living organism demands ali fe-sustaining environment. Modernity's formula for two centuries had been to increase energy in order to produce overwhelming economic growth. While diagnosing the inevitable failures of this logic, Mumford nevertheless warned that modernity's supporters would seek to derail present-tense7 evaluations of the era's social and ecological performance with forecasts of a bountiful future in which, finally, the perennial social conflicts over resources would end. Contrary to traditional notions of democratic governance, Mumford observed that the modern ideal actually issues from a pseudomorph that he named the "democratic authoritarian bargain" ( 1964: 6) in which the modern energy regime and capitalist political economy join in a promise to produce "every material advantage, every intellectual and emotional stimulus [one] may desire, in quantities hardly available hitherto even for a restricted minority" on the condition that society demands only what the regime is capable and willing to offer. An authoritarian energy order thereby constructs an aspirational democracy while facilitating the abstraction of production and consumption from non-economic social values. The premises of the current energy paradigms are in need of critical study in the manner of Mumford's work if a world measurably different from the present order is to be organized. Interrogating modern energy assumptions, this chapter examines the social projects of both conventional and sustainable energy as a beginning effort in this direction. The critique explores the neglected issue of the political economy of energy, underscores the pattern of democratic failure in the evolution of modern energy, and considers the discursive continuities between the premises of conventional and sustainable energy futures.

#### Technocratic management makes extinction inevitable

Crist 7 [Eileen Crist, Associate Professor of Science and Technology in Society at Virginia Tech University, 2007, “Beyond the Climate Crisis: A Critique of Climate Change Discourse,” *Telos*, Volume 141, Winter, Available Online to Subscribing Institutions via Telos Press, p. 49-51]

If mainstream environmentalism is catching up with the solution promoted by Teller, and perhaps harbored all along by the Bush administration, it would certainly be ironic. But the irony is deeper than incidental politics. The projected rationality of a geoengineering solution, stoked by apocalyptic fears surrounding climate change, promises consequences (both physical and ideological) that will only quicken the real ending of wild nature: "here we encounter," notes Murray Bookchin, "the ironic perversity of a 'pragmatism' that is no different, in principle, from the problems it hopes to resolve."58 Even if they work exactly as hoped, geoengineering solutions are far more similar to anthropogenic climate change than they are a counterforce to it: their implementation constitutes an experiment with the biosphere underpinned by technological arrogance, unwillingness to question or limit consumer society, and a sense of entitlement to transmogrifying the planet that boggles the mind. It is indeed these elements of techno-arrogance, unwillingness to advocate radical change, and unlimited entitlement, together with the profound erosion of awe toward the planet that evolved life (and birthed us), that constitute the apocalypse underway—if that is the word of choice, though the words humanization, colonization, or occupation of the biosphere are far more descriptively accurate. Once we grasp the ecological crisis as the escalating conversion of the planet into "a shoddy way station,"59 it becomes evident that inducing "global dimming" in order to offset "global warming" is not a corrective action but another chapter in the project of colonizing the Earth, of what critical theorists called world domination.

Domination comes at a huge cost for the human spirit, a cost that may or may not include the scale of physical imperilment and suffering that apocalyptic fears conjure. Human beings pay for the domination of the biosphere—a domination they are either bent upon or resigned to—with alienation from the living Earth.60 This alienation manifests, first and [end page 50] foremost, in the invisibility of the biodiversity crisis: the steadfast denial and repression, in the public arena, of the epochal event of mass extinction and accelerating depletion of the Earth's biological treasures. It has taken the threat of climate change (to people and civilization) to allow the tip of the biodepletion iceberg to surface into public discourse, but even that has been woefully inadequate in failing to acknowledge two crucial facts: first, the biodiversity crisis has been occurring independently of climate change, and will hardly be stopped by windmills, nuclear power plants, and carbon sequestering, in any amount or combination thereof; and second, the devastation that species and ecosystems have already experienced is what largely will enable more climate-change-driven damage to occur.

Human alienation from the biosphere further manifests in the recalcitrance of instrumental rationality, which reduces all challenges and problems to variables that can be controlled, fixed, managed, or manipulated by technical means. Instrumental rationality is rarely questioned substantively, except in the flagging of potential "unintended consequences" (for example, of implementing geoengineering technologies). The idea that instrumental rationality (in the form of technological fixes for global warming) might save the day hovers between misrepresentation and delusion: firstly, because instrumental rationality has itself been the planet's nemesis by mediating the biosphere's constitution as resource and by condoning the transformation of Homo sapiens into a user species; and secondly, because instrumental rationality tends to invent, adjust, and tweak technical means to work within given contexts—when it is the given, i.e., human civilization as presently configured economically and culturally, that needs to be changed.

#### We must begin with a social critique and analysis of the modern energy regime. Ethical criticism cultivates alternatives to technocratic consumption.

Barry 12—John Barry, Reader Politics @ Queen’s University (Belfast) [*The Politics of Actually Existing Unsustainability* p. 284-290]

'Dissident' is perhaps a better and more accurate term to apply to greens than 'revolutionary', since while both share an opposition to the prevailing social order, revolutionary is clearly more antagonistic rather than agonistic, to use the terms indicated in chapter 7. Dissidents seek to direct a self transforming present in a more radical direction, whereas revolutionaries typically seek the complete destruction of the existing order and then the construction of a new one. Greens as dissidents also begin from an acceptance of the inevitability of key aspects of this transition-primarily around climate change and the end of the oil age-and thus see an answer to 'what is to be done?' in terms of managing and shaping that inevitable transition, rather than building/re-building. Dissident also seems less extreme and dogmatic in its critique and its demands, than those who advocate full-blown revolution. And given what was said in chapter 3 and elsewhere about the link between creativity, flexibility, and adaptive fitness, it would be odd for green politics to be dogmatic revolutionaries animated by a sense of the hopelessness of working within and through contemporary institutiohs or that there was nothing worth preserving within and from the contemporary social order. Green dissent could perhaps be (wrongly) described as somewhere on a continuum between 'reformism' and 'revolution', a form of 'creative adaptive management' to create collective resilience in the face of actually existing unsustainability.1 In his essay 'The Power of the Powerless', Vaclav Havel uses the story of a greengrocer who unthinkingly displays his 'loyalty' to the regime by displaying a Communist Party slogan in his shop. This the greengrocer does 'ritualistically, since this is the only way the regime is capable of acknowledging his display of loyalty' (Havel, 1978: 45). In a similar way, being a dutiful consumer and not questioning economic growth could also perhaps be regarded as the way in which loyalty to a dominant capitalist, consumer regime is ritualistically displayed, enacted, and affirmed. It is for this reason, if not only this reason, that one completely misunderstands consumerism, consumption, and being a 'consumer', if one views it solely individualistically as some economic-cum-metabolic act. As a public display of loyalty, consuming is first and foremost a collective act, an individual joining others in a shared activity and associated identity. So while critics such as Fromm are correct in highlighting the distinction in consumer culture between 'being' and 'having' (Fromm, 1976), what these analyses often miss is that consumption is also an act of' belonging' and identity affirmation (Keat, 1994; Jackson, 2009b).It is for this reason that a refusal to consume is so damaging to the modern political and economic order and why to consciously choose not to consume is perhaps one of the most politically significant acts one can do in a consumer society. And one that, the continual performance (or rather non-performance) of which, further marks one out as a dissident, part of 'the great refusal' to use Marcuse's term (Marcuse, 1964). That is, to question economic growth under consumer capitalism is to be 'disloyal' to the prevailing order. While for Havel living in what he calls the 'post-totalitarian' communist regime is 'living a lie', I do not want to go so far and say that life in contemporary consumer capitalist democracies is in the same way to 'live a lie'. Rather what I would like to dwell upon is Havel's notion of'living within the truth' and what this can offer for green dissidents. For Havel 'living within the truth ... can be any means by which a person or group revolts against manipulation: anything from a letter by intellectuals to a workers' strike, from a rock concert to a student demonstration, from refusing to vote in the farcical elections, to making an open speech at some official congress, or even a hunger strike' (Havel, 1986: 59-60). Though clearly written with the then communist regime in mind, Havel's call to 'live in truth' is equally pertinent to consumer capitalism. As he puts it: The profound crisis of human identity brought on by living within a lie, a crisis which in turn makes such a life possible, certainly possesses a moral dimension as well; it appears, among other things, as a deep moral crisis in society. A person who has been seduced by the consumer value system, whose identity is dissolved in an amalgam of the accoutrements of mass civilization, and who has not roots in the order of being, no sense of responsibility for anything higher than his or her own personal survival, is a demoralized person. The system depends on this demoralization, deepens it, is in fact a projection of it into society. (Havel, 1978: 62; emphasis added) Silence is of course a consequence and precondition for this demoralization, and what power requires under consumer capitalism is passive and silent acquiescence as much as active participation. For Havel the re-appropriation of individual responsibility is something to be actively striven for. This reverses or balances the usual focus on rights and freedoms with which often 'progressive' critiques of consumerism are couched. In Havel's response to what Tim Jackson amongst others has called 'The Age of Irresponsibility' (Jackson, 2009b ), also connects with some of the green republican arguments outlined in chapters 6 and 7, not least the stress on both the recovery of the good of politics and the centrality of the individual citizen as a moral being and not just or only a consumer (or producer/worker or investor). As Jackson notes, 'the "age of irresponsibility" is not about casual oversight or individual greed. The economic crisis is not a consequence of isolated malpractice in selected parts of the banking sector. If there has been irresponsibility, it has been much more systemic, sanctioned from the top, and with one clear aim in mind: the continuation and protection of economic growth' (Jackson, 2009b: 26; emphasis added). The struggle Havel describes from the 1968 'Prague Spring' between 'the system' and 'the aims of life' (Havel, 1978: 66) resonate green concerns of the degradation of natural life-supporting systems and the undermining of conditions promoting human conviviality, quality of life, and well-being (Barry, 2009b; De Geus, 2009, 2003; Jackson, 2009a). What Havel goes on to say about political change and strategy in the context of a consumer culture is pertinent and important for those seeking a transition away from unsustainability, 'Society is not sharply polarized on the level of actual political power, but ... the fundamental lines of conflict run right through each person' (Havel, 1978: 91; emphasis added). This is a profound point, namely that it is difficult, if not impossible, to simply analyse actually existing unsustainability as an oppressive totalitarian regime in which there is an identifiable 'them' dominating 'us'. Under consumer capitalism, debt-based consumption, and so on, we who live in these societies are all implicated in its continuation. And while of course there are identifiable groups and institutions (such as large corporations, financial wealth management firms, the leadership of mainstream political parties, key agencies of the nation state such as departments of finance, global financial institutions such as the World Bank and the IMP, and what Sklair has called the 'transnational capitalist class') who do benefit more from actually existing unsustainability, we have to face up to the fact that 'ordinary people', that is, everyone also contributes (unequally of course) to the 'mundane' operation of global capitalism and the exploitation of people and planet. The recognition of this is but another way of drawing attention to the fact that capitalism, the common sense of neoclassical economics, and so on have achieved 'full spectrum' domination of hearts and minds, such that capitalism, and realistic critiques of it, need to be viewed as cultural (and indeed psychological) projects. It is for this reason that I canvassed the Transition movement in chapter 3, since it adopts an explicitly cultural and psychological approach. Of course such cultural and psychological critical analyses are not exhausted by this movement and these cannot be a substitute for oppositional political struggle. This 'cultural turn' in green politics is, to my mind, linked to the 'postscarcity economics of sustainable desire' outlined in chapter 5, and is premised firmly on a notion of human flourishing that lies beyond production, 'supplyside' solutions, 'competiveness', and increasing 'labour productivity'. This notion of flourishing is not anti-materialist. Let me make that abundantly clear, it is not an ascetic renunciation of materialism for its own sake, as if material life is intrinsically unworthy or does not express valued modes of human being. Thus I do not accept the Fromm-inspired view that materialism or indeed material consumption is simply a mode of 'having' and not 'being'. After all, the critique should be directed at consumerism and overconsumption, not materialism or consumption per se. At a basic level one can see how communism and consumerism are two 'regimes of truth' -to return to the Foucauldian language used in chapter 4 imposing their version of the truth, exacting payment, compliance, and subjectivity from their client populations, quelling, distracting, and undermining dissidents, and using different but also some shared techniques to continue. And the appropriate dissident, progressive attitude, and strategy against both is, for Havel, ultimately an ethical one, an ethical and political life-affirming 'reconstitution of society' (Havel, 1978: 115). That Havel conceives consumer-capitalist and communist societies as comparable can be seen in his view that: traditional parliamentary democracies can offer no fundamental opposition to the autonomism of technological civilization, and the industrial-consumer society, for they, too, are being dragged helplessly along by it. People are manipulated in ways that are infinitely more subtle and refined than the brutal methods used in the post-totalitarian societies ... the omnipresent dictatorship of consumption, production, advertising, commerce, consumer culture, and all that flood of information. (Havel, 1978: 116; emphasis added) Some of the republican elements expressed in Havel's thought centre around 'responsibility' (Havel, 1986: 104). He maintains that the abdication of responsibility in the name of consumer choice-what I have elsewhere described as the reduction of political liberty to a consumer 'freedom of choice' (Barry, 2009a)-weakens the ethical and political capacities of citizens within liberal democracies. Liberal consumer-citizens then become 'victims of the same autonomism, and are incapable of transcending concerns about their own personal survival to become proud and responsible members of the polis, making a genuine contribution to the creation of its destiny' (Havel, 1978: 116; emphasis added). In this Havel is articulating concerns very close to the type of green republicanism outlined in this book. His concluding comments in The Power of the Powerless also offer suggestive lines for interpreting the Transition movement. In a passage focusing on the contours of what Havel calls the 'existential revolution' that is needed to renew the relationship of humans to the 'human order and cosmopolitan responsibility', Havel notes that the structures needed to make this happen 'should naturally arise from below as a consequence of authentic "selforganization"; they should derive energy from a living dialogue with the genuine needs from which they arise, and when these needs are gone, the structures should also disappear ... The decisive criterion of this "selfconstitution" should be the structure's actual significance and not just a mere abstract norm' (Havel, 1978: 119). A better description of the Transition movement's aims, motivations, and objectives would be hard to find. Havel goes on to describe these new, provisional, and practical structures 'postdemocratic'. He describes the outlines of these 'authentic' political structures in this manner: Do not these groups emerge, live, and disappear under pressure from concrete and authentic needs, unburdened by the ballast of hollow traditions? Is not their attempt to create an articulate form of 'living within the truth' and to renew the feeling of higher responsibility in an apathetic society really a sign of some rudimentary moral reconstitution? In other words, are riot these informed, non-bureaucratic dynamic and open communities that comprise the 'parallel polis' a kind of rudimentary prefiguration, a symbolic model of those more meaningful 'post-democratic' political structures that might become the foundation of a better society? (Havel, 1978: 120-121). Fundamental here, I think, is Havel's call to responsibility and struggle against the prevailing political order when it undermines quality of life, perpetuates injustice, or the denial or compromising of democratic norms. In a similar vein Carla Emery puts it eloquently, 'People have to choose what they're going to struggle for. Life is always a struggle, whether or not you're struggling for anything worthwhile, so it might as well be for something worthwhile' (in Astyk, 2008: 204). Or to phrase it differently: get busy living or get busy dying. WHAT IF WE ARE THE PEOPLE WE'VE BEEN WAITING FOR? 289 As argued throughout this book in facing the many challenges of the present time-climate change, peak oil, diminishing forms of social well-being, financial and economic crises, and the ecological liquidation of the foundations of life on the planet-the most important response needed is one which explicitly focuses on imagination and creativity. As W. B. Yeats (long before Barak Obama used a version of these sentiments) suggested, what is needed is for us 'to seek a remedy ... in audacity of speculation and creation' (Yeats, 1926). While 'another world is possible' it can only be possible if it is imagined, and perhaps one of the most persistent obstacles to the transition away from actually existing unsustainability apart from ignorance of the ecological and human costs of our capitalist-consumer way of life-is the stultifying grip of 'business as usual' and its limited and limiting horizons of possible futures for ourselves and our societies. In many respects, our collective inability to respond to 'limits to growth' is in large measure due to limits of creativity and imagination. We cannot, or find it very difficult, to imagine a different social order. For Richard Norgaard the answer to our present ecological predicament is as difficult to achieve as it is simple to express, 'We need a new life story. We need an overarching story that respects a diversity of life stories. Living the story of economic development is destroying humanity and nature and a good many other species along with us. We need a master story that puts our hope, compassion, brains, sociality, and diversity to new and constructive ends' (in Deb, 2009: xxiii). And if we follow Havel, it may be that this new story we need is already here, in the same sense that the eco-feminist Mary Mellor (Mellor, 1995) has persuasively written that the sustainable world, society, or mode of being is not some utopian 'there' but an already living, embodied, engendered 'here' in the reproductive and exploited labour of women, in the 'core' economic activity of caring and sharing and ... flourishing. The Polanyi-inspired attempt to 'reembed' the economy within human social relations can be viewed as a defensive move to protect community from both the formal market and the state. Such protective measures can include the expansion of the social economy, or the efforts by the Transition movement in seeking to disrupt, slow down and re-conceptualize the economy. Such reactive measures could all be thought of as seeking to defend and extend those sustainable practices in the here and now, that is, that already exist within 'actually existing unsustainability'. This is particularly the case with reproductive labour as outlined in this book. Actually it is the neoclassical economic view that is 'utopian' in promoting a fictitious and dangerous imaginary of human life lived at 365/24/7 speed and a way of life completely out of synch not just with human biological but also ecological time. And, it must be recalled, 'Mother Nature does not do bailouts'. As Havel suggests, 'For the real question is whether the "brighter future" is really always so distant. What if, on the contrary, it has been here for a long time already, and only our own blindness and weakness has prevented us from seeing it around us and within us, and kept us from developing it?' (Havel, 1978: 122). Now there's an intriguing set of concluding thoughts-what if not only the resilient, sustainable way of life is 'always already here', present, and available to us if we so choose-but also if it is indeed the case that 'we are the people we've been waiting for?' And what of the hard greens, where do they and their analysis fit within this book? For it is fair to say that they have been shadowing the book. While I discussed them briefly in the Introduction and made some casual comments about them and their diverse positions and prescriptions throughout, I have not met them head on as it were. So it would be fitting for me to offer my thoughts on the place and status of the hard green position. Are they basically correct? Do I agree with them (from the green republican acceptance of the time-bound and contingent character of all human creations, including civilizations and societies) that they have identified the beginning of the end of our existing capitalist, carbon-based civilization and societies? While I certainly admire their brutal honesty, I baulk at their jump from crisis to collapse, and then from collapse to violence and 'de-civilization' (Elias, 2000; Hine and Kingsnorth, 2010). Their political analyses echo (almost always unwittingly) the eco-authoritarian position of the late 1960s and early 1970s. The hard-green view in being so pessimistic means its pessimism precludes a view of politics as the 'art of the possible', and a view of the inevitability of collapse can and does lead to de-politicized or even anti-political responses. But surely the challenge, as outlined by the green republican project of this book, is to embrace new intelligibilities, ways of being, having, and doing, new identities and subjectivities, and new arts of life, all must be part of a project to avert collapse?2 This is, as I see it, the point of green republican politics as a form of 'anticipatory politics' to challenge the rule of the 'nee-liberal vulgate'. At this present moment, on the cusp of this 'Great Transition', what greens need is to cultivate critical awareness, opposition, and dissent, to have the courage of their convictions in analysing and resisting actually existing unsustainability, and outlining their vision for the transition to a better society, in part to engage, inform, and prepare citizens for the coming changes that will characterize the decades ahead. Greens need to be realistic and cleareyed in their disavowal of naive utopianism, but convinced of its basic conviction that another world is possible, necessary, and desirable. And while on quiet mornings we may hear it coming, its arrival, like all major transitions in human history, will demand political struggle. The battle for hearts, minds, and hands has begun, and my writing this book and you reading it are constitutive of that struggle.

### Politics

#### Obama pushing compromise and working together – key to getting House GOP on board for his agenda – Immigration’s only chance

AFP 3 – 7 – 13 Obama tries new tack -- talking to Republicans, http://www.google.com/hostednews/afp/article/ALeqM5js8Vq2BpvFfWBXu5jLLYKRSN\_sMA?docId=CNG.da8c946c1afca2a51f978806a1ab4ca4.311

President Barack Obama has hit on a novel antidote to Washington's endless cycle of political crises: breaking bread with Republicans

Since his re-election triumph in November, Obama has used his political capital to harangue his foes, holding rallies across the country at which he accused rival Republicans of obstructing legislation and serving the rich.

His strategy worked up to a point -- securing new higher tax rates for the wealthy as he pocketed a political win in December over the fiscal cliff showdown.

But with the glow of his re-election waning, Obama came up short in the sequester clash last week as Republicans refused to bend on raising taxes -- and $85 billion in economy-sapping austerity was set in motion.

Two years of incessant budget melodrama between Obama and his foes on Capitol Hill have poisoned the political well but done little to tackle the debt load endangering America's future prosperity.

Now, Obama and conservative Republicans in the House of Representatives are left staring across a seemingly unbridgeable ideological divide.

Since Obama's ambitious second term agenda must clear a divided Congress, the onus is on the president to plot a way through Washington's dysfunction.

So Obama, who disdains the superficiality of backslapping politics, has embarked on a charm offensive -- and on Wednesday night he bought dinner for a dozen Republican senators out of his own pocket.

At an expensive hotel, Obama supped with senators John McCain, Lindsey Graham and others, vocal foes who have also expressed frustration at being stuck in the political purgatory of a Washington where nothing gets done.

Next week, the president will make a rare foray into enemy territory on Capitol Hill to address Republicans from both the Senate and the House.

For now, Obama appears to have dropped the "outside" game of campaigning to move public opinion against Republicans, instead probing whether there is any space for a deal on key issues.

Steven Smith, a former congressional staffer who is now a professor of political science at Washington University, St Louis, said the president had little choice but to try to change the political climate in Washington.

"If you can't deal with the House Republicans in the current political environment -- see if you can change the political environment," he said.

"What (Obama) is hoping is that Republicans in the Senate can start serving almost as opinion leaders for a new way of tackling these fiscal challenges."

Obama is courting Republican senators who may be willing to deal on issues like the national debt, the deficit and growing costs threatening entitlement programs like health care for the elderly.

"The President is interested in finding the members of the 'caucus of common sense,'" said White House spokesman Jay Carney.

A person familiar with Obama's thinking said the White House believes there may be a window for action since -- after the sequester and fiscal cliff dramas -- Washington is finally not on the cusp of an immediate crisis.

Obama aides also think some Senate Republicans may be ready to compromise -- a feeling bolstered by Graham's recent comment that he would swap $600 billion in new revenues in return for entitlement reform.

It is not the first time that Obama has tried dialogue with Republicans -- he tried unsuccessfully to conclude a grand bargain with House Speaker John Boehner aimed at $4 trillion in deficit reduction during his first term.

Obama says that offer is still on the table, but so frayed are his relations with Boehner that it seems doubtful the two of them share the necessary trust to strike a bargain.

Should he fare better with Senate Republicans, Obama hopes his new dance partners can build pressure on their brethren in the House to compromise, which might also ease the way for other top initiatives, like immigration reform.

Republicans, who have long accused Obama of hectoring them, welcome his change of tone.

"Where this goes, I don't know," said Graham, who recently met Obama along with McCain at the White House.

"I do believe (in) what the president has been doing lately, getting off the campaign trail (and) back into the normal way of doing business up here, of talking to each other."

Moderate Republican Senator Susan Collins agreed.

"The important thing is, for the first time in a very long time, the president appears to be doing some outreach to both Republicans and Democrats, and that's long overdue," she said.

Wednesday's dinner might have been a good start, but such is the philosophical gulf between Obama and Republicans that any deal still seems a long shot.

And with mid-term congressional elections in 2014, the window for bipartisan comity is short.

#### Capital is key – Obama is spending it now

CBS NEWS 3 – 4 – 13 <http://www.cbsnews.com/8301-250_162-57572441/white-house-obama-not-focused-on-2014-right-now/>

Carney today said that Mr. Obama does believe his agenda -- which includes a plan to reduce gun violence, immigration reform and measures like raising the minimum wage -- would be easier to enact with Democrats in control of both chambers. "But it is also the president's belief, and it is established in fact in recent history, that you can achieve important policy objectives with divided government," he said.

Carney insisted the president is expending "great political capital and energy" on working quickly to pass immigration reform. Republicans have shown interest, he noted, in both immigration reform and some gun control measures.

#### Plan kills pc and causes a fight– no one supports it

**Mulkern 9 –** (Anne C. March 24th,“Some see daylight at last for U.S. feed-in tariffs” <http://www.nytimes.com/gwire/2009/03/24/24greenwire-some-see-daylight-at-last-for-us-feedin-tariff-10271.html?pagewanted=all>) Jacome

But feed-in tariffs are controversial. They are blamed for sharply higher electricity prices in countries where they exist. Some question whether Americans accustomed to comparatively low electricity costs would tolerate paying more.

Utility companies also argue that they are not needed, since Congress is poised to pass legislation that would set financial penalties for carbon emissions from traditional power sources. And there might not be a political appetite for a fight over a national tariff.

It is sensitive enough that the Solar Energy Industries Association's president and spokeswoman did not want to talk about the question of lobbying for it, except to call the tariff "a heavy lift."

But Efird said that when the issue came up at the association's board of directors' meeting last month, there was "pretty much a consensus that the political atmosphere at this point would justify us investing some of our resources in a lobbying effort for a feed-in tariff."

Since then, a policy task force has been meeting about twice a week, Efird said, "working on the details of what we think the ideal feed-in tariff should look like."

'New ideas take time'

Congress does not appear likely to embrace a feed-in tariff anytime soon, however.

"There is no interest on the Energy Committee's part to examine the concept of feed-in tariffs," said Bill Wicker, spokesman for the Senate Energy and Natural Resources Committee, the most likely starting place for such discussions. "We believe a better way to accomplish the same goal -- creating a market for renewables -- is with a renewable electricity standard."

#### Increase in skilled workers key to biodefense.

Roos ‘3 (Robert, News Editor, July 8, CIDRAP, Biodefense talent shortage said to threaten nation's preparedness, <http://www.cidrap.umn.edu/cidrap/content/bt/bioprep/news/july0803workforce.html>.

The five federal agencies most involved in biodefense face a talent shortage that could keep them from responding effectively to a major bioterrorist attack, according to a new report by a nonprofit group that works on civil service issues. Federal compensation systems and hiring processes badly handicap the agencies in competing with private companies and academia to hire and keep top biodefense specialists, the report states. To make matters worse, up to half of the federal workers in biodefense-related jobs will be eligible to retire within the next few years, and the flow of new talent entering the workforce is static or shrinking. Amid efforts to strengthen the nation's bioterrorism preparedness, the need to build a skilled workforce has been consistently overlooked, says the report by the Partnership for Public Service. The Washington, DC, group describes itself as a nonpartisan organization dedicated to recruiting and retaining excellence in the civil service. "Perhaps more than any other terrorist threat, bioterrorism will place huge burdens on small pools of medical, scientific and technical expertise," the document states. "These organizations are already exhibiting hairline cracks—some would say fractures—that may presage disaster." The report focuses on three agencies in the Department of Health and Human Services (HHS)—the Centers for Disease Control and Prevention (CDC), the National Institute of Allergy and Infectious Dsieases (NIAID), and the Food and Drug Administration (FDA), and two in the US Department of Agriculture—the Food Safety and Inspection Service (FSIS) and the Animal and Plant Health Inspection Service (APHIS). Titled "Homeland Insecurity: Building the Expertise to Defend America from Bioterrorism," the report says the demand for biodefense skills is growing while the projected supply is not. By 2010, the demand for biologists is expected to grow by 20% and the need for physicians by 25%. But the number of people earning advanced degrees in biology decreased through the 1990s, and the flow of new medical professionals has stayed generally constant for the past 20 years, the authors report.

#### Extinction.

Clifford Singer, Spring 2001. Director of the Program in Arms Control, Disarmament, and International Security at the University of Illinois at Urbana—Champaign. “Will Mankind Survive the Millennium?” The Bulletin of the Program in Arms Control, Disarmament, and International Security, University of Illinois at Urbana-Champaign, 13.1, http://www.acdis.uiuc.edu/research/S&Ps/2001-Sp/S&P\_XIII/Singer.htm.

In recent years the fear of the apocalypse (or religious hope for it) has been in part a child of the Cold War, but its seeds in Western culture go back to the Black Death and earlier. Recent polls suggest that the majority in the United States that believe man would survive into the future for substantially less than a millennium was about 10 percent higher in the Cold War than afterward. However fear of annihilation of the human species through nuclear warfare was confused with the admittedly terrifying, but much different matter of destruction of a dominant civilization. The destruction of a third or more of much of the globe’s population through the disruption from the direct consequences of nuclear blast and fire damage was certainly possible. There was, and still is, what is now known to be a rather small chance that dust raised by an all-out nuclear war would cause a so-called nuclear winter, substantially reducing agricultural yields especially in temperate regions for a year or more. As noted above mankind as a whole has weathered a number of mind-boggling disasters in the past fifty thousand years even if older cultures or civilizations have sometimes eventually given way to new ones in the process. Moreover the fear that radioactive fallout would make the globe uninhabitable, publicized by widely seen works such as "On the Beach," was a metaphor for the horror of nuclear war rather than reality. The epidemiological lethal results of well over a hundred atmospheric nuclear tests are barely statistically detectable except in immediate fallout plumes. The increase in radiation exposure far from the combatants in even a full scale nuclear exchange at the height of the Cold War would have been modest compared to the variations in natural background radiation doses that have readily been adapted to by a number of human populations. Nor is there any reason to believe that global warming or other insults to our physical environment resulting from currently used technologies will challenge the survival of mankind as a whole beyond what it has already handily survived through the past fifty thousand years. There are, however, two technologies currently under development that may pose a more serious threat to human survival. The first and most immediate is biological warfare combined with genetic engineering. Smallpox is the most fearsome of natural biological warfare agents in existence. By the end of the next decade, global immunity to smallpox will likely be at a low unprecedented since the emergence of this disease in the distant past, while the opportunity for it to spread rapidly across the globe will be at an all time high. In the absence of other complications such as nuclear war near the peak of an epidemic, developed countries may respond with quarantine and vaccination to limit the damage. Otherwise mortality there may match the rate of 30 percent or more expected in unprepared developing countries. With respect to genetic engineering using currently available knowledge and technology, the simple expedient of spreading an ample mixture of coat protein variants could render a vaccination response largely ineffective, but this would otherwise not be expected to substantially increase overall mortality rates. With development of new biological technology, however, there is a possibility that a variety of infectious agents may be engineered for combinations of greater than natural virulence and mortality, rather than just to overwhelm currently available antibiotics or vaccines. There is no a priori known upper limit to the power of this type of technology base, and thus the survival of a globally connected human family may be in question when and if this is achieved.

**And it Solves the economy**

**Krudy, 13** (Edward, “Immigration reform seen boosting US economic growth,” January 29th, 2013, <http://www.nbcnews.com/business/economywatch/immigration-reform-seen-boosting-us-economic-growth-1C8159298>)

The sluggish U.S. economy could get a lift if President Barack Obama and a bipartisan group of senators succeed in what could be the biggest overhaul of the nation's immigration system since the 1980s. Relaxed immigration rules could encourage entrepreneurship, increase demand for housing, raise tax revenues and help reduce the budget deficit, economists said. By helping more immigrants enter the country legally and allowing many illegal immigrants to remain, the United States could help offset a slowing birth rate and put itself in a stronger demographic position than aging Europe, Japan and China. "Numerous industries in the United States can't find the workers they need, right now even in a bad economy, to fill their orders and expand their production as the market demands," said Alex Nowrasteh, an immigration specialist at the libertarian Cato Institute. The emerging consensus among economists is that immigration provides a net benefit. It increases demand and productivity, helps drive innovation and lowers prices, although there is little agreement on the size of the impact on economic growth. First Thoughts: Obama to embrace Senate immigration deal President Barack Obama plans to launch his second-term push for a U.S. immigration overhaul during a visit to Nevada on Tuesday and will make it a high priority to win congressional approval of a reform package this year, the White House said. The chances of major reforms gained momentum on Monday when a bipartisan group of senators agreed on a framework that could eventually give 11 million illegal immigrants a chance to become American citizens. Their proposals would also include means to keep and attract workers with backgrounds in science, technology, engineering and mathematics. This would be aimed both at foreign students attending American universities where they are earning advanced degrees and high-tech workers abroad. An estimated 40 percent of scientists in the United States are immigrants and studies show immigrants are twice as likely to start businesses, said Nowrasteh. Boosting legal migration and legalizing existing workers could add $1.5 trillion to the U.S. economy over the next 10 years, estimates Raul Hinojosa-Ojeda, a specialist in immigration policy at the University of California, Los Angeles. That's an annual increase of 0.8 percentage points to the economic growth rate, currently stuck at about 2 percent.

**Nuclear war.**

**Kemp 10** Director of Regional Strategic Programs at The Nixon Center, served in the White House under Ronald Reagan, special assistant to the president for national security affairs and senior director for Near East and South Asian affairs on the National Security Council Staff, Former Director, Middle East Arms Control Project at the Carnegie Endowment for International Peace

(Geoffrey Kemp, The East Moves West: India, China, and Asia’s Growing Presence in the Middle East, p. 233-4)

The second scenario, called Mayhem and Chaos, is the opposite of the first scenario; everything that can go wrong does go wrong. The world economic situation weakens rather than strengthens, and India, China, and Japan suffer a major reduction in their growth rates, further weakening the global economy. As a result, energy demand falls and the price of fossil fuels plummets, leading to a financial crisis for the energy-producing states, which are forced to cut back dramatically on expansion programs and social welfare. That in turn leads to political unrest: and nurtures different radical groups, including, but not limited to, Islamic extremists. The internal stability of some countries is challenged, and there are more “**failed states**.” Most serious is the collapse of the democratic government in Pakistan and its takeover by Muslim extremists, who then take possession of a large number of **nuclear weapons**. The danger of war between **India and Pakistan** increases significantly. **Iran**, always worried about an extremist Pakistan, expands and weaponizes its nuclear program. That further enhances **nuclear proliferation** in the **Middle East**, with Saudi Arabia, Turkey, and Egypt joining Israel and Iran as nuclear states. Under these circumstances, the potential for nuclear **terrorism** increases, and the possibility of a nuclear terrorist attack in either the Western world or in the oil-producing states may lead to a further devastating collapse of the world economic market, with a tsunami-like impact on stability. In this scenario, major disruptions can be expected, with dire consequences for two-thirds of the planet’s population.

### States

#### The fifty state governments and relevant territories should establish a feed-in tariff that creates long-term purchase contracts for new qualifying facilities that use wind and/or solar power for energy production to ensure a reasonable rate of return.

CP solves

**Gleason** 2/29/**12** (Jennifer, Environmental Law Alliance Worldwide, Adopting State Feed-in Tariff Laws without Federal Preemption, <http://www.elaw.org/system/files/fed.preemption.feb_.29.2012.pdf>

THE FEDERAL POWER ACT

The Federal Power Act (FPA) grants the federal government jurisdiction over the “sale of electric energy at wholesale” which is further defined as a “sale of electric energy to any person for resale.” FPA § 201. The Federal Energy Regulatory Commission (FERC) has sole jurisdiction over rates charged for electricity sold at wholesale. There are at least four exceptions to this sole federal jurisdiction:

1. Alaska, Hawaii and Texas

**The first exception is that the FPA does not regulate wholesale sales in Alaska, Hawaii and most of Texas because these electric grids do not cross state lines**. Section 201 of the FPA only applies to sales in interstate commerce.

62. Sales from State Agencies

The second exception is sales from the federal government, a state, or a subdivision of a state. The FPA states that it does not apply to sales from these entities (and a few others). FPA § 201(f).

3. PURPA

The third exception is that states have limited authority to set the rate for purchases of wholesale electricity under the Public Utility Regulatory Policies Act (PURPA). (FERC maintains jurisdiction to ensure that rates are just and reasonable). PURPA requires electric utilities to purchase electricity generated by cogenerators and small power production facilities, which are known together as “qualified facilities” or “QFs.”

7 The FPA defines a qualifying “small power production facility” as a facility that produces electric energy from biomass, waste, renewable sources or geothermal sources that has a power production capacity of not greater than 80 MW. FPA § 3(17)(A); 18 C.F.R. § 292.203. A qualifying cogeneration facility is defined in FERC regulations found at 18 C.F.R. § 292.205. The utilities are required to purchase electricity from QFs at what is known as avoided costs.

8Avoided costs means “the incremental costs to an electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source.” 18 C.F.R. § 292.101(b)(6). In plain English, avoided costs is the cost the utility would have incurred to generate its own electricity or to buy electricity from another source instead of buying electricity from a QF.

States are charged with determining “avoided costs” for purchases from QFs. Traditionally, avoided cost rates have been set as the cost of the least expensive power and capacity the utility could purchase without regard to the source of the electricity that was generated. That means that in a state in which the law prohibits utilities from adding a coal-fired power plant as a new generation source, natural gas is likely to be the leastexpensive source of electricity that the utility could self-generate or go out and purchase from a third party, and avoided cost will be set at the cost of natural gas. Traditional avoided cost rates were too low to be used to implement a strong FIT. However, a recent decision by FERC makes it clear that a state can make separate avoided cost calculations if the utility is required to procure electricity from different sources.

9 FERC‟s decision in California Public Utilities Commission, 133 FERC ¶ 61,059 (October 21, 2010), clarified by FERC in its order denying rehearing, California Public Utilities Commission, 134 FERC ¶ 61,044 (January 20, 2011) makes it clear that if a state requires utilities to purchase electricity from renewable sources, it may set avoided costs for the types of electricity that the utility must procure. Thus, if a state requires utilities to purchase 30 MW of electricity generated on solar photovoltaic (solar PV) systems with a total capacity of 10 kW or less, and 100 MW of electricity from solar PV systems between 10 kW and 100 kW, then the state should be able to set separate avoided costs for each of these categories and require utilities to purchase the electricity at that rate (until the utility has met each of these procurement requirements). If a state requires utilities to supply 30% of its electricity from renewable sources, then the state could set avoided cost at the rate needed to cover the least expensive eligible renewable source (this rate would apply only to sales needed to procure the 30%). If a state is implementing a FIT following the formula described by FERC in the October, 2010 and January, 2011 orders, it would need to implement it under PURPA and sellers would need to be QFs.

OUTSIDE THE FEDERAL POWER ACT There is also at least one way for a state to implement a FIT outside of these exceptions to the FPA without federal preemption. FERC has made it clear that renewable energy certificates (RECs)

10have been created by the states and that the market for the RECs is controlled by the states. States have the authority to set the price for a REC. A FERC order states, “RECs are created by the States. They exist outside the confines of PURPA. . . . States, in creating RECs, have the power to determine who owns the REC in the initial instance, and how they may be sold or traded . . . .” American Ref-Fuel Company, 105 FERC 61,004 (October 1, 2003).

11 Therefore, a FIT could be designed so that a utility would have to purchase the electricity at avoided cost and purchase the accompanying REC at a price set by the state. Avoided cost could be traditional avoided cost rates if there is no renewable energy procurement requirement, or differentiated rates if there is a state procurement requirement in place. The seller would have to be a QF. Of course, this would only apply to a state that has created renewable energy credits or creates them as part of this process.

OTHER NOTES RELATED TO FEDERAL PREEMPTION NET METERING

Net metering, a program that allows people to install renewable energy generating facilities and use the electricity on-site before sending any excess to the grid, and take electricity from the grid when they need more than they produce, can look like a wholesale transaction that would be preempted by federal law, but it is not. The Energy Policy Act of 2005 encouraged states to consider adopting net metering programs and many states have. Now some states are looking at enhanced net metering programs instead of instituting a true FIT. One reason for that is that FERC has said that as long as the generator does not generate more than it uses, the Commission will not assert

jurisdiction over the program.

12Net metering programs will not stimulate the market like

a FIT.13LONG TERM CONTRACTS It should be noted that states have the authority to require utilities to enter into long-term contracts to purchase electricity from a particular source. In FERC‟s California Public Utilities Commission October 2010 Order, FERC made it clear that states have the authority to require utilities to purchase energy from particular sources “for a long duration.”

14RENEWABLE ENERGY STANDARD OFFER The American Council On Renewable Energy (ACORE) is working with the Federal Energy Regulatory Commission to define another path forward that would include FERC approving rates submitted to it by state public utility commissions.

15CONCLUSION It is clear that states have the authority to adopt strong FITs. States can design a program that falls within one or more of the exceptions to exclusive federal authority under the FPA or they can design one that uses payments for RECs to supplement the price that will be paid for the electricity. To understand specifically how a state can implement a strong law, see the paper that accompanies this paper, Available Paths for Designing Strong State Feed-in Tariffs.

### Electricity Prices

**Electricity prices will remain stable.**

**Reuters**, **2/21**/2013. “Fitch: lower natural gas prices hurting electricity wholesalers,” http://www.reuters.com/article/2013/02/21/idUSWNB0039S20130221.

Surging domestic oil and gas output has been beneficial from a macroeconomic perspective. The December U.S. trade deficit narrowed by 20.7% ($38.5 billion) largely based on an all-time record export of petroleum products and the smallest amount of oil imported in 16 years. Over the near term, we believe this export activity will continue. For example, domestic refiners will continue to have a significant competitive advantage due to their access to cheap natural gas and low cost domestic light crude. In 2011, the U.S. exported $52 billion worth of petroleum products. In 2012, exports rose to $61 billion. However, low natural gas prices may also continue to put pressure on power producers that depend heavily on the sale of excess power to subsidize their retail revenue. We expect wholesale power prices to increase slowly through 2015 **but remain near current levels, driven by historically low natural gas prices, high capacity reserve margins, and weaker demand**. We also believe that increased dependence on natural gas can create issues over the longer term. For example, if low gas prices result in accelerated retirement of already challenged coal fired plants, the ability to revert to coal usage following those retirements may be limited.

#### FIT Raises electricity prices

Couture May 2009 (Toby, Karlynn Cory, National Renewable Energy Laboratory, State Clean Energy Policies¶ Analysis (SCEPA) Project: An¶ Analysis of Renewable Energy¶ Feed-in Tariffs in the United States¶ http://www.renewwisconsin.org/policy/ARTS/NREL%20Docs/NREL%20RE%20Feed-in%20Tariffs09%2045551.pdf

1.3 FIT Policy Challenges

Despite their advantages, there are a few central challenges of FIT policies. These can be broken down into five basic categories.

The first challenge is that FIT policies do not address the barrier posed by the high up-front costs of RE systems, in contrast to rebate programs and other up-front “capacity-based” incentives. FIT policies are designed to offer stable revenue streams through long-term purchase contracts, requiring that the high up-front costs be amortized over a long period of time. It is generally assumed that the guaranteed terms offered by FIT policies will help developers and investors overcome the high up-front costs by financing a larger portion of the project with debt financing. However, FIT policies do little to address up-front costs directly. Despite this challenge, experience from both Europe and North America indicates that up-front incentives may not be as effective at spurring broad market adoption or at driving innovation and technological cost reductions (Lantz 2009, Jacbosson and Lauber 2005, Nielsen 2005).

Second, FIT policies can put near-term, upward pressure on electricity rates, particularly if high-cost technologies like solar photovoltaics (PV) are included in large amounts (i.e., thousands of MW). The risk of cost impacts grows in proportion to the rate and scale of deployment of these costlier technologies. One way to resolve this issue is to cap the total annual capacity of high-cost RE resources. Additionally, experience in Europe has shown that the large-scale deployment of wind power, for instance, has actually helped lower electricity rates (see Section 6.3; also de Miera et al. 2008, Morthorst 2006). Also, it is important to weigh the broader social and economic benefits of the rapid RE development generated under successful FIT policies against any near-term pressure on rates. Analysis in Germany has found the tradeoff between higher near-term rates and industry development, economic growth, environmental costs, etc. has been positive (see Section 6.3) (BMU 2008b).

Third, well-designed FIT policies require a significant up-front administrative commitment to design the policy and to establish FIT payments based on the levelized cost of RE generation. Detailed analyses on technology cost and resource quality are needed to ensure FIT payments are adequate to guarantee cost recovery without leading to windfall profits.

Fourth, FIT policies designed to include guaranteed grid interconnection, regardless of location on the grid, could lead to less-than-optimal project siting. Accordingly, if projects are sited far from load centers or transmission or distribution lines, interconnection costs increase, putting upward pressure on policy costs. However, this challenge can be largely overcome if FIT policies encourage siting projects near load centers by creating an incentive (either a bonus or a higher price based on higher spot-market prices), or if the policies require developers to bear a portion, if not the entirety, of the costs of connecting projects to the grid. Both of these financially-based solutions create incentives and could encourage more efficient, less costly project siting (Klein et al. 2008). However, requiring the developer to cover all costs related to interconnection, including grid upgrades, may make certain projects where significant resource potential exists uneconomic when considered in isolation. If utilities are required to share the costs of interconnection and grid infrastructure upgrades, it is likely that higher levels of RE penetration will occur as more of a region’s RE potential will be harnessed.

Finally, due to changes in technology costs and market prices over time, FIT policies must be adjusted periodically to account for these changes. Accounting for changes in technology costs accurately remains a challenge. Changing payment levels too often can be undesirable as well, as it creates investor uncertainty and increases overall market risk. Some jurisdictions such as Germany choose to adjust their policies via tariff degression, where FIT payments decline by a pre-established percentage every year, coupled with periodic policy adjustments that occur every three or four years (BMU 2008). Others such as Spain choose to adjust FIT policies annually by updating the entire suite of FIT premium payments to track observed changes in technology and operational costs (RD 661/2007). Despite these short-term adjustments, both Germany and Spain retain long-term commitments to the policy (see Section 6.3). To be successful, these adjustments require a detailed methodology to track market changes effectively from year to year. Ultimately, the challenge is to provide a flexible policy framework without jeopardizing investor confidence (Klein et al. 2008).

#### Low electricity prices spurs manufacturing "reshoring"

Perry 7/31/12 (Mark, Prof of Economics @ Univ. of Michigan, "America's Energy Jackpot: Industrial Natural Gas Prices Fall to the Lowest Level in Recent History," http://mjperry.blogspot.com/2012/07/americas-energy-jackpot-industrial.html)

Building petrochemical plants could suddenly become attractive in the United States. Manufacturers will "reshore" production to take advantage of low natural gas and electricity prices. Energy costs will be lower for a long time, giving a competitive advantage to companies that invest in America, and also helping American consumers who get hit hard when energy prices spike.¶ After years of bad economic news, the natural gas windfall is very good news. Let's make the most of it." ¶ The falling natural gas prices also make the predictions in this December 2011 study by PriceWaterhouseCoopers, "Shale gas: A renaissance in US manufacturing?"all the more likely: ¶ U.S. manufacturing companies (chemicals, metals and industrial) could employ approximately one million more workers by 2025 because of abundant, low-priced natural gas.¶ Lower feedstock and energy cost could help U.S. manufacturers reduce natural gas expenses by as much as $11.6 billion annually through 2025.¶ MP: As I have emphasized lately, America's ongoing shale-based energy revolution is one of the real bright spots in an otherwise somewhat gloomy economy, and provides one of the best reasons to be bullish about America's future. The shale revolution is creating thousands of well-paying, shovel-ready jobs in Texas, North Dakota and Ohio, and thousands of indirect jobs in industries that support the shale boom (sand, drilling equipment, transportation, infrastructure, steel pipe, restaurants, etc.). In addition, the abundant shale gas is driving down energy prices for industrial, commercial, residential and electricity-generating users, which frees up billions of dollars that can be spent on other goods and services throughout the economy, providing an energy-based stimulus to the economy. ¶ Cheap natural gas is also translating into cheaper electricity rates, as low-cost natural gas displaces coal. Further, cheap and abundant natural gas is sparking a manufacturing renaissance in energy-intensive industries like chemicals, fertilizers, and steel. And unlike renewable energies like solar and wind, the natural gas boom is happening without any taxpayer-funded grants, subsidies, credits and loans. Finally, we get an environmental bonus of lower CO2 emissions as natural gas replaces coal for electricity generation. Sure seems like a win, win, win, win situation to me.

#### Manufacturing is key to the industrial commons.

Lind & Freedman 12—Policy Director of Economic Growth Program & Policy analyst in the Economic Growth Program @ New America Foundation [Michael Lind & Joshua Freedman “Value Added: America’s Manufacturing Future,” New America Foundation, April 2012]

Manufacturing creates an industrial commons, which spurs¶ growth in multiple sectors of the economy through linked industries. An “industrial commons” is a base of shared¶ physical facilities and intangible knowledge shared by a¶ number of firms. The term “commons” comes from communally-¶ shared pastures or fields in premodern Britain.

The industrial commons in particular in the manufacturing¶ sector includes not only large companies but also small and¶ medium sized enterprises (SMEs), which employ 41 percent of the American manufacturing workforce and account for¶ 86 percent of all manufacturing establishments in the U.S. Suppliers of materials, component parts, tools, and more are all interconnected; most of the time, Harvard Business¶ School professors Gary Pisano and Willy Shih point out,¶ these linkages are geographic because of the ease of interaction and knowledge transfer between firms.18 Examples of¶ industrial commons surrounding manufacturing are evident¶ in the United States, including the I-85 corridor from¶ Alabama to Virginia and upstate New York.19

Modern economic scholarship emphasizes the importance¶ of geographic agglomeration effects and co-location synergies.¶ 20 Manufacturers and researchers alike have long noted the symbiotic relationship that occurs when manufacturing¶ and R&D are located near each other: the manufacturer¶ benefits from the innovation, and the researchers¶ are better positioned to understand where innovation can be found and to test new ideas. While some forms of¶ knowledge can be easily recorded and transferred, much¶ “know-how” in industry is tacit knowledge. This valuable tacit knowledge base can be damaged or destroyed by the¶ erosion of geographic linkages, which in turn shrinks the pool of scientists and engineers in the national innovation¶ ecosystem.

If an advanced manufacturing core is not retained, then¶ the economy stands to lose not only the manufacturing¶ industry itself but also the geographic synergies of the¶ industrial commons, including R&D. Some have warned that this is already the case: a growing share of R&D by U.S. multinational corporations is taking place outside of the United States.21 In particular, a number of large U.S.¶ manufacturers have opened up or expanded R&D facilities¶ in China over the last few years. 22 pg. 4-5 //1nc

#### That sustains the earth’s carrying capacity

Wilson 6/9/12—Executive Director of the International Council for Science [Steven Wilson (PhD in Chemistry from University of Bristol and Former Director of Earth Observation, Director of Science and Innovation, and Director of Strategy and Partnerships @ UK Natural Environment Research Council), “Science is key to our sustainable future,” Al Jazeera, Last Modified: 09 Jun 2012 15:41, pg. <http://www.aljazeera.com/indepth/opinion/2012/06/20126211211472368.html>]

Paris, France—Scientific evidence for dangerous, long-term and potentially irreversible changes in the Earth's life support system is manifold. These changes threaten our sustainability and could bring forth a new global reality for people, nations, economies and our environment.

Science has sounded the alarm—notably through observations, modelling and predictions of unprecedented quality—and shown that the future wellbeing of humankind is at risk. We now need science to help identify whole system solutions—ones that look at the big picture and not just the parts—and for scientists to take a more pro-active role in informing the policy debate on these solutions.

Time is running out for us to meet the urgent challenge of global sustainability. We need to find solutions which de-couple our development from ever-increasing demands for non-renewable resources, forge a new era of equitable and sustainable balance between people and planet earth, and fully recognise that the Earth is a complex and interconnected system.

The transformation to sustainable development, which is likely to be equal in scale to the agrarian-industrial transition of the 18th and 19th centuries, will entail tough trade-offs. A dash to quick fix solutions to one problem without examining the impact of these decisions is a recipe for disaster. For example, just a few years ago, rising fuel prices sent policymakers searching for solutions. First generation biofuels were an easy fix and the subsidies rolled in. But this in turn fuelled rising global food prices, hitting some of the world's poorest people hardest.

To address these trade-offs explicitly, we need integrated knowledge from natural, social and engineering sciences to inspire innovative, holistic solutions, as well as new ways of measuring wealth, growth and wellbeing.

To better inform decisions, we urgently need more scientists to take an active role in public debate. The hallmark of science is objectivity, and this principle must always be our foundation. But now that global environmental change is threatening the Earth's carrying capacity, more scientists must take on a new role involving engagement with end-users of science. Scientists need to collaborate directly with people and business to ensure shared understanding of the new realities shaping our world, and help translate knowledge into action for sustainable development.

This will require nothing short of a new paradigm in the way that science engages with society.

This new, collaborative approach to research is already making an impact. In Kenya, the first ever community-based mangrove carbon credit project to win international accreditation has shown that the carbon storage potential of these forests can create wealth for local people. Elsewhere in Kenya, innovation for end-users has provided livestock insurance to farmers through satellite monitoring of rainfall in drought-prone rural areas. In Nicaragua, researchers are exploring how to implement "just ecosystem services" by involving locals in deciding who has access to forest services and who benefits.

Widespread societal engagement by scientists, leading to better public understanding of the scientific evidence and potential solutions will be an important factor in tackling the difficult decisions ahead. It will equally help shape future research agendas.

These topics will be on the table at the Forum on Science, Technology and Innovation for Sustainable Development in Rio this June—co-organised by the International Council for Science (ICSU) in its role as the co-organiser of the Scientific and Technological Community Major Group in the Rio +20 negotiations.

The Forum will look at the greatest challenges facing our planet's carrying capacity: how to secure food and water supplies for the global population, how to provide energy in a green economy, how to adapt to a world of greater risk from climate change and disaster, how to ensure urban wellbeing and sustainable livelihoods which are more equitable and how to rethink social and economic models.

### Glut

#### Nationalism will not lead to lashout—CCP wants to avoid conflict

Gao 12—Professor of International Studies @ University of Technology [Dr. Yingjie Guo, “Chinese Nationalism and Its Future Prospects,” Interviewed By: Jonathan Walton, The National Bureau of Asian Research, June 27, 2012, pg. <http://www.nbr.org/research/activity.aspx?id=258>]

The Chinese government typically prefers to avoid confrontations with foreign countries while controlling the information available to ordinary Chinese citizens and manipulating their reactions to international events, ensuring that the situation does not backfire on the party-state or get out of hand. Although the CCP cannot afford to ignore popular demands entirely, it can afford not to respond to every popular demand. Its ability to do this is probably enhanced because it is not an elected government and is therefore less susceptible to popular pressure.

#### No chance social pressure will cause collapse --- movements are narrow and the CCP knows how to contain.

Taipei Times, 9/19/2012. “China not turning democratic: experts,” http://www.taipeitimes.com/News/taiwan/archives/2012/09/19/2003543134.

A rising number of cases of civic unrest in China do not necessarily mean China will one day become a Western-style democracy because mass protests there have focused on a great number of issues, but democracy has not been one of them, academics said in Taipei yesterday.¶ While the increasing number of mass protests is an alarming issue for Beijing, “the party-state regime is getting better at containing public anger so it does not threaten the reins of the government,” said Wang Hsin-hsien (王信賢), an associate professor at National Chengchi University.¶ Wang was among four China experts who spoke yesterday at a forum called “Facing Chinese society,” the second of four symposiums organized by the Democratic Progressive Party (DPP) to increase the party’s understanding of China.¶ Experts said it was imperative for the DPP to better understand Chinese society, but added that the party also needed to be able to accurately ascertain societal differences between Taiwan and China.¶ Social instability in China likely reflects internal power struggles in the Chinese Communist Party (CCP) based on differences of opinion on how to respond to specific instances of unrest, such as the riots in Xinjiang in 2009, rather than a real threat to the authoritarian regime, Wang said, adding that in the case of Xianjiang, the CCP was split over how to tame the unrest.¶ Compared with Taiwan, where social movements have shared a close connection with political movements since the late 1970s, social movements in China have rarely been cross-class, cross-agenda or cross-geographical in nature, nor have they attracted large numbers from the middle class, Wang said.¶ Wang also said that academics have underestimated the Chinese government’s technological control over the Internet and its sophisticated control of demonstrations.¶ Academia Sinica political scientist Hsu Szu-chien (徐斯儉) shared this view, saying that China has listed “social management innovation” as one of its top priorities, meaning that China’s leadership understands that social movements in the enormous country can only be “contained,” not stopped.¶ “[The CCP] has learned when to tighten the leash and when to let go. It can even mobilize mass movements for its own agenda,” Hsu said, adding that the CCP has established a social organization network to increase its influence.¶ Recent anti-Japan protests in various cities across China were a good example because “the only organization that could organize anti-Japan protests in 85 cities on the same day is the CCP,” Hsu said.¶ Academia Sinica sociologist Lin Thung-hong (林宗弘) said that social movements in China were very different from those in Taiwan because Chinese protests focused on basic rights, such as housing, wages and other elements related to livelihood, rather than political rights.

#### \*Catastrophic consequences to CCP collapse are just fear-mongering

Bruce Gilley, 2004. PhD Candidate Politics @ Princeton U. and Adjunct Prof. Int’l. Affairs @ New School U. “China's Democratic Future: How it Will Happen and where it Will Lead,” p. 115-116, Google Print.

Would the entire PRC edifice simply collapse from the accumulated pressures of crisis and mass protest? In cross-country comparisons, "post-totalitarian" states like China are the most vulnerable to collapse because they are unable to respond creatively to protest and yet there is no organized opposition to assume control. The East German regime was a perfect example. It simply collapsed when huge defections from the state occurred at every level and there was no organized opposition ready to take over. In the German case, there was a neighboring fraternal state whose arms provided some cushion for the collapse. China would not have the same support. For this reason, the CCP and many of its supporters have warned of the dangers of collapse in words designed to scare the regime's opponents into quiescence. Fear-mongering about the consequences of regime collapse in China has been a staple of PRC propaganda since reforms began. Deng said: "If the political situation in china became unstable the trouble would spread to the rest of the world, with consequences that would be hard to imagine." Foreign scholars have taken up the histrionics with relish. One has worried about "societal disintegration" and even "the fragmentation of China into several competing polities." Another warns: "At worst the resulting chaos from a collapsing China would have a profound effect on the stability of Asia and on the U.S. policy to guarantee the security of its Asian allies. At the least, China could turn to the West for economic relief and reconstruction, the price tag of which would be overwhelming." Yet these fears appear overblown or misplaced. First, as we saw in the last part, many of these dire predictions are an accurate portrayal of China today. The problems of Party rule have created the very crisis that the fear-mongers alluded to. China already has an AIDs crisis, an illegal emigration crisis, a pollution crisis, and an economic crisis. Given its well-established state and social cohesion, China has far more to gain than to lose from political liberalization. Second, there is a good argument that governance in China will not collapse further even with a top leadership in crisis. The country actually functioned quite normally during the Cultural Revolution, when there was often no rule at the top, as a result of strong local governments and a social fabric that held together. At this state, with protests in full swing, a military on good behavior and a regime trying to confront the possibility of change, there is no reason to believe that the country will abruptly disintegrate. As in 1989, in fact, there is every reason to believe that people will act better toward each other and that local governments will look kindly upon the movement, an outpouring of civic behavior linked with the ideals of democracy. Finally, as above, if we are concerned with the creation of a more just system, then some degree of "chaos" relating to unstable government may be a worthwhile price to **pay,** including for the world. Claims by some U.S. foreign policy analysts that "there is as great a 'threat' to US interests from a weak and unstable China as there is from a strong and antagonistic China" are based on a highly instrumental and even the flawed view of U.S., and world, interests. A world community committed to the principles of justice through democracy has an overriding interest in its realization in China. To the extent that instability in China worsens conditions for greater justice there or abroad, it would indeed "threaten" world interests. But if the instability, despite its costs, leads to greater gains through a more just order in China and, through it, abroad, then this is very much in the world's interests. Few Americans, French, Croats, Romanians, South Africans, Filipinos, South Koreans, or Indonesians would say the "chaos" of their democratic revolutions was not a price worth paying. China's people should be allowed to make the same choice.

No impact to Chinese economy and the CCP solves econ collapse

**Coonan 08** (10/25, Clifford, IrishTimes.com, “China's stalling boom has globe worried,” http://www.irishtimes.com/newspaper/opinion/2008/1025/1224838827729.html)

All of this downbeat news feeds into a growing suspicion that China has had its cake and eaten for way too long, and that there is simply no precedent for a country growing and growing without some kind of respite. Establishing what that pause will look like and what it means to the rest of the world is the latest challenge facing global analysts. A hangover is considered inevitable and the Olympics, while meaningless economically, are widely considered the psychological trigger for China to face a slowdown. Despite all this gloom, however, writing China off is premature. The Beijing government is well placed to help protect the economy from the worst ravages of a global downturn. It has spent the last two years trying to fight inflation and cool the overheating economy, so it's a lot easier for it to take the foot off the brakes than it is to put them on in the first place. The central bank has lowered its benchmark interest rate twice in the past two months, the first time in six years. The State Council is increasing spending on infrastructure, offering tax rebates for exporters and allowing state-controlled prices for agricultural products to rise. Expect significant measures to kick-start the property market to avoid house prices falling too drastically. China has a lot of plus points to help out. Chinese banks did not issue subprime loans as a rule, and the country's €1.43 trillion in hard-currency reserves is a useful war chest to call on in a downturn. The currency is stable and there are high liquidity levels, all of which give China the most flexibility in the world to fend off the impact of the global financial crisis, says JP Morgan economist Frank Gong. China is now a globalised economy, but its domestic market is still massively underexploited, and it is to this market that the government will most likely turn. While it is a globalised economy committed to the WTO, China is also a centralised economy run by the Communist Party, and it has no real political opposition at home to stop it acting however it sees fit to stop sliding growth. Should the economy start to worsen significantly, public anger will increase, but China has been so successful in keeping a tight leash on the internet and the media that it is difficult for opposition to organise itself in a meaningful way. Recent years of surging growth in China have certainly done a lot to keep global economic data looking rosy, but perhaps China's influence has been somewhat oversold. It is not a big enough economy by itself to keep the global economy ticking over, accounting for 5 per cent of the world economy, compared to the United States with a muscular 28 per cent. And whatever about slowing growth, 9 per cent is still an admirable rate, one that European leaders gathered this weekend in Beijing for the Asian-Europe Meeting would give their eye teeth to be able to present to their constituencies.

#### Chinese economic growth strong now

#### Bloomberg 1-17 ["China Economic Growth Picks Up for First Time in Two Years," 1-17-13, http://www.bloomberg.com/news/2013-01-18/china-economic-growth-picks-up-for-first-time-in-two-years-1-.html]

China’s economic growth accelerated for the first time in two years, with industrial output picking up, after the government implemented policies to revive domestic demand as export growth slumped. Gross domestic product rose 7.9 percent in the fourth quarter from a year earlier, the National Bureau of Statistics said in Beijing today. That compared with the 7.8 percent median estimate in a Bloomberg News survey and 7.4 percent in the previous period. Industrial output in December rose a more-than- expected 10.3 percent and fixed-asset investment for the year gained 20.6 percent. Enlarge image Pedestrians and shoppers walk past Chinese national flags displayed outside a department store in Beijing, China. Photographer: Tomohiro Ohsumi/Bloomberg Enlarge image Pedestrians walk past the central business district in Beijing. Improving investor confidence in China’s outlook has lifted mainland stocks and the currency. The Shanghai Composite Index has advanced 17 percent as of yesterday from an almost four-year low on Dec. 3. Photographer: Wang Zhao/AFP/Getty Images The rebound may gather pace in the first half as infrastructure projects are rolled out and the housing market picks up, a boost for new leaders who are set to take office in March. Incoming Premier Li Keqiang may face a tougher second half as stimulus effects fade, a likely acceleration in inflation encourages monetary tightening and regulators grapple with shadow-banking risks. “China is in a cyclical recovery and we can see that the recovery will continue into the first and second quarters, but what happens after that is quite uncertain,” Yao Wei, China economist with Societe Generale SA, said before the report. “What happens to the property market is the biggest upside and downside risk, while the rise in non-bank financing may lead regulators to tighten -- we can’t simply assume policy will get easier from now on.” Raised Forecast Hong Kong-based Yao, ranked by Bloomberg as the most accurate forecaster for quarterly GDP, had forecast 7.9 percent for the quarter. She raised her estimate for expansion in the first three months of 2013 to 8.2 percent from 7.8 percent and for the second quarter to 7.9 percent from 7.5 percent, according to a note released yesterday. She expects momentum to fade in the second half, with growth slowing to 7.4 percent in the fourth quarter. The economy expanded 7.8 percent for the full year, the least in 13 years, according to statistics bureau data, compared with the 7.7 percent median estimate in a Bloomberg survey of 32 economists. Growth may pick up to 8.1 percent this year, according to analysts polled by Bloomberg in December. Outgoing Premier Wen Jiabao set a 2012 target of 7.5 percent in March, the lowest goal since 2004. The government will keep the target at 7.5 percent this year, Bloomberg News reported on Dec. 18, citing two bank executives and a regulatory official briefed on the matter. Stocks Increase Improving investor confidence in China’s outlook has lifted mainland stocks and the currency. The Shanghai Composite Index (SHCOMP), the nation’s benchmark gauge, has advanced 17 percent as of yesterday from an almost four-year low on Dec. 3. It was 0.7 percent higher at 10:02 a.m. local time today. The yuan has appreciated 0.23 percent against the dollar this year as of yesterday, the best start since 2009, on signs China’s growth is accelerating. The currency touched 6.2124 per dollar on Jan. 14, the strongest level since the government unified the official and market exchange rates at the end of 1993. The increase in industrial production compared with the 10.2 percent median forecast in a Bloomberg survey of 44 analysts and was the fastest pace since March. Retail sales climbed 15.2 percent from a year earlier, compared with the median analyst estimate of 15.1 percent and a 14.9 percent increase the previous month. Fixed-asset investment excluding rural households for the January-to-December period compared with a 20.7 percent gain in the first 11 months of the year. Easing Pause The central bank has paused from its monetary easing since July after two interest-rate cuts and three reductions in lenders’ reserve requirements starting in November 2011. At the same time, the government has accelerated investment-project approvals, trimmed fees for exporters and increased spending on infrastructure. The investment is helping companies including China Railway Group Ltd., which said this week that it won 11 contracts valued at 29.8 billion yuan ($4.8 billion) to build urban railways, bridges and other infrastructure.

#### Fundamental disconnect between their ILs --- preventing Chinese solar industry collapse doesn't resolve environmental protests

#### Demand strong in China --- don't need US markets

Silverstein 1-11 [Michael, "Behind China’s roaring solar industry," Harvard Business School Blog, http://economicdevelopment.org/2013/01/behind-chinas-roaring-solar-industry/]

Wednesday, [Bloomberg reported](http://www.bloomberg.com/news/2013-01-09/trina-leads-solars-higher-on-state-goals-china-overnight.html) that Chinese solar stocks had soared based on market expectations that demand in China for alternative energy will increase given the Chinese government’s increasing solar capacity targets. Earlier this week, China’s National Energy Administration [announced its intention to add 10 gigawatts of solar power capacity in 2013](http://online.wsj.com/article/SB10001424127887323706704578229570073217326.html), more than twice its current level. According to Barron’s and others, China has already begun implementing its ambitious plan to increase installations. It previously approved the Golden Sun initiative for the first half of this year and committed prodigious amounts of government cash to the sector. China has also begun offering subsidies for rooftop solar projects. These aren't controversial production-side subsidies (of the kind that have been challenged as contravening international trade agreements) but rather incentivizing domestic subsidies intended to help Chinese citizens and organizations to purchase solar systems at an affordable price. This week, the share price of Trina Solar Ltd. the nation's third-biggest maker of [solar panels](http://blogs.hbr.org/cs/2013/01/behind_chinas_roaring_solar_in.html?), jumped to the highest level in five months even as that of LDK Solar Co. rallied 7.7 percent. Although some commentators may see this uptick in China's solar investments (and equity values) as an intriguing short term phenomenon, we at The Boston Consulting Group believe it reflects a public commitment on the part of China's government to embrace [clean energy](http://blogs.hbr.org/cs/2013/01/behind_chinas_roaring_solar_in.html?) sources and to seek economic growth that is less energy dependent, as well as these profound long-term trends: A booming Chinese population of ever more confident middle class consumers. We calculate that between 2010 and 2020, the people of China and India will have consumed goods and services worth a total of $64 trillion. Chinese consumers will spend $41.5 trillion over this period, with annual expenditures rising from $2.0 trillion to $6.2 trillion, an increase of 203 percent. Many of these newly affluent consumers are purchasing homes for the first time. In 1990, there were 227 million houses in China — by 2010, there were 371 million. Increased urbanization, construction, and vertical living, driving tremendous new demand for sources of safe and renewable energy. More than 15 percent of the country's investment goes into real estate, and around 12 percent of GDP comes from property-related industries. In 2010, for the first time, China overtook the United States as the world's largest center for construction, investing more than $1 trillion in building projects. Over half of this money was spent on new housing. Heavy government investments in the nation's infrastructure. China is projected to spend $113 billion per year on trains and railway infrastructure. The new high-speed line connecting Shanghai to Hangzhou, which opened in late October 2010, cost $4 billion and took just two years to build — an astonishingly rapid rate, given the glacial pace at which large infrastructure projects proceed in the West. Even larger investments are pouring into housing, waterworks, mass transit systems, power plants, natural gas distribution networks, and electric grids. We calculate that China needs to make an investment of $17.3 trillion between now and 2030: around 40 percent on housing, 27 percent on water infrastructure, 16 percent on roads and railways, 13 percent on electricity networks, and the rest on telecommunications, ports, and airports.

#### China solar capacity won't get developed in time to solve environmental concerns

### Warming

#### Reducing coal emissions would trigger rapid warming due to reduced aerosol cooling.

N. Chalmers et al,1,2 E. J. Highwood,1 E. Hawkins,1,2 R. Sutton,1,2 L. J. Wilcox1, 8/21/2012. 1Department of Meteorology, University of Reading, Reading, U.K.; 2NCAS-Climate, University of Reading, Reading, U.K. “Aerosol contribution to the rapid warming of 2 near-term climate under RCP 2.6,” Manuscript, accepted for publication in Geophysical Research Letters, [www.met.reading.ac.uk/~ed/home/chalmers\_etal\_2012\_accepted.pdf](http://www.met.reading.ac.uk/~ed/home/chalmers_etal_2012_accepted.pdf).

The period during which global mean surface temperature in RCP2.6 is higher than in 130 RCP4.5, discussed in the previous section, is directly related to a rapid increase in global 131 mean surface temperature in RCP2.6, between around 2010 and around 2025 (Figure 1a). 132 In this section we investigate the causes of this rapid warming, and relate this event to 133 the comparison with RCP4.5. Figure 3 shows maps of the differences between the 10 year 134 means before and after the rapid warming. In this case a positive value indicates a larger 135 value after the sudden warming identified in Figure 1.¶ 136 As expected, there is a large reduction in sulphate load, and corresponding decrease 137 in CDNC over most of the northern hemisphere, consistent with a change in the indirect 138 aerosol effect. An increase in the effective radius is also seen (not shown). This reduces 139 the optical depth of the clouds when they are present, meaning more downward shortwave 140 flux is transmitted to the surface. There is also a prominent decrease in cloud fraction over 141 the subtropical northeastern Pacific Ocean which could be a consequence of the impact 142 of reduced sulphate aerosol on cloud lifetime. Lu et al. [2009] show that drizzle rate from 143 clouds in this region is indeed inversely related to aerosol concentration. Kloster et al. 144 [2010] also suggested that a change in cloud water path in their simulations with aggres-¶ 145 sive aerosol reductions resulted from enhanced drizzle formation. We hypothesise that 146 the localised nature of this feature by comparison with the sulphate and CDNC change 147 is due to the cloud in this region being particularly sensitive to a change in aerosol. Cli- 148 matologically, this region is a transition zone between open and closed mesoscale cellular 149 convection [Rosenfeld et al., 2011], aerosol concentrations being lower in the open celled 150 regions [Woods et al., 2011]. Although the details of these processes are unlikely to be 151 represented explicitly in global models, the localised strong decrease in cloud fraction in 152 the northeastern Pacific ocean would be consistent with a change in cloud regime driven 153 by decreased aerosol. Other regions show increases in cloud fraction, which cannot readily 154 be explained as a direct response to the decrease in sulphate load. It is likely that instead 155 these reflect non-local adjustments of the coupled ocean-atmosphere system in response 156 to the change in forcing.¶ 157 Figure 3 also shows the difference in surface shortwave flux (panel d), surface air tem- 158 perature (panel e), and global energy balance (panel f). The predicted increase in surface 159 downward shortwave radiation is seen in the global mean and particularly in the regions 160 of decreased cloud fraction and sulphate load. A negative anomaly in surface SW is co- 161 located with the positive cloud fraction changes. The pattern of surface air temperature 162 change shows large warming over the northern continents and the Arctic, and also a local 163 maximum over the subtropical northeastern Pacific coincident with the region of reduced 164 cloud fraction. The same localised pattern appears in all the simulations of Kloster et al. 165 [2010] that include aerosol reductions, but is absent from their simulations considering 166 only future changes in greenhouse gases.¶ 167 The surface energy budget shows the expected increases in downward shortwave radia- 168 tion. In addition there is an increase in downward longwave radiation in response to the 169 increase in GHG concentrations between the two periods, and also reflecting changes in 170 clouds. The warming due to increases in net surface downward radiation is balanced by 171 increases in latent and (over land) sensible heat fluxes.¶ 4. Discussion and Conclusions¶ 172 In this study we have compared projections of near term climate in the HadGEM2-ES 173 model under RCP4.5 and RCP2.6. GHG forcing under these scenarios is almost identical 174 until 2020, and then declines in RCP2.6 relative to RCP4.5. However, between 2018 and 175 2037 global annual mean surface air temperature is warmer under RCP2.6. The start of 176 this period **is characterised by a period of particularly rapid warming**.¶ 177 Our results provide compelling evidence that the warming in RCP2.6 is a result of a 178 rapid decrease in sulphate aerosol load. This decrease is caused by a decrease in sulphur 179 emissions in RCP2.6, **as a result of the rapid decrease in coal use** needed to reduce GHG 180 emissions. Thus our results highlight the difficulty of reducing the rate of global warming 181 in the near term in this model, even under extreme scenarios for reducing GHG emissions, 182 and is consistent with previous simulations by Wigley [1991] and Johns et al. [2011].

#### That would double warming and quickly take us above the “2-degree threshold.”

Dr Andrew Glikson, 6/6/2011. Earth and paleoclimate science, Australian National University. “Global warming above 2° so far mitigated by accidental geo-engineering,” Crikey, http://www.crikey.com.au/2011/06/06/global-warming-above-2%C2%B0-so-far-mitigated-by-accidental-geo-engineering/.

According to NASA’s Goddard Institute of Space Science climate reports, global warming is already committed to a rise above two degrees. The magical two degrees ceiling determined by governments **is only holding thanks to effective, if unintended, geo-engineering by sulphur dioxide** emitted from industry, holding global warming to about half of what it would be otherwise. Recent publications by Hansen and his [research](http://www.columbia.edu/%7Ejeh1/mailings/2011/20110415_EnergyImbalancePaper.pdf) [group](http://arxiv.org/ftp/arxiv/papers/1105/1105.0968.pdf) indicate the rise of atmospheric energy (heat) level due to greenhouse gases and land clearing are committed to +2.3 degrees (+3.1 Watt/m2), currently mitigated by the transient effect of sulphur aerosols and the cooling effect of the oceans. Sulphur dioxide is emanated from coal, oil and the processing of minerals (breakdown of sulphides to produce copper, zinc, lead and so on), and from other chemical industries. It combines with water in the atmosphere to produce sulphuric acid, which (being heavier than air) condenses and settles to the ground within a few years. Aerosols stay in the atmosphere and stratosphere on time scales ranging from hours to days and to years, depending on their grain size, chemistry and height in the atmosphere and on the physical state and temperature of the atmosphere at different altitudes and latitudes. The aerosols are short-lived, i.e. on time scales of up to a few years, but since they are continuously emitted from industry the overall level is increasing as burning of fossil fuels is rising. The continuing emission of sulphur aerosols in effect constitute a global geo-engineering process without which the atmosphere would warm by another 1.2 degrees (1.6 Watt/m2) above the present level, **resulting in near-doubling of global warming** ([Figure 1](http://www.columbia.edu/%7Ejeh1/mailings/2011/20110415_EnergyImbalancePaper.pdf)).

#### Speed is critical—rapid warming overwhelms adaptation.

Joseph Milton, 11/11/2010. PhD Evolutionary Biology @ St Andrews, science journalism @ City U London, writer for the Financial Times, New Scientist, Nature News, Research Fortnight, and Scientific American. “Rapid warming boosted ancient rainforest,” Scientific American, http://www.scientificamerican.com/article.cfm?id=rapid-warming-boosted-ancient.

Most scientists have assumed that, as carbon dioxide levels increase and the Earth warms, plant species diversity in the rainforests will start to dwindle, with [plants](http://www.scientificamerican.com/topic.cfm?id=plants) unable to adapt to the heat. But a new study suggests that the opposite may be true. In the past, rising atmospheric carbon dioxide and higher temperatures actually drove the evolution of far greater numbers of new rainforest plant species than were wiped out. ¶ But don't trade in your electric car for a gas-guzzler just yet--**if** rainfall drops as **temperatures** rise, or if they **rise too rapidly, the outcome** for rainforest diversity **could be much less positive**.¶ For clues to how rainforest diversity will be affected by increasing atmospheric carbon dioxide and the corresponding rise in temperatures, Carlos Jaramillo, a palaeobiologist at the Smithsonian Tropical Research Institute in Panama, and his colleagues decided to look at what happened during similar conditions in the past.¶ One such episode in Earth's history occurred 56.3 million years ago and is called the Palaeocene-Eocene Thermal Maximum (PETM). Within 10,000-20,000 years, the world warmed by 3-5 degrees Celsius and atmospheric carbon dioxide doubled to around two and a half times the levels we see today. These unusually warm conditions lasted for around 200,000 years. ¶ Pollen clues¶ To find out how this ancient climate change affected rainforest plants, Jaramillo and his team analyzed fossilized pollen trapped in rock cores from rainforests in Colombia and Venezuela. They spent seven years locating appropriate sites and taking samples, then used a battery of dating techniques to ensure that they were examining cores formed before, during and after the thermal maximum--a relatively narrow time window in geological terms. The results were published November 12 in Science.¶ Although some plant species disappeared, many more new species arose. That included entire families, suggesting that the increased temperatures and carbon dioxide levels actually boosted [biodiversity](http://www.scientificamerican.com/topic.cfm?id=biodiversity). "What we found was exactly the opposite of what we were expecting," says Jaramillo. "The diversity of the tropical forest increased really fast over a very short amount of time."¶ The pollen fossil record shows that some important plant families, such as Myrtaceae, which includes eucalyptus, and Passifloraceae--the passion flowers--made their first appearance during the thermal maximum. The tropics have remained the most species-diverse area of the world ever since.¶ This might sound like good news for the rainforest in the face of contemporary climate change. However, Guy Harrington, a palaeobiologist at the University of Birmingham, UK, warns that any positive effects on plant diversity could be canceled out if temperatures rise too quickly for plants to adapt. "**It's the rate--how fast you're turning up the heater--that's the most important thing**," he says.

#### Climate commitment means warming would be unmasked.

K. C. Armour 1 and G. H. Roe 2, 2010. 1Department of Physics, University of Washington, Seattle,; and 2Department of Earth and Space Sciences, University of Washington, Seattle. “Climate commitment in an uncertain world,” Geophysical Research Letters 38, L01707, 5 PP.

Climate commitment—the warming that would still occur given no further human influence—is a fundamental metric for both science and policy. It informs us of the min- imum climate change we face and, moreover, depends only on our knowledge of the natural climate system. Studies of the climate commitment due to CO2 find that global temperature would remain near current levels, or even decrease slightly, in the millennium following the cessation of emissions. However, this result overlooks the important role of the non-CO2 greenhouse gases and aerosols. This paper shows that **global energetics require an immediate and significant warming following the cessation of emissions as aerosols are quickly washed from the atmosphere**, and the large uncertainty in current aerosol radiative forcing implies a large uncertainty in the climate commitment. Fundamental constraints preclude Earth returning to pre-industrial temperatures for the indefinite future. These same constraints mean that observations are currently unable to eliminate the possibility that we are already beyond the point where the ultimate warming will exceed dangerous levels. Models produce a narrower range of climate commitment, but under- sample observed forcing constraints.

#### Short lifetime means SO2 reductions would immediately cause warming.

Zeke Hausfather, 6/24/2008. MA Environmental Management @ Yale, Chief Scientist and Executive Vice President of Energy at Efficiency 2.0. “Why Reducing Sulfate Aerosol Emissions Complicates Efforts to Moderate Climate Change,” Yale Climate Forum, http://www.yaleclimatemediaforum.org/2008/06/common-climate-misconceptions-why-reducing-sulfate-aerosol-emissions-complicates-efforts-to-moderate-climate-change/.

A reduction of anthropogenic SO2 of around 50 percent worldwide over the next century, as projected in the most recent IPCC report, would result in a significant warming effect on the global climate. Sulfates are extremely short-lived particles, and emission reductions **would have immediate effects on radiative forcing**. A 50 percent reduction in sulfate aerosol emissions would reduce by half their current radiative forcing of -0.83 W m-2. This change in forcings would increase global temperatures by roughly 0.36 degrees C (.64 F) relative to a scenario where aerosol emissions remain constant.¶ Figure three below shows the practical implications of a reduction in aerosols in the next century. If current greenhouse gas concentrations remain constant at current levels, scientists project about 1.34 degrees C (2.41 F) warming relative to pre-industrial temperatures by the end of the century (the world has already warmed 0.74 degrees C (1.33 F) in the past century, and 0.60 degrees C (1.08F) additional warming is in the pipeline as a result of Earth’s thermal inertia). A reduction of anthropogenic atmospheric sulfate aerosols by 50 percent means that 1.34 degrees C (2.41 F) warming suddenly becomes 1.70 degrees C (3.06 F).

**Can’t solve – eliminating every coal plant would only be a POINT 2 degree change**

RAPIER 12 Chief Technology Officer at Merica International – a Renewable Energy Company, Master’s in Chemical Engineering from Texas A&M University [Robert Rapier, Study: Eliminating Coal-Fired Power is Worth 0.2 Degrees in 100 Years, <http://www.consumerenergyreport.com/2012/03/05/study-eliminating-coal-fired-power-is-worth-0-2-degrees-in-100-years/>]

Who could have dreamed solving climate change would be so easy? A new paper in Environmental Research Letters called “Greenhouse gases, climate change and the transition from coal to low-carbon electricity” concludes that replacement of all of the world’s currently operating coal-fired power plants — which produce about 40% of the world’s electricity — and replacing them with renewable energy would have an impact of 0.2 degrees Celsius 100 years from now.

Cherry-Picking Conclusions According to One’s Viewpoint

However, a number of climate change websites took away a very different message than I took away from the paper. Here is Joe Romm’s view:

Bombshell: You Can’t Slow Projected Warming With Gas, You Need ‘Rapid and Massive Deployment’ of Zero-Carbon Power

I seem to recall another “bombshell” that he recently reported upon on the same theme: Natural Gas Bombshell: Switching From Coal to Gas Increases Warming for Decades, Has Minimal Benefit Even in 2100. I debunked that by showing that in that particular study, every possible alternative — including wind power, solar power, and even simply shutting down all of the coal plants — was projected to increase global warming in the short term: BOMBSHELL: Solar and Wind Power Would Speed Up, Not Reduce, Global Warming.

But Joe is back with the hyperbolic titles and exaggerations (which I get into below), and he missed the biggest story in the paper.

Coal and Sunlight-Reflecting Pollutants

The subject of Romm’s earlier “natural gas bombshell” was a paper written by Tom Wigley that concluded that shutting down coal-fired power plants would cause the global temperature to increase in the short term because of the loss of sunlight-reflecting pollutants.

In that particular paper, Dr. Wigley modeled what would happen if coal-fired power was replaced with natural gas. He did indeed project short-term warming in that scenario, yet it was a result of the air becoming cleaner and allowing sunlight through as the coal was phased out. Thus, the media really got that story wrong, which was not about a deficiency of natural gas, but rather about the peculiarity of burning coal — that the particulate emissions reflect sunlight. Those who fixated on natural gas as the culprit could have written the same story about solar power — which the study’s author confirmed for me. Hence, I made that my “Bombshell” to illustrate the point.

However, that particular study didn’t actually model the temperature impact of shutting down coal plants and replacing them with anything other than natural gas. So, I posed the following question to Dr. Wigley:

What does the graph look like in 2100 if all coal-fired plants were replaced with zero emission sources (as the idealized study)? I am just wondering what the potential actually is. Are we talking about 1 or 2 degrees lower? I just have no idea of the relative context.

We had several email exchanges over his paper, and he said that my questions were intriguing and he would look into them. I never heard back from him on that, but this new paper answers the question.

Shuttering All the World’s Coal Plants Wouldn’t Do Much

The authors of this newest study modeled the replacement of coal-fired power plants with either natural gas, coal with carbon capture and storage, hydropower, solar PV, solar thermal, wind power, or nuclear power. You can see from Joe Romm’s headline how the story is being spun, but let’s break it down in a more objective fashion.

The following graphic from the paper tells the story. Pay particular attention to the temperature scale.

The graphic indicates — as Tom Wigley’s previous paper indicated but which was only reported relative to natural gas — that in every single case, it doesn’t matter what coal-fired power plants are replaced with, the temperature is projected to increase for almost the next 40 years. This is true even in the baseline “Conservation” case, which involves merely idling the coal-fired plants and not replacing them with anything.

The paper projects that if coal-fired power plants continue to operate, the expected temperature rise relative to the baseline (i.e., relative to the expected temperature increase from other sources) in 50 years is 0.15 degrees C, and in 100 years is about 0.33 degrees C. If coal is phased out and replaced with natural gas, the relative 50 and 100 year temperature rise is projected to be 0.14 degrees C and 0.24 degrees C, respectively. So the paper shows slightly less warming when natural gas is used, which Climate Progress Tweeted as “Switch from coal to natural gas would have zero effect on global temperatures by 2100” and included a link to Joe’s “bombshell.” That is obviously an exaggeration, as the graphic clearly shows that the effect is not zero. If it was, the natural gas line would overlay the coal line.

Shocking Implications

One shocking implication from the paper was the projection that hydropower would be worse than coal for the next 60 years. The study’s authors cited methane emissions from organic matter buried under water as the reason for this apparent anomaly. But that’s not the really shocking thing about the study for me.

The most shocking conclusion was the magnitude of the numbers we are talking about. Even if you could in theory shut down all of the coal-fired power plants in the world and replace them with wind, solar, and hydropower — in 50 years the projected temperature is only one-twentieth of a degree C cooler than the base case of continuing to use coal. In 100 years, if I could replace all global coal-fired power plants with firm, renewable power — the temperature is only projected to be about 0.2 degrees cooler than under the coal base case. And the way this is being spun is that the 0.09 degree reduction from switching to natural gas is equivalent to an effect of “zero”, but the 0.2 degree reduction in hypothetically replacing everything with wind and solar power 100 years from now is significant. About the natural gas case, Romm literally said the 0.09 degree lower temperature in switching to natural gas means that “natural gas is a bridge fuel to nowhere”, but the 0.2 degree lower temperature in switching to renewables is “the world’s only plausible hope to avert catastrophic temperature rise.”

Nuclear & Natural Gas to the Rescue — But Most Environmentalists Hate Them

A big irony here is that there are only two power sources that are today capable of achieving the study’s conclusion that we must rapidly replace coal-fired power plants: Nuclear power and natural gas. If people really believe that we must urgently address this issue — and they don’t believe that the change from going to natural gas is enough — that leaves nuclear power as the only option capable of achieving a rapid replacement.

Bear in mind that this is for a global replacement of coal — most of which is used in Asia. Good luck trying to sell China and India on a 0.2 degree temperature difference in 100 years if they quickly abandon their coal-fired power plants and replace them with wind power.

Conclusion: Study is a Major Downer for Activists Battling Climate Change

To be honest, if I was devoting my life to fighting against the threat of climate change, this would be one of the most depressing papers I have ever read. If we could convince everyone in the world to shut down their coal-fired power plants — which we can’t — and replace them with renewable power — which isn’t available in quantities sufficient to replace coal-fired power — then by the end of my life there would still be no statistically significant temperature change to even be able to tell if my life’s work was successful.

But let’s be realistic, shall we? The people who are concerned about global warming have dug in their heels over natural gas, and they are generally opposed to nuclear power. Because of the sheer impossibility that we will rapidly replace coal with wind and solar power (especially since “we” is the world), then we will in all likelihood be left with the status quo. As I have said before, emissions are much higher in Asia Pacific than they are in the U.S. and Europe combined, and they are rising rapidly. Unless we can figure out a way to convince them to develop without fossil fuels — something no country has done — then global carbon emissions will continue to rise. This is why — even though I accept the science behind climate change — it isn’ t my focus. I just don’t see how the West can possibly do anything about it.

#### Not try or die

**Aikman 11** [Amos, “Climate forecasts 'exaggerated': Science journal,” 11-25, <http://www.theaustralian.com.au/news/health-science/climate-forecasts-exaggerated-science-journal/story-e6frg8y6-1226205464958>]

DRAMATIC forecasts of global warming resulting from a doubling of atmospheric carbon dioxide have been exaggerated, according to a peer-reviewed study by a team of international researchers.

In the study, published today in the leading journal Science, the researchers found that while rising levels of CO2 would cause climate change, the most severe predictions - some of which were adopted by the UN's peak climate body in its seminal 2007 report - had been significantly overstated.

The authors used a novel approach based on modelling the effects of reduced CO2 levels on climate, which they compared with proxy-records of conditions during the last glaciation, to infer the effects of doubling CO2 levels.

They concluded that current worst-case scenarios for global warming were exaggerated.

"Now these very large changes (predicted for the coming decades) can be ruled out, and we have some room to breathe and time to figure out solutions to the problem," the study's lead author, Andreas Schmittner, an associate professor at Oregon State University, said.

Scientists have struggled for many years to understand how to quantify "climate sensitivity" - how Earth will respond to projected increases in atmospheric carbon dioxide.

In 2007, the UN's peak climate body, the Intergovernmental Panel on Climate Change, warned that a doubling of CO2 from pre-industrial levels would warm the Earth's surface by an average of 2C to 4.5C, although some studies have claimed the impact could be 10C or higher.

Professor Schmittner said it had been very difficult to rule out these extreme "high-sensitivity" scenarios, which were very important for understanding risks associated with climate change.

The study found high-sensitivity models led to a "runaway effect" under which the Earth would have been covered in ice during the last glacial maximum, about 20,000 years ago, when CO2 levels were much lower.

"Clearly that didn't happen, and that's why we are pretty confident that these high climate sensitivities can be ruled out," he said.

Professor Schmittner said taking his results literally, the IPCC's average or "expected" value of a 3C average temperature increase for a doubling of CO2 ought to be regarded as an upper limit.

"Many previous climate-sensitivity studies have looked at the past only from 1850 through to today, and not fully integrated paleoclimate data, especially on a global scale," he said. "If these paleoclimatic constraints apply to the future, as predicted by our model, the results imply less probability of extreme climatic change than previously thought."

Slowing now due to natural forcings – no risk of runaway warming

Klimenko 11 [VV, Research Assistant at the [Department of Theoretical Astrophysics](http://www.ioffe.ru/astro/) of the [Ioffe Physico-Technical Institute](http://www.ioffe.ru/), “Why Is Global Warming Slowing Down?,” 5-20, Doklady Earth Sciences, 2011, Vol. 440, Part 2, pp. 1419–1422]

The first decade of the present century has ended with a remarkable climatic event: for the first time over the past 65 years, the five year average global temperature over 2006–2010 turned out to be lower than the value for the previous five year interval (2001–2005). In addition, the absolute maximum temperature, which was attained as long ago as in 1998, has not been surpassed for thirteen years. Both these facts seem ingly support the arguments of the opponents of global warming theory, at least those who regard the anthro pogenic origin of warming questionable or even farfetched. Indeed, the anthropogenic emission of carbon dioxide, which is the major greenhouse atmospheric component, has risen by 60% from 5.2 giga tons to 8.5 gigatons of carbon, and its concentration has increased from 339 to 390 ppmv (parts per million by volume). How then do we explain the apparent slowdown in the rate of global warming?

Evidently, the observed global rise in temperature (Fig. 1) is a response of the climatic system to the combined action of both anthropogenic and natural impacts. Some of the latter are precisely the factors responsible for the current climatic paradox. Further, we will attempt to identify these factors and, based on their analysis, forecast the global climatic trends for the next decades.

Figure 2 presents the wavelet spectra yielded by continuously analyzing the time series of global tem perature over 1850–2011 [1]. Here, we analyze only one of three existing global temperature datasets which are continuously updated, namely the HadCRUT3 temperature series provided by the Uni versity of East Anglia (accessible at http://www.cru. uea.ac.uk/cru/data/temperature/), because this is, as of now, the only dataset covering more than a 150-year interval, which is crucial for our study. We note that it only recently became possible to analyze such long time series and, thus, identification of multidecade rhythms became a solvable task. The temperature data were preliminarily rid of the longterm anthropogenic trend associated with the accumulation of greenhouse gases and aerosols in the atmosphere; this trend was calculated from the energybalance climate model developed at the Moscow Power Engineering Institute (MPEI) [2]. The resulting temperature series, free of anthropogenic trends, will contain important infor mation on the influence of natural factors. Figure 2 shows that, throughout the entire interval of instrumental observations since the mid nineteenth century, the data contain rather stable 70 year and 20 year cyclic components. A less significant 9year cycle was present in most observations (during 1870– 1900 and 1940–2000), and a 6year cycle persisted over a considerable part of the entire time span. Closely consistent results were also obtained when analyzing the temperature series by the maximum entropy method (MEM) (Fig. 3). As the order of the auroregression (AR) method is known to significantly affect the result, in our case this parameter was chosen to be onethird the length of the studied data series: according to the long experience in application of MEM in climate research, this value is suitable for providing useful information. All the harmonic com ponents identified above are statistically significant with a confidence level of 90%.

Supposedly, the source of the dominant 70year cycle is the North Atlantic, where this harmonic is reliably identified not only in the ocean [3–5] but also on the continental margins: in Greenland [6], England [7], Finland [8], at the Novaya Zemlya Archipelago, and on the Yamal Peninsula [9]. Moreover, this periodical component is not only recognized in the instrumental data but it is also revealed in the time series of paleotemperature and pressure which date back to over hundreds and even thousands of years ago. We believe that this rhythm is associated with the quasiperiodical changes in the atmospheric and oceanic circulation known as the North Atlantic Oscillation (NAO) and with the related pulsations in the advection of warm waters to the basins of the Nor wegian and Barents seas. Indeed, the time series of the NAO index contain an approximately 60to 70year component [10] and show a strong positive correlation with the time series of temperature in the Northern hemisphere [11]. The positive phases of NAO indices are character ized by a more intense westerly air mass transport and a noticeable warming of the major part of the nontrop ical zone in the northern hemisphere, which is most prominent in the winter–spring season. Incidentally, the most rapid phase of the presentday warming (1975–2005) just featured such seasonal asymmetry, which is more evidence in favor of the hemispherical and global temperatures being related to NAO. Finally, it turns out that the 70year periodicity is present in the globally averaged temperature and in the temperature averaged over the northern hemisphere, whereas in the spectrum for the southern hemisphere, this harmonic component is rather weak (Fig. 3). This is an important additional argument in favor of the North Atlantic origin of the 70year cycle.

The existence of the quasibidecadal oscillations is often attributed to the influence of the Sun. However, the situation is not so simple: in our case, this cycle is almost not recognizable in the northern hemisphere, although clearly pronounced in the southern hemisphere (Fig. 3). This fact motivates one not to con strain the probable origin of this periodicity to the behavior of the Sun, but also to search for its possible correlations to the variability in the Southern Oscillation (SO) whose index has a peak at a period of 22 years [12, 13]. The latter hypothesis is supported by the fact that the temperature series over the equatorial and southern portions of the Pacific as well as those over the entire water area of the Indian Ocean contain a distinctly expressed quasibidecadal oscillation [3]. In turn, the SO, which largely controls the tempera ture regime of the southern hemisphere, is undoubt edly affected by the variations in the rate of the Earth’s rotation, which also have a significant periodical com ponent at 22 years [14].

As of now, the nature of the 9year oscillations is least clear. We suppose it to be a result of superimposi tion of oscillations associated with the lunar–solar tides that have characteristic times of 8.85 (the perigee period of the Moon) and 9.86 years (the period of barycenter of the Sun–Jupiter system), which are cer tainly able to cause significant changes to the atmo spheric circulation and, therefore, temperature. The comparison of the instrumental data series since 1850 with the results of calculations using the energy balance model with superimposed main cyclic components is presented in Fig. 1. The calculated curve in the interval 1850–2011 accounts for more than 75% of the observed variability in the data and clearly demonstrates that the natural factors may considerably enhance or, quite the opposite, reduce the ongoing warming up to its complete disappearing or even shortterm cooling, as has occurred during the last 6–8 years. We suppose warming will resume shortly in the years to come (Fig. 1). However, up to the end of the century, its rate will likely be lower than the value attained in 1975–2005 when the extremely intense positive phases of NAO and SO concurrent with the highest solar irradiation over the last 600 years [15] resulted in a rate of warming as high as in excess of 0.2°C per decade. In the next few decades, the natural forcings will restrain the process of global warming. This will be primarily associated with the decline in solar activity and the transition to the negative phase in NAO, which features a weaker westerly air mass transport. Recent measurements show that both these processes are gaining strength. Indeed, the NAO index has consistently decreased since early 1990 and is now at a 40year low (http://www.cgd. ucar.edu/cas/jhurrell/indices.html). At the same time, the minimal solar constant over the entire 33year his tory of satellite observations has been recorded in the current, solar cycle 24, which started in the fall of 2008 (http://www.pmodwrc.ch/pmod.php?topic=tsi/ composite/SolarConstant/).

#### Not anthropogenic – other factors are more important and there is a diminishing curve. Evidence to the contrary is media hysteria

#### Paterson 11 [Norman R., Professional Engineer and Consulting Geophysicist, PhD in Geophysics from University of Toronto, Fellow of the Royal Society of Canada, “Global Warming: A Critique of the Anthropogenic Model and its Consequences,” Geoscience Canada, Vol 38, No 1, March, Ebsco]

The term ‘global warming’ is commonly used by the media to mean ‘anthropogenic’ global warming; that is, warming caused by human activity. In this article, the writer has chosen to prefix ‘global warming’, where appropriate, by the terms ‘anthropogenic or ‘humancaused’ in order to avoid confusion. We are led today by our media, governments, schools and some scientific authorities to believe that, through his CO2 emissions, man is entirely, or almost entirely, responsible for the modest, modulated rise in global temperature of about 0.7° C that has taken place over the past 100 years. We are told, and many sincere people believe, that if we continue on this path, the planet will experience escalating temperature and dangerous sealevel rise before the end of this century. Over the past 20 years or so, this has become so much a part of our belief system, that to challenge it is to be labelled a ‘denier’ and put in the same category as a member of the Flat Earth Society. Yet, even a cursory review of the peer-reviewed scientific literature will show that the popular anthropogenic global warming dogma is being questioned by hundreds of respected scientists. Furthermore, emerging evidence points directly to other natural phenomena as probably having greater effects on global temperatures than can be attributed to human-caused CO2 emissions. The disproportionate scientific weighting attributed to the anthropogenic warming interpretation, and the general public perception of its validity, could be a serious problem for society, as the human-caused global warming belief is diverting our attention from other, more serious anthropogenic effects such as pollution and depletion of our water resources, contamination of our food and living space from chemicals, and diminishing conventional energy resources.

PROBLEMS WITH THE ANTHROPOGENIC MODEL The fact that the world has undergone cycles of warming and cooling has been known for a very long time, but the question as to man’s influence on climate did not become a hot debate until after the mid-twentieth century, when Revelle and Seuss (1957) first drew attention to the possible effect of greenhouses gases (particularly CO2 ) on the earth’s temperature. Subsequent studies pointed to the increase in atmospheric CO2 from roughly 0.025% to 0.037%, or 50%, over the past 100 years. Much was made of the apparent but crude covariance of atmospheric CO2 and global temperature, and the conclusion was drawn that [hu]man’s escalating carbon emissions are responsible for the late 20 th century temperature rise. Anxiety was rapidly raised among environmentalists, and also attracted many scientists who found ready funding for studies aimed at better understanding the problem. However, scientists soon encountered three important difficulties:

i) To this date, no satisfactory explanation is forthcoming as to how CO2 at less than 0. 04% of atmospheric concentration can make a major contribution to the greenhouse effect, especially as the relationship between increasing CO2 and increasing temperature is a diminishing logarithmic one (Gerlich and Tscheuschner 2009);

ii) Geological records show unequivocally that past temperature increases have always preceded, not followed, increases in CO2 ; i.e. the warming could potentially cause the CO2 increase, but not the reverse. Studies (e.g. Petit et al. 1999) have shown that over the past 400 000 years of cyclical variations, temperature rose from glacial values about 800 years before CO2 concentration increased. A probable explanation is that solar warming, over a long period of time, causes the oceans to outgas CO2 , whereas cooling results in more CO2 entering solution, as discussed by Stott et al. (2007). Averaged over a still longer period of geological time, it has been shown (Shaviv and Veizer 2003) that there is no correlation between CO2 and temperature; for example, levels of CO2 were more than twice present day values at 180 Ma, at a time when temperature was several degrees cooler;

iii) Other serious mistakes in analysis were made by some scientists over the years. Perhaps the worst of these (see Montford 2010 for a thorough discussion) was the publication of the ‘Hockey Stick Curve’ (Fig. 1), a 1000-year record of past temperature which purported to show that “The 20 th century is likely the warmest century in the Northern Hemisphere, and the 1990s was the warmest decade, with 1998 as the warmest year in the last 1000 years” (Mann et al. 1999). This conclusion was adopted by the Intergovernmental Panel on Climate Change (IPCC) in its 2001 report and also by Al Gore in the movie An Inconvenient Truth. Subsequently, Mann et al.’s work has been challenged by several scientists (though to be fair, it is also supported by some). For example, McIntyre and McKitrick (2003) amended Mann’s graph, using all available data and better quality control (Fig. 1), and showed that the 20 th century is not exceptionally warm when compared with that of the 15 th century. However, the IPCC has continued to report a steady increase in global temperature in the face of clear evidence that average temperature has remained roughly level globally, positive in the northern hemisphere and negative in the southern hemisphere, since about 2002 (Archibald 2006; Fig. 2).

WHAT CAUSES WARMING? It is likely that the cyclical warming and cooling of the earth results from a number of different causes, none of which, taken alone, is dominant enough to be entirely responsible. The more important ones are solar changes (including both irradiance and magnetic field effects), atmosphere–ocean interaction (including both multidecadal climatic oscillations and unforced internal variability), and greenhouse gases. All of these factors have been discussed by IPCC, but the first two have been dismissed as negligible in comparison with the greenhouse-gas effect and man’s contribution to it through anthropogenic CO2 . It is claimed (e.g. Revelle and Suess 1957) that the particular infrared absorption bands of CO2 provide it with a special ability to absorb and reradiate the sun’s longer wavelength radiation, causing warming of the troposphere and an increase in high-altitude (cirrus) cloud, further amplifying the heating process. Detailed arguments against this conclusion can be found in Spencer et al. (2007) and Gerlich and Tscheuschner (2009). These scientists point out (among other arguments, which include the logarithmic decrease in absorptive power of CO2 at increasing concentrations), that clouds have poor ability to emit radiation and that the transfer of heat from the atmosphere to a warmer body (the earth) defies the Second Law of Ther-modynamics. They argue that the Plank and Stefan-Boltzman equations used in calculations of radiative heat transfer cannot be applied to gases in the atmosphere because of the highly complex multi-body nature of the problem. Veizer (2005) explains that, to play a significant role, CO2 requires an amplifier, in this case water vapour. He concludes that water vapour plays the dominant role in global warming and that solar effects are the driver, rather than CO2 . A comprehensive critique of the greenhouse gas theory is provided by Hutton (2009).

It is firmly established that the sun is the primary heat source for the global climate system, and that the atmosphere and oceans modify and redirect the sun’s heat. According to Veizer (2005), cosmic rays from outer space cause clouds to form in the troposphere; these clouds shield the earth and provide a cooling effect. Solar radiation, on the other hand, produces a thermal energy flux which, combined with the solar magnetic field, acts as a shield against cosmic rays and thereby leads to global warming. Figures 3 and 4 illustrate both the cooling by cosmic rays (cosmic ray flux, or CRF) and warming by solar irradiation (total solar irradiance, or TSI) in the long term (500 Ma) and short term (50 years), respectively. CRF shows an excellent negative correlation with temperature, apart from a short period around 250 Ma (Fig. 3). In contrast, the reconstructed, oxygen isotope-based temperature curve illustrates a lack of correlation with CO2 except for a period around 350 Ma.

Other studies have highlighted the overriding effect of solar radiation on global heating. Soon (2005) studied solar irradiance as a possible agent for medium-term variations in Arctic temperatures over the past 135 years, and found a close correlation in both decadal (5–10 years) and multi-decadal (40–80 years) changes (Fig. 5). As to the control on this variation, the indirect effect of solar irradiance on cloud cover undoubtedly results in modulations of the sun’s direct warming of the earth. Veizer (2005) estimated that the heat reflected by cloud cover is about 78 watts/m2 , compared to an insolation effect of 342 watts/m2 , a modulation of more than 25%. This contrasts with an IPCC estimate of 1.46 watts/m2 , or about 0.5% of TSI, for the radiative effect of anthropogenic CO2 accumulated in the modern industrial era (IPCC 2001). Veizer concludes: “A change of cloud cover of a few percent can therefore have a large impact on the planetary energy balance.” In addition to solar insolation effects, the intensity of the Earth’s magnetic field (which deflects the charged particles that constitute cosmic rays) and associated sun-spot maxima are correlated with historic periods of global warming such as the Medieval Climate Optimum (Fig. 6), and typically occur mid-way between ice ages (Veizer 2005). Solar magnetic minima have accompanied global cooling, such as occurred during the Little Ice Age between 1350 and 1850 A.D. A proxy for sunspot activity prior to the start of telescope observations in 1610 can be reconstructed from the abundance of cosmogenic 10 Be in ice cores from Antarctica and Greenland (Miletsky et al. 2004).

Global temperature oscillations have been evident in both geologic and recent times, with periods varying from a few years (mostly solar and lunar driven) up to 120 million years (galactic and orbital influences) (Plimer 2009). In addition, ocean– atmosphere interactions are implicated in the control of some shorter-period climatic oscillations. For example, McLean et al. (2009) have studied the El Niño Southern Oscillation (ENSO), a tropical Pacific ocean–atmosphere phenomenon, and compared the index of intensity (the Southern Oscillation Index, or SOI) with global tropospheric temperature anomalies (GTTA) for the 1960–2009 period (Fig. 7). McLean et al. (2009) concluded that “Change in SOI accounts for 72% of the variance in GTTA for the 29-year long record, and 68% for the 50-year record”. They found the same or stronger correlation between SOI and mean global temperature, in which SOI accounted for as much as 81% of the variance in the tropics (Fig. 8). A delay of 5 to 7 months was deduced between the SOI maximum and the associated temperature anomaly. Volcanic influences on temperature are also evident (Figs. 7, 8), probably caused by the injection of sulphur dioxide into the stratosphere, where it is converted into sulphate aerosols that reflect incoming solar radiation (McLean et al. 2009). The GTTA nearly always falls in the year or two following major eruptions.

Both solar irradiation and ocean–atmosphere oscillations have therefore been demonstrated to have effects on global temperature of at least the same order of magnitude as the CO2 greenhouse gas hypothesis, and these alternative mechanisms are supported by well-documented empirical data. Nevertheless, the CO2 hypothesis, the theoretical basis for which is being increasingly challenged, remains the popular explanation for global warming in the public domain.

THE CONTROVERSY The main factors that have led to heated scientific controversy regarding the cause of the mild late 20 th century global warming can be summarized as follows: i) A surge of media coverage and consequent public interest and anxiety, magnified by productions such as Al Gore’s An Inconvenient Truth.

ii) Fear and concern on the part of environmentalists, who were already aware of many other harmful aspects of industrial, commercial and other human activities. Environmentalists, including NGOs such as Greenpeace and the World Wildlife Fund, exploited the open disagreements that existed among scientists as to the scale of the warming and its impacts, disagreements that inevitably arose because climate science is complex and empirical data were in short supply until recently.

#### Statistical studies disprove – no climate conflicts

#### Theisen et al 11 [Ole Magnus, doctoral candidate at the Norwegian University of Science and Technology (NTNU) and Associate Researcher at the Centre for the Study of Civil War (CSCW) at the Peace Research Institute Oslo, Helge Holtermann and Halvard Buhaug, “Climate Wars? Assessing the Claim That Drought Breeds Conflict,” Winter, International Security Vol 36, No 3, p. 79-106, <http://www.mitpressjournals.org/doi/pdfplus/10.1162/ISEC_a_00065>]

Climate change is hot. Twice in recent years, the Nobel Peace Prize has been awarded to environmental activists: in 2004 to Wangari Maathai and in 2007 to the United Nations’ Intergovernmental Panel on Climate Change (IPCC) and former U.S. Vice President Al Gore. In April 2007, the UN Security Council held its ªrst ever debate on climate security. The chair of this debate, then British Foreign Secretary Margaret Becket, left no doubt as to the connection between climate and conºict: “What makes wars start? Fights over water. Changing patterns of rainfall. Fights over food production, land use.” 1 In the same year, a report by eleven retired U.S. generals and admirals stated that environmental security is no longer soft politics, concluding that climate change is a “threat multiplier” for instability and conflict that will have repercussions for all. 2 And in a speech to the UN on September 22, 2009, U.S. President and Nobel laureate Barack Obama asserted that “the threat from climate changes is serious, it is urgent, and it is growing,” as more frequent droughts and crop failures “breed hunger and conºict.” 3 Surely, such statements must be based on solid scientiªc evidence—much in the same manner as the natural sciences inform the debate on likely physical changes? Not so. As a matter of fact, the policy debate on the security implications of climate change has run far ahead of the scientific evidence base. This study represents one scholarly attempt to catch up with the rhetoric.

At the heart of the climate security discourse lies the issue of water scarcity. A key characteristic of the world’s poorest and most vulnerable societies is their dependence on rain-fed agriculture for income and food supply. Global warming is likely to affect precipitation patterns and increase the unpredictability of extreme weather events, thereby probably having a negative impact on health and food security in many parts of the world. 4 Some argue that these developments might also have implications for peace and security in a stricter sense. The environmental security literature offers several case-based accounts of armed conºict within the context of competition over scarce resources. 5 Yet, it remains unclear whether these cases are exceptions or whether they epitomize a more systematic pattern of resource scarcity and conºict, in general, and drought and violent conºict, in particular. 6

This study offers a rigorous assessment of the claim that drought and water shortages increase the risk of civil war. 7 In contrast to earlier attempts to study the scarcity-conflict nexus in a comparative manner, we explicitly incorporate the role of ethnopolitical structures. Not all groups in a society are equally vulnerable to environmental shocks. Almost all accounts of land and water conflicts in Africa concern peripheral and neglected groups in weak or oppressive regimes—even though the nature of the political system in these narratives often remains implicit. Environmental hardships, such as prolonged drought, tend to accentuate societal divides, as marginalized groups lack alternative means of livelihood and income and are less likely to be at the receiving end of government-sponsored redistribution programs and relief aid. This leads to a second significant improvement of this study: its geographically disaggregated design. Grievances and human suffering will emerge first, and be most acute, in locations where drought coincides with political and economic marginalization. Local, short-term implications could include lowered opportunity cost of rebel recruitment and a higher motivation for using violence to redress grievances. Therefore, if leading politicians, think tanks, and environmental security scholars are correct—if a regular pattern of increasing water scarcity and increasing risk of violent conºict truly exists—this should be observed where drought strikes marginalized populations in poor, agrarian, nondemocratic societies.

To evaluate the empirical validity of this general proposition, we employ a high-resolution gridded dataset of Africa from 1960 to 2004 that combines georeferenced and annualized precipitation data with new data on the point location of civil war onset and the location and political status of ethnic groups. 8 We test a large selection of alternative location-speciªc drought measures and allow for both direct and conditional relationships, where the effect of drought is contingent on various sociopolitical characteristics at the local as well as the national level. In contrast to popular conception, the analysis reveals little evidence of a drought-conflict connection. Although we find strong support for the exclusion perspective—African civil wars break out disproportionately in politically marginalized areas—this statistical regularity is unaf fected by abrupt local water shortages. This finding calls for moderation when discussing security implications of climate change, particularly within the context of policy advice and practice

**Meta-analysis confirms acidification has only minor effects. And experiments OVERESTIMATE the effects by ignoring adaptation and community effects.**

**Hendriks et al ’10** (Iris, C.M. Duarte, and M. Alvarez, Department of Global Change Research – Mediterranean Institute of Advanced Studies, Estuarine, Coastal and Shelf Science, “Vulnerability of marine biodiversity to ocean acidification: A meta-analysis”, 86(2), January)

The meta-analysis of our database, **which includes 372 published experimental evaluations with control values** assembled from literature (Supplementary information Table S1), confirmed that acidification effects differed considerably across taxonomic groups and functions, but that **the magnitude of the changes were, overall, modest for acidification levels within ranges expected during this century**. Acidification does not occur in isolation, but in concert with other challenges such as warming, eutrophication, and increased UV radiation. There are, however, few studies examining the interactive effect of acidification and other direct or indirect results of global change, which may aggravate the effect of ocean acidification on marine organisms. This analysis suggests that marine biota do not respond uniformly to ocean acidification. Some experiments report significant impacts for vulnerable taxa at pCO2 values expected within the 21st century, **but there was no consistent evidence that suggests biological rates,** apart from calcification for one functional group, the bivalves**, might be significantly suppressed** across the range of pCO2 anticipated for the 21st century. Some organisms, particularly autotrophs, even showed enhanced growth under elevated pCO2. The data do suggest that calcification rate, the most sensitive process responding directly to ocean acidification (Gattuso et al., 1998 J.P. Gattuso, M. Frankignoulle, I. Bourrge, S. Romaine and R.W. Buddemeier, Effect of calcium carbonate saturation of seawater on coral calcification, Global and Planetary Change 18 (1998), pp. 37–46. Article | PDF (107 K) | View Record in Scopus | Cited By in Scopus (153)[Gattuso et al., 1998], [Gazeau et al., 2007], [Leclercq et al., 2000] and [Riebesell et al., 2000]), will decline by, on average, 25% at elevated pCO2 values of 731–759 ppmv. These values will be reached within the 21st century (IPCC, 2007). However, the 25% decline in biological calcification rates at elevated pCO2 values of approximately 750 ppmv is likely to be an upper limit, considering that all experiments involve the abrupt exposure of organisms to elevated pCO2 values, while the gradual increase in pCO2 that is occurring in nature may allow **adaptive and selective processes to operate** (Widdicombe et al., 2008). These gradual changes take place on the scale of decades, permitting adaptation of organisms even including genetic selection. Short-term experimental results are likely to overestimate the impacts of acidification rates on marine organisms. The ambition and sophistication of experimental approaches need be expanded, to assess complex communities, rather than single species, and to assess responses to enhanced CO2 over long terms. Such long-term experiments to observe community responses to long-term exposure to enhanced CO2 have been successfully conducted for terrestrial systems. Experiments comparable to those conducted on land (e.g. Hättenschwiler et al., 2003), should be planned and conducted. The only such experiment so far available is the Biosphere 2 experiment, where responses of coral-reef communities included in the “ocean” biome of the Biosphere 2 facility were assessed (Atkinson et al., 1999). Also important, most experiments assessed organisms in isolation, rather than whole communities, whereas **the responses within the community may buffer the impacts.** For instance, seagrass photosynthetic rates may increase by 50% with increased CO2, which may deplete the CO2 pool, maintaining an elevated pH that may protect associated calcifying organisms from the impacts of ocean acidification.

### Grid

**Latynina is about a chemical plant explosion that already happened- there’s also no warrant**

**Even if blackouts happen, the impacts are isolated- past events prove**

**Leger 7-31**-12 [Donna Leinwand Leger, USA Today, “Energy experts say blackout like India's is unlikely in U.S.,” <http://www.usatoday.com/news/nation/story/2012-07-31/usa-india-power-outage/56622978/1>]

A massive, countrywide power failure like the one in India on Tuesday is "extremely unlikely" in the United States, energy experts say. In India, three of the country's government-operated power grids failed Tuesday, leaving 620 million people without electricity for several hours. The outage, the second in two days in the country of 1.21 billion people, is the world's biggest blackout on record. The U.S. electricity system is segmented into three parts with safeguards that prevent an outage in one system from tripping a blackout in another system, "making blackouts across the country extremely unlikely," Energy Department spokeswoman Keri Fulton said. Early reports from government officials in India say excessive demand knocked the country's power generators offline. Experts say India's industry and economy are growing faster than its electrical systems. Last year, the economy grew 7.8% and pushed energy needs higher, but electricity generation did not keep pace, government records show. "We are much, much less at risk for something like that happening here, especially from the perspective of demand exceeding supply," said Gregory Reed, a professor of electric power engineering at University of Pittsburgh. "We're much more sophisticated in our operations. Most of our issues have been from natural disasters." The U.S. generates more than enough electricity to meet demand and always have power in reserve, Reed said. "Fundamentally, it's a different world here," said Arshad Mansoor, senior vice president of the Electric Power Research Institute in Washington and an expert on power grids. "It's an order of magnitude more reliable here than in a developing country." Grid operators across the country analyze power usage and generation, factoring outside factors such as weather, in real time and can forecast power supply and demand hour by hour, Mansoor said. "In any large, complex interactive network, the chance of that interconnection breaking up is always there," Mansoor said. "You cannot take your eye off the ball for a minute." Widespread outages in the U.S. caused by weather are common. But the U.S. has also had system failures, said Ellen Vancko, senior energy adviser for the Union of Concerned Scientists, based in Washington. On Aug. 14, 2003, more than 50 million people in the Northeast and Canada lost power after a major U.S. grid collapsed. The problem began in Ohio when a transmission wire overheated and sagged into a tree that had grown too close to the line, Vancko said. That caused other power lines to overheat until so many lines failed that the system shut itself down, she said. "That was less a failure of technology and more a failure of people, a failure of people to follow the rules," Vancko said. "There were a whole bunch of lessons learned." In 2005, in response to an investigation of the blackout, Congress passed a law establishing the North American Electric Reliability Corporation (NERC) to enforce reliability standards for bulk electricity generation.

**Hegemony doesn’t prevent war – its absence would have zero effect on international stability   
Friedman 10** [Ben, research fellow in defense and homeland security, Cato. PhD candidate in political science, MIT, Military Restraint and Defense Savings, 20 July 2010, <http://www.cato.org/testimony/ct-bf-07202010.html>]  
  
Another argument for high military spending is that U.S. military hegemony underlies global stability. Our forces and alliance commitments dampen conflict between potential rivals like China and Japan, we are told, preventing them from fighting wars that would disrupt trade and cost us more than the military spending that would have prevented war. The theoretical and empirical foundation for this claim is weak. It overestimates both the American military's contribution to international stability and the danger that instability abroad poses to Americans. In Western Europe, U.S. forces now contribute little to peace, at best making the tiny odds of war among states there slightly more so.7 Even in Asia, where there is more tension, the history of international relations suggests that without U.S. military deployments potential rivals, especially those separated by sea like Japan and China, will generally achieve a stable balance of power rather than fight. In other cases, as with our bases in Saudi Arabia between the Iraq wars, U.S. forces probably create more unrest than they prevent. Our force deployments can also generate instability by prompting states to develop nuclear weapons. Even when wars occur, their economic impact is likely to be limited here.8 By linking markets, globalization provides supply alternatives for the goods we consume, including oil. If political upheaval disrupts supply in one location, suppliers elsewhere will take our orders. Prices may increase, but markets adjust. That makes American consumers less dependent on any particular supply source, undermining the claim that we need to use force to prevent unrest in supplier nations or secure trade routes.9 Part of the confusion about the value of hegemony comes from misunderstanding the Cold War. People tend to assume, falsely, that our activist foreign policy, with troops forward supporting allies, not only caused the Soviet Union's collapse but is obviously a good thing even without such a rival. Forgotten is the sensible notion that alliances are a necessary evil occasionally tolerated to balance a particularly threatening enemy. The main justification for creating our Cold War alliances was the fear that Communist nations could conquer or capture by insurrection the industrial centers in Western Europe and Japan and then harness enough of that wealth to threaten us — either directly or by forcing us to become a garrison state at ruinous cost. We kept troops in South Korea after 1953 for fear that the North would otherwise overrun it. But these alliances outlasted the conditions that caused them. During the Cold War, Japan, Western Europe and South Korea grew wealthy enough to defend themselves. We should let them. These alliances heighten our force requirements and threaten to drag us into wars, while providing no obvious benefit.

#### No regional rebalancing or security dilemmas—the only empirical data goes our way.

Fettweis 11—Professor of Poli Sci @ Tulane University [Christopher J. Fettweis, “The Superpower as Superhero: Hubris in U.S. Foreign Policy,” Paper prepared for presentation at the 2011 meeting of the American Political Science Association, September 1-4, Seattle, WA, September 2011, pg. http://ssrn.com/abstract=1902154]

The final and in some ways most important pathological belief generated by hubris places the United States at the center of the current era of relative peace. “All that stands between civility and genocide, order and mayhem,” explain Kaplan and Kristol, “is American power.”68 This belief is a variant of what is known as the “hegemonic stability theory,” which proposes that international peace is only possible when there is one country strong enough to make and enforce a set of rules.69 Although it was first developed to describe economic behavior, the theory has been applied more broadly, to explain the current proliferation of peace. At the height of Pax Romana between roughly 27 BC and 180 AD, for example, Rome was able to bring an unprecedented level of peace and security to the Mediterranean. The Pax Britannica of the nineteenth century brought a level of stability to the high seas. Perhaps the current era is peaceful because the United States has established a de facto Pax Americana in which no power is strong enough to challenge its dominance, and because it has established a set of rules that are generally in the interests of all countries to follow. Without a benevolent hegemon, some strategists fear, instability may break out around the globe.70 Unchecked conflicts could bring humanitarian disaster and, in today’s interconnected world, economic turmoil that could ripple throughout global financial markets. There are good theoretical and empirical reasons, however, to doubt that U.S hegemony is the primary cause of the current stability.¶ First, the hegemonic-stability argument shows the classic symptom of hubris: It overestimates the capability of the United States, in this case to maintain global stability. No state, no matter how strong, can impose peace on determined belligerents. **The U.S. military** may be the most imposing in the history of the world, but it can only police the system if the other members generally cooperate. Self-policing must occur, in other words; if other states had not decided on their own that their interests are best served by peace, then no amount of international constabulary work by the United States could keep them from fighting. The five percent of the world’s population that lives in the United States simply cannot force peace upon an unwilling ninety-five percent. Stability and unipolarity may be simply coincidental.¶ In order for U.S. hegemony to be the explanation for global stability, the rest of the world would have to expect reward for good behavior and fear punishment for bad. Since the end of the Cold War, the United States has not been especially eager to enforce any particular rules. Even rather incontrovertible evidence of genocide has not been enough to inspire action. Hegemonic stability can only take credit for influencing those decisions that would have ended in war without the presence, whether physical or psychological, of the United States. Since most of the world today is free to fight without U.S. involvement, something else must be preventing them from doing so.71 Stability exists in many places where no hegemony is present. Ethiopia and Eritrea are hardly the only states that could go to war without the slightest threat of U.S. intervention, yet few choose to do so.¶ Second, it is worthwhile to repeat one of the most basic observations about misperception in international politics, one that is magnified by hubris: Rarely are our actions as consequential upon their behavior as we believe them to be. The ego-centric bias suggests that while it may be natural for U.S. policymakers to interpret their role as crucial in the maintenance of world peace, they are almost certainly overestimating their own importance. At the very least, the United States is probably not as central to the myriad decisions in foreign capitals that help maintain international stability as it thinks it is.¶ Third, if U.S. security guarantees were the primary cause of the restraint shown by the other great and potentially great powers, then those countries would be demonstrating an amount of **trust** in the intentions, judgment and wisdom of another that would be **without precedent in** international **history**. If the states of Europe and the Pacific Rim detected a good deal of danger in the system, relying entirely on the generosity and sagacity (or, perhaps the naiveté and gullibility) of Washington would be the height of strategic irresponsibility. Indeed it is hard to think of a similar choice: When have any capable members of an alliance virtually disarmed and allowed another member to protect their interests? It seems more logical to suggest that the other members of NATO and Japan just do not share the same perception of threat that the United States does. If there was danger out there, as so many in the U.S. national security community insist, then the grand strategies of the allies would be quite different. Even during the Cold War, U.S. allies were not always convinced that they could rely on U.S. security commitments. Extended deterrence was never entirely comforting; few Europeans could be sure that United States would indeed sacrifice New York for Hamburg. In the absence of the unifying Soviet threat, their trust in U.S. commitments for their defense would presumably be lower—if in fact that commitment was at all necessary outside of the most pessimistic works of fiction.¶ Furthermore, in order for hegemonic stability logic to be an adequate explanation for restrained behavior, allied states must not only be fully convinced of the intentions and capability of the hegemon to protect their interests; they must also trust that the hegemon can interpret those interests correctly and consistently. As discussed above, the allies do not feel that the United States consistently demonstrates the highest level of strategic wisdom. In fact, they often seem to look with confused eyes upon our behavior, and are unable to explain why we so often find it necessary to go abroad in search of monsters to destroy. They will participate at times in our adventures, but minimally and reluctantly.¶ Finally, while believers in hegemonic stability as the primary explanation for the long peace have articulated a logic that some find compelling, they are rarely able to cite much evidence to support their claims. In fact, the limited empirical data we have suggests that there is little connection between the relative level of U.S. activism and international stability. During the 1990s, the United States cut back on defense fairly substantially, spending $100 billion less in real terms in 1998 that it did in 1990, which was a twenty-five percent reduction.72 To defense hawks and other believers in hegemonic stability, this irresponsible “peace dividend” endangered both national and global security. “No serious analyst of American military capabilities doubts that the defense budget has been cut much too far to meet America’s responsibilities to itself and to world peace,” argued Kristol and Kagan.”73 If global stability were unrelated to U.S. hegemony, however, one would not have expected an increase in conflict and violence.¶ The verdict from the last two decades is fairly plain: The world grew more peaceful while the United States cut its forces.74 No state believed that its security was endangered by a less-capable U.S. military, or at least none took any action that would suggest such a belief. **No defense establishments were enhanced** to address power vacuums; **no security dilemmas drove insecurity or arms races; no regional balancing occurred** after the stabilizing presence of the U.S. military was diminished. The rest of the world acted as if the threat of international war was not a pressing concern, despite the reduction in U.S. capabilities. The incidence and magnitude of global conflict declined while the United States cut its military spending under President Clinton, and kept declining as the Bush Administration ramped that spending back up. The two phenomena are unrelated.¶ These figures will not be enough to convince skeptics. Military spending figures by themselves are insufficient to disprove a connection between overall U.S. actions and international stability, and one could also presumably argue that spending is not the only or even the best indication of hegemony, that it is instead U.S. foreign political and security commitments that maintain stability. Since neither was significantly altered during this period, instability should not be expected. Alternately, advocates of hegemonic stability could believe that relative rather than absolute spending is decisive in bringing peace. Although the United States cut back on its spending during the 1990s, its relative advantage never wavered.¶ However, two points deserve to be made. First, even if it were true that either U.S. commitments or relative spending account for global pacific trends, it would remain the case that stability can be maintained at drastically lower levels. In other words, even if one can be allowed to argue in the alternative for a moment and suppose that there is in fact a level of engagement below which the United States cannot drop without increasing international disorder, a rational grand strategist would still cut back on engagement and spending until that level is determined. Basic logic suggests that the United States ought to spend the minimum amount of its blood and treasure while seeking the maximum return on its investment. And if, as many suspect, this era of global peace proves to be inherently stable because normative evolution is typically unidirectional, then no increase in conflict would ever occur, irrespective of U.S. spending.75 Abandoning the mission to stabilize the world would save untold trillions for an increasingly debt-ridden nation.¶ Second, it is also worth noting that if opposite trends had unfolded, if other states had reacted to news of cuts in U.S. defense spending with more aggressive or insecure behavior, then surely hegemonists would note that their expectations had been justified. If increases in conflict would have been interpreted as evidence for the wisdom of internationalist strategies, then logical consistency demands that the lack thereof should at least pose a problem. As it stands, the only evidence we have regarding the relationship between U.S. power and international stability suggests that the two are unrelated. Evidently the rest of the world can operate quite effectively without the presence of a global policeman. Those who think otherwise base their view on faith alone.¶ It requires a good deal of hubris for any actor to consider itself indispensable to world peace. Far from collapsing into a whirlwind of chaos, the chances are high that the world would look much like it does now if the United States were to cease regarding itself as God’s gladiator on earth. The people of the United States would be a lot better off as well.

#### Wind kills bats

CRYAN 11 Research Biologist, United States Geological Survey, Fort Collins Science Center [Paul M. Cryan, Wind Turbines as Landscape Impediments to the migratory connectivity of Bats, Environmental Law 41: 355-370]

Several species of insectivorous bats migrate hundreds to thousands of kilometers each spring and autumn, crossing a wide variety of landscape features and ecosystems on their journey.1 These long-distance nocturnal flights, combined with the cryptic diurnal habits of migratory bats, have made it extremely difficult to uncover the details of their seasonal whereabouts, movements, and migration behaviors. Beginning around the turn of the millennium, a scatter of reports came to light regarding the surprising numbers of migratory bats found dead beneath wind turbines during autumn across both North America and Europe.2 Since the release of these studies, mortality of migratory bats at wind turbines during latesummer and autumn has become a major conservation issue.3 Whereas there were no known energy-related imminent threats to populations of migratory bats prior to about the year 2000, observed fatality rates of certain species at turbines now indicate the distinct possibility of population declines. At some sites, the estimated number of bats killed range from hundreds to over one thousand in a single autumn migration season, with cumulative estimates for North America ranging into the hundreds of thousands per year, eclipsing any previously observed mortality of these mysterious migrants.4 Over the past decade it has become apparent that wind turbines have the potential to seriously impede and disrupt the migration—and therefore long-term persistence—of several species of bats at a continental scale. Importantly, none of the migratory bats most affected by wind turbines are protected by national conservation laws or international treaties,5 so legal mandates for researching and finding practical solutions to the problem are lacking.

#### Keystone species

BEST 07 Board on Environmental Studies and Toxicology [Environmental Impacts of Wind-Energy Projects (2007), p. 71]

We can make three general predictions about the large-scale and longterm impacts of individual fatalities. First, life-history theory predicts that characteristics of populations of affected species determine the consequences of increased mortality: organisms whose populations are characterized by low birth rate, long life span, naturally low mortality rates, a high trophic level, and small geographic ranges are likely to be most susceptible to cumulative, long-term impacts on population size, genetic diversity, and ultimately, population viability (e.g., McKinney 1997; Purvis et al. 2000). Bats are unusual among mammals with respect to their life-histories, because they typically have small body sizes but long life spans (Barclay and Harder 2003), and the probability of extinction in bats has been linked to several of these characteristics (Jones et al. 2003). Second, the effects of a decline in one species on entire biotic communities is determined by the role of the species in the larger context: losses of keystone species, organisms that have a disproportionately high impact on ecosystem functioning (Power et al. 1996), and those that provide important ecosystem services (Daily et al. 1997) are of most concern. Species that are important predators and perform critical top-down control over communities, and species that are important prey sources can be keystone species in both natural and human-altered ecosystems (Cleveland et al. 2006). Notably, many raptors and insectivorous bats fill these roles. Finally, we do not know how the migration patterns of affected species will influence regional-scale mortality; we also do not understand the consequences of deaths of individuals of these migrating species to the local populations they originate from. Unfortunately this type of information is nearly impossible to obtain.

#### Extinction

Tutchton 11 General Counsel at WildEarth Guardians, House Natural Resources Committee Hearing [Jay; "The Endangered Species Act: How Litigation is Costing Jobs and Impeding True Recovery Efforts,” 12-6, LexisNexis]

The vast variety of species with which humans share this planet are of incalculable value to us. As stated by Representative Evans on the House floor in 1982: [I]t is important to understand that the contribution of wild species to the welfare of mankind in agriculture**,** medicine, industry, and science have been of incalculable value. These contributions will continue only if we protect our storehouse of biological diversity ... [O]ur wild plants and animals are not only uplifting to the human spirit, but they are absolutely essential - as a practical matter - to our continued healthy existence. 128 Cong. Rec. 26,189 (1982) (Statement of Rep. Evans of Delaware). As Americans, we have celebrated the comeback of the bald eagle, the very symbol of our country, from a low of 487 nesting pairs in the continental United States to more than 9,000 nesting pairs. In large part, the Endangered Species Act is responsible for the eagle's recovery. Similarly, we now enjoy the company of approximately 3 million American alligators, a species we almost lost before it was protected under the Act and quickly recovered. The whooping crane, a symbol of wisdom, fidelity, and long life in many cultures, has also benefited from protection under the Endangered Species Act, rebounding from a low of 16 individuals to approximately 400. However, though the Act has prevented the extinction of this species, the Whooper is not yet ready to graduate from the Act's protection. Such charismatic creatures the Act has pulled back from the brink of extinction are frequently invoked in hearings on the Endangered Species Act. The law, however, does not deny its protective shield to creatures whose pictures may never grace a wildlife calendar. While some have criticized the Endangered Species Act for protecting "bugs and weeds," these invertebrates and plants are frequently of the most utilitarian value to humans. As expressed by Harvard professor E. O. Wilson, if we do not protect the little things that run the world: New sources of scientific information will be lost. Vast potential biological wealth will be destroyed. Still undeveloped medicines, crops, pharmaceuticals, timber, fibers, pulp, soil-restoring vegetation, petroleum substitutes, and other products and amenities will never come to light ... it is also easy to overlook the services that ecosystems provide humanity. They enrich the soil and create the very air we breathe. Without these amenities, the remaining tenure of the human race would be nasty and brief. The life-sustaining matrix is built of green plants with legions of microorganisms and mostly small, obscure animals - in other words, weeds and bugs. The Diversity of Life at 346-47. On a global scale, 25 to 40 percent of pharmaceutical products come from wild plants and animals. Kellert, Stephen R., The Value of Life: Biological Diversity and Human Society (1996). A full 70 percent of pharmaceutical products are modeled on a native species, despite only 0.1% of plant species having been examined for their medicinal value. Dobson, Andrew P. Conservation and Biodiversity, Scientific American Library (1996). Invertebrate pollinators are also of high value to humanity. A variety of pollinators, such as some butterflies and bats, are currently protected by the Endangered Species Act, although others are not. The loss of pollinators threatens ecological and economic systems across the country. Committee of the Status of Pollinators in North America, National Research Council, Status of Pollinators in North America, National Academies Press (2006). One of the Endangered Species Act's explicit purposes is "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." 16 U.S.C. [Sec.] 1532(b). This vision of ecosystem protection appears frequently throughout the Act's legislative history. Rosmarino, Nicole J., Endangered Species Act Under Fire: Controversies, Science, Values and the Law, University of Colorado (2002) The economic benefits healthy ecosystems provide humanity dwarf even our national debt. Economists estimate the global value of "ecosystem services" at $33 trillion annually and in the U.S. alone at $300 billion annually. Pimentel, David, et al., Economic and Environmental Benefits of Biodiversity, BioScience 47(11) (1997) at 747-57; Costanza, R. et al., The Value of the World's Ecosystem Services and Natural Capital, Nature 387 (1997) at 253-260. Even these dramatic estimates are conservative, as the value of ecosystems ultimately equates to the value of everything - as without ecosystems humans could not survive. Leakey, Richard et al., The Sixth Extinction: Patterns of Life and the Future of Humankind (1995). Moreover, most of the services, currently provided to us for free by ecosystems, are so intricate and provided on such a massive scale that it would not be feasible to replicate them at any cost even if scientists possessed the knowledge to do so. The tremendous value of ecosystems is placed at risk by the continued erosion of the biodiversity. Ehrlich, Paul R. and Wilson, E.O., Biodiversity Studies: Science and Policy, Science 253 (1991) at 758-62. Additionally, endangered species are of great aesthetic, symbolic, and recreational value. Animals and nature are ubiquitous in our children's fairly tales and stories, which inform social codes of conduct. Continued destructiveness towards nature may consequently impact human cognition and social relations. "The more we know of other forms of life, the more we enjoy and respect ourselves. Humanity is exalted not because we are so far above other living creatures, but because knowing them well elevates the very concept of life." Wilson, Edward O. Biophilia: The Human Bond with Other Species, Harvard University Press (1984) at 115. The recreational value of wildlife is also very significant. The U.S. Fish and Wildlife Service has determined that approximately 87 million adult Americans, or 38 percent of the adult population, spend more than $120 billion in the course of wildlife-related recreation annually. These expenditures support hundreds of thousands of jobs. U.S. Department of the Interior, 2006 National Survey of Fish, Hunting, and Wildlife-Associated Recreation. These jobs are every bit as valuable to those who hold them as are the jobs the Committee perceives at risk from enforcement of the Endangered Species Act. In short, the protection of biodiversity appears well worth the effort. Just as a nation should not squander its fiscal resources, it should not squander its natural ones. The Endangered Species Act is central to our national effort to conserve our irreplaceable natural resources. B. The Present Rate of the Loss of Species Is Alarming The current rate of species' extinction worldwide is estimated at 1,000 times the natural rate of extinction and is increasing. The impact of seven billion humans on species diversity is comparable to that of the asteroid that wiped out most life on Earth 65 million years ago. Like geologists do today, future intelligent beings, should there be any, will be able to mark the current human-caused extinction epoch by observing the number and diversity of fossils preserved in future rock layers. Unless these trends are reversed, by the year 2020 up to 20 percent of all extant species will no longer exist. Wilson, Edward O., The Diversity of Life at 346. According to the International Union for the Conservation of Nature, one in every four mammals is facing a high risk of extinction in the near future. Almost half of all tortoises and freshwater turtles are threatened. More than one-fifth of the world's birds face extinction according to Birdlife International. One third of the world's amphibians are also vanishing. Stokstad, E., Global Survey Documents Puzzling Decline of Amphibians, Science 306: 391 (2004). At least two out of every five species on earth will go extinct due to human-caused climate change if greenhouse gas emissions are not promptly curtailed. Flannery, Tim, The Weather Makers, Atlantic Monthly Press (2005) at 183. Moreover, there is a trickle-down effect from species' extinction as the loss of one species leads to the loss of other dependent species. For example, researchers recently calculated that the extinction of nearly 6,300 plants listed as threatened or endangered by the International Union for the Conservation of Nature would also result in the loss of nearly 4,700 species of beetles and 136 types of butterflies. Lian Pin Koh, et al., Species Coextinctions and the Biodiversity Crisis, Science 305 (2004) at 1632-34. In sum, there should be no legitimate debate over whether or not our planet's biodiversity is rapidly diminishing. There should also be little debate that this loss is attributable to human activities and dramatic human population increases: Human demographic success has brought the world to this crisis of biodiversity. Human beings - mammals of the 50-kilogram weight class and members of a group, the primates, otherwise noted for scarcity - have become a hundred times more numerous than any other land animal of comparable size in the history of life. By every conceivable measure, humanity is ecologically abnormal. Our species appropriates between 20 and 40 percent of the solar energy captured in organic material by land plants. There is no way that we can draw upon the resources of the planet to such a degree without drastically reducing the state of most other species. Wilson, Edward O., The Diversity of Life at 272. Over ninety-nine percent of scientists agree that a serious, world-wide loss of biodiversity is likely, very likely, or virtually certain. Rudd, Murray A., Scientists' Opinions on the Global Status and Management of Biological Diversity, Conservation Biology 25(6) (2011) at 1165-1175. There is also strong scientific consensus that humans are responsible for this extinction crisis. Id. Indeed, last year the United Nations marked the first ever International Year of Biodiversity to call attention and spur action to address this problem. The United States Endangered Species Act serves as a model for many other nations and exhibits our national commitment to the international effort to save the diversity of life on Earth.

Buzan 10—Professor of International Relations @ London School of Economics [Barry Buzan (Senior Fellow @ IDEAS, Honorary professor @ Universities of Copenhagen and Fellow of the British Academy), “The End of Leadership?—Constraints on the World Role of Obama’s America,” IDEAS reports—special reports, 2010

INTRODUCTION It is appealing to think of the Obama administration as a return to normalcy after the deviance, unilateralist arrogance and damaging mistakes of the Bush years. In this view, we should expect a¶ return to business as usual, with the US picking up the signature themes of multilateralism and the¶ market that have underpinned its world role since the end of the Second World War. Although by no means universally loved, the US was an effective leader through the Cold War and beyond not only¶ because it promoted liberal economic and political values that were attractive to many others, but also¶ because it was prepared to bind its own power in multilateral rules and institutions sufficiently that¶ its followers could contain their fear of its overwhelming power. Does Obama’s liberal stance mean that we should expect a return to the leadership role that the US has exercised for more than half a¶ century? I argue that this is unlikely to happen because there are now three powerful constraints that¶ will largely block a return to US leadership. The first is that the US has lost much of its followership. The second is that the capacity of the US to lead is now much weakened even if it still retains the will¶ to do so. The third is that there is a general turn within international society against hegemony and¶ therefore against the global leadership role itself. LOST FOLLOWERSHIP If the US remains willing to lead, will anyone follow? There are two issues here: the growing range of policy disagreements on specific issues between the US and others; and the decline of shared values and visions between the US and its former followers. A good symbol of the weakening relationship¶ between the US and its followers is the replacement of talk about ‘friends and allies’ or ‘the free¶ world’ with a much harsher and still basically unchanged, line about ‘coalitions of the willing’. There¶ is some hope that under Obama differences over policy might improve in specific areas, particularly¶ the environment, but even on that issue Obama will be lucky just to get the US seen as not part of¶ the problem. Domestic constraints on carbon pricing and accepting binding international standards¶ will make it difficult for the US to lead. Many other areas of disagreement remain, some deep. The US has failed to make the war on terrorism into¶ anything like the binding cause that underpinned¶ its leadership during the Cold War, and its policies¶ continue to erode its liberal credentials. By its use¶ of torture, and even moreso the public advocacy¶ of such interrogation techniques by senior Bush administration figures, and by its rejection of the¶ Geneva Conventions on prisoners or war, it exposed¶ itself to ridicule and contempt as an advocate for¶ human rights. That China is still plausibly able to criticise the US on human rights and environment¶ issues is a marker of how far Washington’s reputation has fallen. US policy in the Middle East, particularly¶ on Israel, has few followers, and the repercussions of¶ the disastrous interventions in Iraq and Afghanistan¶ continue to rattle on. Unless China turns quite nasty, the inclination of many in the US to see China¶ as a challenger to its unipolar position is unlikely¶ to attract much sympathy. The financial chaos of 2008-9 has undermined Washington’s credibility as¶ an economic leader. Anti-Americanism, though obviously not newbecame exceptionally strong under Bush, and is now more culturally based, and more corrosive of shared identities. It questions whether the ‘American way of life’ is an appropriate model for the rest of the world, and whether the US economic model is either sustainable or desirable. It looks at health; at a seeming US inclination to use force as the first choice policy instrument, with its domestic parallel of gun culture; at the influence of religion and special interest lobbies in US domestic politics; at a US government which was openly comfortable with the use of torture and was re-elected; and at a federal environmental policy until recently in denial about global warming; and asks not just whether the US is a questionable model, but whether it has become a serious part of the problem. While some of this was specific to the Bush administration, and is being turned around by Obama, some of the deeper issues are more structural. The US is much more culturally conservative, religious, individualistic, and anti-state than most other parts of the West. America’s religion and cultural conservatism and anti-statism set it apart from most of Europe, where disappointment with Obama is already palpable. America’s individualism and anti-statism set it apart from Asia, where China is anyway disinclined to be a follower. This kind of anti-Americanism rests on very real differences, and raises the possibility that the idea of ‘the West’ was just a passing epiphenomenon of the Cold War. The Bush administration asset-stripped half-a-century of respect for, goodwill towards and trust in US leadership, and it reflected, and helped to consolidate, a shift in the centre of gravity of US politics. The Obama administration cannot just go back to the late 1990s and pick up from where Clinton left off. LOST CAPACITY In addition to having less common ground with its¶ followers the US also has less capacity, both material and ideological, to play the role of leader. The rise¶ of China, and also India, Brazil and others, means¶ that the US now operates in a world in which the¶ distribution of power is becoming more diffuse, and in which several centres of power are not closely linked to it, and some are opposed. In this context, the Bush legacy of a crashed economy and an enormous debt severely constrain the leadership¶ options of the Obama administration. The economic¶ crisis of 2008-9 not only hamstrung the US in terms of material capability, but also stripped away the Washington consensus as the ideological legitimizer for US leadership. The collapse of neoliberal ideology¶ might yet be seen as an ideational event on the same¶ scale as the collapse of communism in 1989. Since the late 1990s, and very sharply since 2003,¶ the US has in many ways become the enemy of its own 20th century project and thus of its own¶ capacity to lead. Not surprisingly this has deepened¶ a longstanding disjuncture between how the US¶ perceives itself and how the rest of the world sees it. The deeply established tendency of the US to see itself as an intrinsic force for good because it stands for a right set of universal values, makes it unable easily, or possibly at all, to address the disjuncture between its self-perception and how others see it. Self-righteous unilateralism does not acquire legitimacy¶ abroad. To the extent that celebrations of US power as a good in itself (because the US is good) dominate¶ American domestic politics, this does not inspire the US to seek grounds for legitimating its position abroad. A contributing factor here is the US tendency to demand nearly absolute security for itself. The problem for the US of transcending its own self-image is hardly new, but it has become both more difficult and more important in managing its position in the more complex world in which the US is neither so clearly on the right side of a great struggle, nor so dominant in material terms. It is unclear at this point whether Obama will be able to transcend this aspect of American politics, though it is clear that the nature of American¶ politics makes it difficult for any president to do so. THE TURN AGAINST HEGEMONY The third constraint stems not from any particular characteristic of the US, but from the fact of unipolarity itself. Since decolonisation global international society has developed a growing disjuncture between a¶ defining principle of legitimacy based on sovereign equality, and a practice that is substantially rooted in¶ the hegemony of great powers. The problem is the absence of a consensual principle of hegemony with¶ which international society might bridge this gap between its principles and its practices. A concentration¶ of power in one actor disrupts the ideas of balance and equilibrium which are the traditional sources and¶ conditions for legitimacy in international society. This problem would arise for any unipolar power, but it¶ connects back to the more US-specific aspects of the legitimacy deficit. Under the Bush administration, the US lost sight of what Adam Watson calls raison de systeme (‘the belief that it pays to make the system¶ work’), and this exacerbated the illegitimacy of hegemony in itself. Since the US looks unlikely to abandon its attachment to its own hegemony, this problem is not going to go away. If hegemony itself is illegitimate, and the US now lacks both the capabilities and attractiveness to overcome this, what lies on the near horizon is a world with no global leader. Such a world would still have several great powers influential within and beyond their regions: the EU, Russia, China, Japan, the US, possibly¶ India and Brazil. It would also have many substantial regional powers such as South Africa, Turkey and Iran. Whether one sees a move towards a more polycentric, pluralist, and probably regionalised, world political order as desirable or worrying is a matter of choice. In such a world, global hegemony by any one power or culture will be unacceptable. Obama may hasten or delay the US exit from leadership. But the waning of the Western tide, and the re-emergence of a more multi-centred (in terms of power and wealth) and more multicultural (albeit with substantial elements of Westernization) world, mean that hegemonic global leadership whether by a single power or the West collectively is no longer going to be acceptable. The question is whether such a new world order can find the foundations for collective great power management,¶ and whether the US can learn to live in a more pluralist international society where it is no longer the sole¶ superpower but merely the first among equals. Pg. 4-6

#### No threat of cyberattacks

**Valeriano and Maness 12** [Brandon, Lecturer in Social and Political Sciences at the University of Glasgow, and Ryan, Ph.D. candidate at the University of Illinois at Chicago,"The Fog of Cyberwar," 11-21, Foreign Affairs, http://www.foreignaffairs.com.proxy.library.emory.edu/articles/138443/brandon-valeriano-and-ryan-maness/the-fog-of-cyberwar?page=2]

Stuxnet was followed by the Flame virus: a new form of malware that infiltrated several networks in Iran and across the Middle East earlier this year. Flame copied text, recorded audio, and [deleted files](http://www.foreignaffairs.com.proxy.library.emory.edu/articles/138443/brandon-valeriano-and-ryan-maness/the-fog-of-cyberwar)on the computers into which it hacked. Israel and the United States are again the suspected culprits but deny responsibility. These two attacks generated substantial buzz in the media and among policymakers around the world. Their dramatic nature led some experts to argue that cyberwarfare will fundamentally change the future of international relations, forcing states to rethink their foreign policy. In a speech to the New York business community on October 11, 2012, U.S. Defense Secretary Leon Panetta expressed fear that a cyber version of Pearl Harbor might take the United States by surprise in the near future. He warned that the U.S. government, in addition to national power grids, [transportation systems](http://www.foreignaffairs.com.proxy.library.emory.edu/articles/138443/brandon-valeriano-and-ryan-maness/the-fog-of-cyberwar), and financial markets, are all at risk and that cyberdefense should be at the top of the list of priorities for President Barack Obama’s second term. The Stuxnet and Flame attacks, however, are not the danger signs that some have made them out to be. First of all, the [viruses](http://www.foreignaffairs.com.proxy.library.emory.edu/articles/138443/brandon-valeriano-and-ryan-maness/the-fog-of-cyberwar) needed to be physically injected into Iranian networks, likely by U.S. or Israeli operatives, suggesting that the tactic still requires traditional intelligence and military operation methods. Second, Stuxnet derailed Iran’s nuclear program for only a short period, if at all. And Flame did nothing to slow Iran’s nuclear progression directly, because it seems to have been only a data-collection operation. Some cyberattacks over the past decade have briefly affected state strategic plans, but none has resulted in death or lasting damage. For example, the 2007 cyberattacks on Estonia by Russia shut down networks and government websites and disrupted commerce for a few days, but things swiftly went back to normal. The majority of cyberattacks worldwide have been minor: easily corrected annoyances such as website defacements or basic data theft -- basically the least a state can do when challenged diplomatically. Our research shows that although warnings about cyberwarfare have become more severe, the actual magnitude and pace of attacks do not match popular perception. Only 20 of 124 active rivals -- defined as the most conflict-prone pairs of states in the system -- engaged in cyberconflict between 2001 and 2011. And there were only 95 total cyberattacks among these 20 rivals. The number of observed attacks pales in comparison to other ongoing threats: a state is 600 times more likely to be the target of a terrorist attack than a cyberattack. We used a severity score ranging from five, which is minimal damage, to one, where death occurs as a direct result from cyberwarfare. Of all 95 cyberattacks in our analysis, the highest score -- that of Stuxnet and Flame -- was only a three. To be sure, states should defend themselves against cyberwarfare, but throwing vast amounts of money toward a low-level threat does not make sense. The Pentagon estimates it spent $2.6 to $3.2 billion on cybersecurity in fiscal year 2012. And it is likely that such spending will only increase. The U.S. Air Force alone anticipates spending $4.6 billion on cybersecurity in the next year. Even if the looming “fiscal cliff” guts the Defense Department’s budget, Panetta has made clear that cybersecurity will remain a top funding priority. At a New York conference on October 12, 2012, he described the United States as being in a “pre-9/11 moment” with regards to cyberwarfare and said that the “attackers are plotting,” in reference to the growing capabilities of Russia, China, and Iran. Of the 20 ongoing interstate rivals in our study, China and the United States cybertargeted each other the most. According to our study, Beijing attacked U.S. assets 18 times and Washington returned fire twice. Two notable attacks were the 2011 Pentagon raid, which stole sensitive files from the Defense Department, and the 2001 theft of Lockheed Martin’s F-35 fighter-jet schematics. These attacks get only a moderate severity score because they targeted specific, nonessential state documents and were not intended to affect the general public. Over the same time span, India and Pakistan targeted each other 11 times (India five times, Pakistan six), as did North and South Korea, with North Korea being the aggressor ten times and South Korea launching one return attack. These ranged from minor incidents, such as Pakistan defacing an Indian government website, to more serious ones, such as North Korea stealing sensitive state documents from South Korea. Israeli-Iranian tensions have risen in recent months, but despite all the talk, this conflict is not playing out in the cybersphere. There were only eight cyberattacks between these states from 2001 to 2011, four launched by Israel, four by Iran. Although Stuxnet and Flame were more severe, Iranian attempts to disrupt government websites have not been very sophisticated. And Israel’s near-insistence on an armed conventional attack proves that even the most sophisticated cyberattacks are not changing state behavior. Cyberattacks are rare, and when they do occur, states are cautious in their use of force. As with conventional and nuclear conflict, some of the principles of deterrence and mutually assured destruction [apply](http://www.foreignaffairs.com.proxy.library.emory.edu/articles/138443/brandon-valeriano-and-ryan-maness/the-fog-of-cyberwar?page=2). Any aggressor in cyberspace faces the acute threat of blowback: having techniques replicated and repeated against the initiator. Once developed, a cyberweapon can easily be copied and used by a tech-savvy operative with access to a critical system such as the Defense Department’s network, which foreign-government hackers have had success infiltrating. Far from making interstate cyberwarfare more common, the ease of launching an attack actually keeps the tactic in check. Most countries’ cyberdefenses are weak, and a state trying to exploit an adversary’s weakness may be similarly vulnerable, inviting easy retaliation. An unspoken but powerful international norm against civilian targets further limits the terms of cyberwarfare.

#### No risk of the impact—Energy Security Case Studies solve

Stockton 11—Assistant Secretary of Homeland Defense and Americas' Security Affairs @ Department of Defense [Paul Stockton, “HEADLINE: ELECTRIC GRID AND INFRASTRUCTURE SECURITY,” Committee on House Energy and Commerce Subcommittee on Energy and Power, CQ Congressional Testimony, May 31, 2011 Tuesday]

Homeland Defense Energy Security Case Studies

I initiated a series of regional Energy Security Case Studies in January 2010 to address the policy and technical issues necessary to mitigate the risks of longterm electric power outages to clusters of Department of Defense and Defense Industrial Base sites. The Energy Grid Security Executive Council provides oversight of this effort. The case studies are consistent with requirements under Section 335 of the 2009 National Defense Authorization Act and a 2008 Defense Science Board Report recommendation that the Department of Defense take actions to "island" installations from the commercial electric power grid.

The case studies are an attempt to analyze the impact of an extended power outage and the potential range of feasible Department of Defense and interagency solutions, much like an analysis of alternatives. The studies are intended to help set the stage for defining the size and scope of the issue and to help facilitate the requirements process. They will help define where Department of Defense's prudent investments should end and where commercial and civil authorities, responsibilities and investments should begin. The case studies approach is designed to provide greater electric power security to a region by separating key elements of generation and distribution infrastructure from the grid as an independent operating unit or "island". The island would be capable of generating and distributing electric power if the grid (outside the region) is disrupted for either short or extended periods of time.

The first of three Case Studies was initiated in May 2010 in the Norfolk, Virginia region. The Navy's Dahlgren Mission Assurance Division completed the assessment phase (the first of three phases) for the Norfolk case study on May 13th. The Norfolk Region Assessment Phase recommended two risk mitigation approaches for operating electrical systems in support of the identified critical Department of Defense missions for extended electrical power outages.

The two mitigation approaches identified include working with the local utility to establish a load management schematic to ensure both critical Department of Defense and non-Department of Defense assets (such as life safety and supporting infrastructure) have sustained stable power in the event the load exceeds available generation. The study also recommends a second approach that separates the mission critical functions, those identified during the mission analysis, from the commercial grid and establishes separate microgrids using an integrated network of back-up generators on the installation. This enable Department of Defense to manage the load and generation within the microgrids, ensure constant and stable power to critical Department of Defense missions and reduce the overall load in the region providing the utility provider with additional flexibility stabilizing the grid and providing power to the community. Pursuing both mitigation approaches optimizes management of electric power for critical Department of Defense missions, supporting infrastructure and broader community needs. There are several potential options for finding a balance between commercially-generated and government- generated power on the installations that will be explored.

The Mission Assurance Division recently initiated phase II (solutions refinement) to refine the recommended mitigation approaches and develop a technically relevant and feasible mitigation plan. A second case study is underway at Vandenberg Air Force Base in California, with a set of preliminary findings and recommendations due in July 2011. A third case study is in the initial planning stages and will include a cluster of Defense Industrial Base facilities in Texas. All case studies are pursuing the goal of mitigating the risks to Department of Defense missions caused by long-term electric power outages. The end state is a comprehensive, adaptable, and repeatable methodology to identify high-order commercial electric power- related risks on a regional basis throughout the United States and develop and implement appropriate mitigation solutions.

#### Plan causes trade retaliation from China – risks hurting the entire industry

#### Hook 11 [Leslie, “China to probe US clean energy subsidies,” 11-25, <http://www.ft.com/intl/cms/s/0/22d9033e-174b-11e1-b20e-00144feabdc0.html#axzz20S3FZc6z>]

China has launched a trade probe into US subsidies for renewable energy, the latest volley in a quickly escalating trade dispute over clean energy policies between the world’s top two energy users.

China’s Ministry of Commerce announced on Friday that it would investigate US government support for clean energy and could file a case with the World Trade Organisation, depending on its findings.

The global clean energy sector, a $240bn a year industry, has been facing headwinds this year as supplies of wind turbines and solar panels have outstripped demand in some key markets. [Trade tensions have been rising](http://www.ft.com/intl/cms/s/0/b46865ac-fa85-11e0-8e7e-00144feab49a.html#axzz1eIpfTYA5) between the US and China ever since the office of the US Trade Representative initiated an investigation into Chinese wind subsidies last year.

Trade barriers in clean energy were high on the agenda at the Asia Pacific Economic Cooperation Summit in Hawaii earlier this month, where Apec members agreed in principle to reduce barriers on clean energy goods and services by 2015.

The trade probe from Beijing follows a [US trade investigation](http://www.ft.com/www.ft.com/intl/cms/s/0/6c419b06-0b0e-11e1-ae56-00144feabdc0.html#axzz1eIpfTYA5) into Chinese solar cells and panels initiated earlier this month. The case could result in penalty tariffs of 50 to 250 per cent on imports of Chinese cells and panels if it concludes that anti-dumping tariffs or countervailing duties are merited.

Although the Ministry of Commerce statement did not mention the US panel probe, the announcement follows an outcry from Chinese solar industry associations and officials who have called for trade countermeasures.

Chinese panel sales to America have been growing rapidly but the US is still a net exporter of solar equipment to China because of sales of polysilicon, a key ingredient for making solar panels, and of panel-making machinery. Last year the US exported more than $1.7bn of solar products to China and imported $1.4bn, mostly panels, according to research from the Solar Energy Industries Association.

Gao Hongling, deputy secretary-general of the China Photovoltaic Industry Alliance, said in an interview before the probe was announced that a potential trade war would hurt both sides.

“If we launch countermeasures, American raw material and equipment firms will take a very big hit,” she said, adding that China imported $830m of polysilicon from the US last year.

Both the US and China, the world’s top two energy users, have made renewable energy a priority of their domestic energy strategies and support clean energy with a range of policies including tax breaks, loan assistance and fast-tracking permits.

China is the world’s biggest investor in clean energy, spending $54bn last year, while the US is the world’s third-biggest, investing $34bn in the sector last year, according to research from Pew Charitable Trusts.

The Ministry of Commerce said its trade probe was launched in response to petitions from industry bodies. “The applicants proposed that the US government’s supportive policies and subsidy measure to its domestic renewable energy industry violate WTO rules, hinder and limit the development of China’s renewable energy industry, and constitute trade barriers,” the statement said.

#### Trade wars escalate to military conflict

#### Landy 07 [Ben, Director of Research and Strategy at the Atlantic Media Company, publisher of the Atlantic Monthly, National Journal, and Government Executive magazines, Former Researcher at the Brookings Institution and Center for Strategic and International Studies, 4-3 (<http://chinaredux.com/2007/04/03/protectionism-and-war/#comments>]

The greatest threat for the 21st century is that these economic flare-ups between the US and China will not be contained, but might spill over into the realm of military aggression between these two world powers. Economic conflict breeds military conflict. The stakes of trade override the ideological power of the Taiwan issue. China’s ability to continue growing at a rapid rate takes precedence, since there can be no sovereignty for China without economic growth. The United States’ role as the world’s superpower is dependent on its ability to lead economically. As many of you will know from reading this blog, I do not believe that war between the US and China is imminent, or a foregone conclusion in the future. I certainly do not hope for war. But I have little doubt thatprotectionist policies on both sides greatly increase the likelihood of conflict–far more than increases in military budgets and anti-satellite tests.

#### Extinction

#### Wittner 11 - Professor of History @ State University of New York-Albany. [Lawrence S. Wittner, “Is a Nuclear War with China Possible?,” Huntington News, Monday, November 28, 2011 - 18:37 pg. http://www.huntingtonnews.net/14446]

While nuclear weapons exist, there remains a danger that they will be used. After all, for centuries **national conflicts have led to wars**, with nations employing their deadliest weapons. The current deterioration of U.S. relations with China might end up providing us with yet another example of this phenomenon.

The gathering tension between the United States and China is clear enough. Disturbed by China’s growing economic and military strength, the U.S. government recently challenged China’s claims in the South China Sea, increased the U.S. military presence in Australia, and deepened U.S. military ties with other nations in the Pacific region. According to Secretary of State Hillary Clinton, the United States was “asserting our own position as a Pacific power.” But need this lead to nuclear war?

Not necessarily. And yet, there are signs that it could. After all, both the United States and China possess large numbers of nuclear weapons. The U.S. government threatened to attack China with nuclear weapons during the Korean War and, later, during the conflict over the future of China’s offshore islands, Quemoy and Matsu. In the midst of the latter confrontation, President Dwight Eisenhower declared publicly, and chillingly, that U.S. nuclear weapons would “be used just exactly as you would use a bullet or anything else.”

Of course, China didn’t have nuclear weapons then. Now that it does, perhaps the behavior of national leaders will be more temperate. But the loose nuclear threats of U.S. and Soviet government officials during the Cold War, when both nations had vast nuclear arsenals, should convince us that, even as the military ante is raised, nuclear saber-rattling persists.

Some pundits argue that nuclear weapons prevent wars between nuclear-armed nations; and, admittedly, there haven’t been very many—at least not yet. But the Kargil War of 1999, between nuclear-armed India and nuclear-armed Pakistan, should convince us that such wars can occur. Indeed, in that case, the conflict almost slipped into a nuclear war. Pakistan’s foreign secretary threatened that, if the war escalated, his country felt free to use “any weapon” in its arsenal. During the conflict, Pakistan did move nuclear weapons toward its border, while India, it is claimed, readied its own nuclear missiles for an attack on Pakistan.

At the least, though, don’t nuclear weapons deter a nuclear attack? Do they? Obviously, NATO leaders didn’t feel deterred, for, throughout the Cold War, NATO’s strategy was to respond to a Soviet conventional military attack on Western Europe by launching a Western nuclear attack on the nuclear-armed Soviet Union. Furthermore, if U.S. government officials really believed that nuclear deterrence worked, they would not have resorted to championing “Star Wars” and its modern variant, national missile defense. Why are these vastly expensive—and probably unworkable—military defense systems needed if other nuclear powers are deterred from attacking by U.S. nuclear might?

Of course, the bottom line for those Americans convinced that nuclear weapons safeguard them from a Chinese nuclear attack might be that the U.S. nuclear arsenal is far greater than its Chinese counterpart. Today, it is estimated that the U.S. government possesses over five thousand nuclear warheads, while the Chinese government has a total inventory of roughly three hundred. Moreover, only about forty of these Chinese nuclear weapons can reach the United States. Surely the United States would “win” any nuclear war with China.

But what would that “victory” entail? A nuclear attack by China would immediately slaughter at least 10 million Americans in a great storm of blast and fire, while leaving many more dying horribly of sickness and radiation poisoning. The Chinese death toll in a nuclear war would be far higher. **Both nations would be reduced to smoldering, radioactive wastelands**. Also, radioactive debris sent aloft by the nuclear explosions would blot out the sun and bring on a “**nuclear winter**” around the globe—destroying agriculture, [and] creating worldwide famine, and generating chaos and destruction.

Moreover, in another decade the extent of this catastrophe would be far worse. The Chinese government is currently expanding its nuclear arsenal, and by the year 2020 it is expected to more than double its number of nuclear weapons that can hit the United States. The U.S. government, in turn, has plans to spend hundreds of billions of dollars “modernizing” its nuclear weapons and nuclear production facilities over the next decade.

To avert the enormous disaster of a U.S.-China nuclear war, there are two obvious actions that can be taken. The first is to get rid of nuclear weapons, as the nuclear powers have agreed to do but thus far have resisted doing. The second, conducted while the nuclear disarmament process is occurring, is to **improve U.S.-China relations**. If the American and Chinese people are interested in ensuring their survival and that of the world, they should be working to encourage these policies.

## 2NC Electricity Prices

### 2NC FIT Link

#### Boosts Energy Prices – pass onto consumer

SCHRIDER 11 Heritage Foundation Energy Staff [William Schrider, Feed-in Tariffs: Just Another Renewable Energy Subsidy, <http://blog.heritage.org/2011/12/08/feed-in-tariffs-just-another-renewable-energy-subsidy/>]

Another day, another new subsidy for renewable energy. This time it’s a feed-in tariff, as Senator Dianne Feinstein (D–CA) recently inserted language supporting feed-in tariffs into the 2012 Energy and Water Appropriations bill. Feed-in tariffs subsidize renewable energy by forcing utilities to purchase renewable energy at fixed, above-market prices. The extra cost is then passed to the consumers. Feed-in tariffs are simply another subsidy that props up a selected industry and damages the economy, industry, and consumers.

As of 2010, more than two dozen European countries had implemented feed-in tariffs, with Germany’s being the most widely recognized. In Germany, the tariff dictates that utilities must purchase electricity from renewable energy producers at a rate that guarantees a 5 percent to 7 percent profit. These costs are then passed on to the consumers, who pay higher energy bills to reimburse the utilities for the extra expense. Germany’s tariff is guaranteed for 20 years, with gradual reductions in rates over time to promote innovation and efficiency.

Given such lavish incentives—profits without worrying about market competition—it’s easy to see why the program is a “success” in Germany, where renewable energy production has increased from 6 percent in 2000 to 15 percent in 2008.

But forcing renewable energy also brought increased electricity prices. According to Germany’s Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the extra cost of the “Renewable Energy Sources Act” in 2008 was €4.6 billion. While the Ministry expects the extra costs to ultimately decline, it bases that expectation on the assumption that renewable energy costs will decrease, while traditional energy costs will increase. Given that subsidies generally remove the incentive to reduce costs, this assumption is dubious at best.

#### Renewable adoption raises prices – their ev doesn’t assume state requirements which artificially increase prices in the short-term to create competition

Noon 12 -- Executive Director of Energy Makes America Great, Executive Director of Citizens' Alliance for Responsible Energy (Marita, 8/22/12, "Higher Energy Prices Are Coming. Energy Shortages Are Coming," http://www.google.com/gwt/n?u=http://www.energytribune.com/articles.cfm/11491/Higher-Energy-Prices-Are-Coming-Energy-Shortages-Are-Coming)

“Once real numbers have come out about renewable energy costs, people are having second thoughts,” reported Maureen Masten, Deputy Secretary of Natural Resources and Senior Advisor on Energy to Governor Bob McDonnell, VA, while addressing his “all of the above energy” strategy to meet the state’s energy needs. The real costs of renewable energy are coming out—both in dollars and daily impacts. After years of hearing about “free” energy from the sun and wind, people are discovering that they’ve been lied to. On Tuesday, August 14, the New Mexico Public Regulation Commission (PRC) approved a new renewable energy rate rider that will allow the Public Service Company of New Mexico (PNM) to start recovering a portion of its recent development costs for building five solar facilities around the state, a pilot solar facility with battery storage, and wind resource procurements. The renewable rider could be on ratepayers' bills by the end of the month—“depending on when the commission publishes its final order,” said PNM spokeswoman Susan Spooner. The rate rider currently represents about a $1.34 increase for an average residence using 600 kilowatt hours of electricity per month—or a little more than $16 per year. This increase seems miniscule until you realize that this is only a small part of increases to come. PNM needs to recover $18.29 million in renewable expenditures in 2012 and the rate rider only addresses monies spent in the last four to five months. The remaining expense will be carried into 2013. Like more than half of the states in the US, New Mexico has a Renewable Portfolio Standard (RPS) that mandates public utilities have set percentages of their electricity from renewable sources. In New Mexico the mandate is 10 percent this year, 15 percent by 2015 and 20 percent by 2020. Most states—with the exception of California (which is 33 percent by 2020)—have similar benchmarks. To meet the mandates, PNM will need considerably more renewable energy with dramatically more expense—all of which ultimately gets passed on to the customer. PNM acknowledges that the rider will increase next year and predicts the total cost recovery for 2013 to be about $23 million. By 2020, based on the current numbers of approximately $20 million a year invested, resulting in a $24 a year increase, consumers’ bills will go up about $200 a year just for the additional cost of inefficient renewable energy. Had the PRC not approved the special rate rider, costs would be even higher. Typically rate increases are only approved at periodic rate case hearings, usually held every few years. The system of only allowing rate increases after a lengthy hearing, keeps the costs hidden from the consumer for longer but increases costs to the utility and, ultimately, the consumer, due to interest charges on the borrowed money. PNM believes the rider will allow for more “timely recovery of costs,” resulting in a $2.7 million savings. Environmental groups, who’ve been pushing for the renewable energy increases, opposed the special renewable rate rider and have threatened a potential appeal of the PRC’s decision. It is hard to tout “free” energy when there is a special line on the utility bill that clearly points out the new charge for renewables. Pat Lyons, Chairman of the Public Regulation Commission, told me that he’d pushed for a year and a half to get the rate rider listed on utility bills: “With the support of the commissioners, ratepayers will now have transparency. This is the first step toward full disclosure regarding the real cost of renewables. Once we have that, maybe we can let the free market work.” So, renewable electricity is hardly free. It also isn’t there when you need it—like in the predictable summer heat of California. To meet their 33 percent renewable mandate, California’s utility companies, like New Mexico, have been installing commercial renewable electricity facilities—with wind capable of providing about 6 percent, and solar 2 percent, of the state’s electric demand. But in the summer heat, the wind doesn’t blow much and the solar capacity drops by about 50 percent when the demand is the highest. Despite increasing renewable capacity and an exodus of the population, California has been facing threats of rolling brown/blackouts due to potential shortages. TV and radio ads blanket the air waves begging consumers to limit electricity usage by setting their air conditioners at 78 degrees and using household appliances only after 6PM. “Flex Alerts” have been issued stating: “conservation remains critical.” “Consumers are urged to reduce energy use,” “California ISO balances high demand for electricity with tight power supplies” and “maintain grid reliability.” Even with expedited permitting, California cannot build renewable electricity generation fast enough. Environmentalists block construction due to species habitat, such as that of the desert tortoise or the kit fox. If they oppose renewable energy construction, you can imagine the vitriol they extend toward coal, natural gas, and nuclear. There is a big push to shut down nuclear power plants and new natural-gas plants, which are ideal for meeting the needs of “peak demand,” are fought by the very same groups that are pushing electric cars. San Diego-based, nationally syndicated radio talk show host Roger Hedgecock observed: “Right at the moment in California, building new electricity generating power plants of any kind is politically taboo. Electricity itself is becoming politically taboo.” Texas has been faced with both increasing costs and fears of shortages. “Concerned about adequate electricity supplies,” the Texas Public Utility Commission recently voted to allow electricity generators to charge up to 50 percent more for wholesale power. The increase is to encourage the building of new power plants in the state with the highest capacity in the country for wind electricity generation. Apparently new electricity-generating power plants are politically taboo in Texas, too—at least within the environmental community. Instead of encouraging new power plants to be built, Ken Kramer, the Texas head of the Sierra Club, said, “A better idea would be to encourage more energy-saving programs”—perhaps like setting the thermostat to 78 degrees and not turning on appliances until after 6PM. When will Americans revolt over being forced to use less while paying more? We know that high energy prices are just the beginning of inflation that raises the cost of everything from food to clothing to manufactured goods. When the cost of manufacturing goes up, industry moves to countries with lower-priced energy, cheaper labor, and more reasonable regulations. Jobs go overseas and we import more. The trade deficit grows, and America is less competitive. The higher electricity costs are 100 percent due to government regulation and legislation that are unreasonably crushing American businesses and ratepayers—much like the pressure England imposed on the American colonies that launched the American Revolution. Paul Revere alerted the early settlers—“the Red Coats are coming, the Red Coats are coming”—which brought people into the town square where they joined forces and rallied together. Their cooperative effort was so effective that those early Americans made it so painful for the Red Coats that they abandoned their objective. People who hear me speak often describe me as the Ann Coulter of energy. Due to the childhood nickname of “Bunny,” my family refers to me as the Energizer Bunny. But today, I feel like the Paul Revere of energy: “Higher energy prices are coming. Energy shortages are coming.”

#### Germany proves – even subsidies increase prices

Wiesmann, 10-15 – Financial Times Berlin correspondent

(Gerrit, "German rush to renewables faces backlash," Financial Times, 10-15-12, www.ft.com/cms/s/0/347e5530-16b4-11e2-957a-00144feabdc0.html#axzz29TR3GknR, accessed 10-16-12)

The rapid proliferation of subsidised solar and wind plants in Germany will mean a sharp increase in electricity prices next year, it has emerged, dealing a blow to Angela Merkel’s ambitious plans to foster green energy. The price rise flies in the face of the chancellor’s previous pledge that energy costs would stay stable for households, despite the swift move away from nuclear power. Generous guaranteed prices for electricity generated by renewable sources have encouraged investors to build new capacity – so much so that consumers will have to pay green energy generators €20.4bn in feed-in tariffs in 2013. As a result, Germany’s power transmission companies revealed on Monday that the mandatory surcharge on every unit of electricity will rise to 5.3 cents next year from 3.6 cents per kWh. This will represent an overall price increase of about 7 per cent for consumers. With retail electricity prices already among the highest in Europe, many Germans have started to ask why households should bear the brunt of the subsidy for renewable energy – especially as many businesses, such as steel and glassmaking, are exempt to protect their competitiveness. Fears are mounting in Berlin that the decade-old renewable-energy subsidy could **kill public acceptance** of Ms Merkel’s energy policy before next autumn’s election. The question of how to deal with the obligation to pay ever more in feed-in tariffs – which will total “only” €14bn this year – has divided her coalition. The Free Democrats, Ms Merkel’s junior partner, have called for a cut in the tax levied on electricity and its surcharge. With business also worried about electricity price rises and possible scrutiny of its exemptions, Peter Altmaier, environment minister, called for “calm” and stressed that the looming increase would not be so large if Social Democrats and Greens had supported prior attempts to reform the surcharge system. The opposition last week rejected a call by Mr Altmaier to set a cap on the amount of green electricity eligible for guaranteed prices. The Social Democrats and the Greens, who introduced the surcharge to foster a nascent renewables industry when in government a decade ago, blamed its rise on what they see as a growing list of exemptions. The disaster at Japan’s Fukushima nuclear power plant last year saw Ms Merkel bring forward Germany’s phase-out of nuclear energy to 2022 from 2036 and promise to double renewable energy generation to 35 per cent by 2020. She played down warnings by industry that electricity prices could rise. But the generous price guarantees for green electricity have proved a big lure for investors. Solar power plants, in particular, still offer cast-iron returns, even after two cuts to feed-in tariffs. After 7.5gW last year, some 7gW in new capacity is expected to go live in 2012 – plants that will receive guaranteed prices until 2032. While the rapid increase in solar power installations means that Mr Altmaier now expects Germany to produce 40 per cent of its electricity from renewable sources by 2020, he has warned that the “mis-allocation” and costs of the current system could lead to a **backlash and erode public support** **for a central Merkel policy.**

## 2NC SO2

### 2NC I/L Wall

#### Speed is critical—rapid warming overwhelms adaptation.

Joseph Milton, 11/11/2010. PhD Evolutionary Biology @ St Andrews, science journalism @ City U London, writer for the Financial Times, New Scientist, Nature News, Research Fortnight, and Scientific American. “Rapid warming boosted ancient rainforest,” Scientific American, http://www.scientificamerican.com/article.cfm?id=rapid-warming-boosted-ancient.

Most scientists have assumed that, as carbon dioxide levels increase and the Earth warms, plant species diversity in the rainforests will start to dwindle, with [plants](http://www.scientificamerican.com/topic.cfm?id=plants) unable to adapt to the heat. But a new study suggests that the opposite may be true. In the past, rising atmospheric carbon dioxide and higher temperatures actually drove the evolution of far greater numbers of new rainforest plant species than were wiped out. ¶ But don't trade in your electric car for a gas-guzzler just yet--**if** rainfall drops as **temperatures** rise, or if they **rise too rapidly, the outcome** for rainforest diversity **could be much less positive**.¶ For clues to how rainforest diversity will be affected by increasing atmospheric carbon dioxide and the corresponding rise in temperatures, Carlos Jaramillo, a palaeobiologist at the Smithsonian Tropical Research Institute in Panama, and his colleagues decided to look at what happened during similar conditions in the past.¶ One such episode in Earth's history occurred 56.3 million years ago and is called the Palaeocene-Eocene Thermal Maximum (PETM). Within 10,000-20,000 years, the world warmed by 3-5 degrees Celsius and atmospheric carbon dioxide doubled to around two and a half times the levels we see today. These unusually warm conditions lasted for around 200,000 years. ¶ Pollen clues¶ To find out how this ancient climate change affected rainforest plants, Jaramillo and his team analyzed fossilized pollen trapped in rock cores from rainforests in Colombia and Venezuela. They spent seven years locating appropriate sites and taking samples, then used a battery of dating techniques to ensure that they were examining cores formed before, during and after the thermal maximum--a relatively narrow time window in geological terms. The results were published November 12 in Science.¶ Although some plant species disappeared, many more new species arose. That included entire families, suggesting that the increased temperatures and carbon dioxide levels actually boosted [biodiversity](http://www.scientificamerican.com/topic.cfm?id=biodiversity). "What we found was exactly the opposite of what we were expecting," says Jaramillo. "The diversity of the tropical forest increased really fast over a very short amount of time."¶ The pollen fossil record shows that some important plant families, such as Myrtaceae, which includes eucalyptus, and Passifloraceae--the passion flowers--made their first appearance during the thermal maximum. The tropics have remained the most species-diverse area of the world ever since.¶ This might sound like good news for the rainforest in the face of contemporary climate change. However, Guy Harrington, a palaeobiologist at the University of Birmingham, UK, warns that any positive effects on plant diversity could be canceled out if temperatures rise too quickly for plants to adapt. "**It's the rate--how fast you're turning up the heater--that's the most important thing**," he says.

#### Climate commitment means warming would be unmasked.

K. C. Armour 1 and G. H. Roe 2, 2010. 1Department of Physics, University of Washington, Seattle,; and 2Department of Earth and Space Sciences, University of Washington, Seattle. “Climate commitment in an uncertain world,” Geophysical Research Letters 38, L01707, 5 PP.

Climate commitment—the warming that would still occur given no further human influence—is a fundamental metric for both science and policy. It informs us of the min- imum climate change we face and, moreover, depends only on our knowledge of the natural climate system. Studies of the climate commitment due to CO2 find that global temperature would remain near current levels, or even decrease slightly, in the millennium following the cessation of emissions. However, this result overlooks the important role of the non-CO2 greenhouse gases and aerosols. This paper shows that **global energetics require an immediate and significant warming following the cessation of emissions as aerosols are quickly washed from the atmosphere**, and the large uncertainty in current aerosol radiative forcing implies a large uncertainty in the climate commitment. Fundamental constraints preclude Earth returning to pre-industrial temperatures for the indefinite future. These same constraints mean that observations are currently unable to eliminate the possibility that we are already beyond the point where the ultimate warming will exceed dangerous levels. Models produce a narrower range of climate commitment, but under- sample observed forcing constraints.

#### Short lifetime means SO2 reductions would immediately cause warming.

Zeke Hausfather, 6/24/2008. MA Environmental Management @ Yale, Chief Scientist and Executive Vice President of Energy at Efficiency 2.0. “Why Reducing Sulfate Aerosol Emissions Complicates Efforts to Moderate Climate Change,” Yale Climate Forum, http://www.yaleclimatemediaforum.org/2008/06/common-climate-misconceptions-why-reducing-sulfate-aerosol-emissions-complicates-efforts-to-moderate-climate-change/.

A reduction of anthropogenic SO2 of around 50 percent worldwide over the next century, as projected in the most recent IPCC report, would result in a significant warming effect on the global climate. Sulfates are extremely short-lived particles, and emission reductions **would have immediate effects on radiative forcing**. A 50 percent reduction in sulfate aerosol emissions would reduce by half their current radiative forcing of -0.83 W m-2. This change in forcings would increase global temperatures by roughly 0.36 degrees C (.64 F) relative to a scenario where aerosol emissions remain constant.¶ Figure three below shows the practical implications of a reduction in aerosols in the next century. If current greenhouse gas concentrations remain constant at current levels, scientists project about 1.34 degrees C (2.41 F) warming relative to pre-industrial temperatures by the end of the century (the world has already warmed 0.74 degrees C (1.33 F) in the past century, and 0.60 degrees C (1.08F) additional warming is in the pipeline as a result of Earth’s thermal inertia). A reduction of anthropogenic atmospheric sulfate aerosols by 50 percent means that 1.34 degrees C (2.41 F) warming suddenly becomes 1.70 degrees C (3.06 F).

#### AND—prefer our modeling—the Hadley Center model puts the rest to shame.

Olive Heffernan, February 2010. Editor of Nature Reports Climate Change. “Earth science: The climate machine,” Nature 463, 1014-1016.

This massive supercomputer at the UK Met Office in Exeter is home to what is **possibly the world's most sophisticated climate model**. Developed by researchers at the Hadley Centre, the Met Office's climate-change branch, the newly finished model will be put to its first big test over the coming months. It will run a series of climate simulations out to the year 2100 for the next report of the Intergovernmental Panel on Climate Change (IPCC), on the physical-science basis of climate change, which is due out in 2013.¶ Four years in the making, the model is known as HadGEM2-ES, short for the Hadley Centre Global Environmental Model, version two, with an added Earth-system component. It is one of a dozen Earth-system models under development worldwide that reach far beyond their distant forebears, which represented just the physical elements of the climate, such as air, sunlight and water. The new generation includes all that and much more: forests that can shrink or spread as conditions change; marine food webs that react as the oceans grow more acidic with carbon dioxide; aerosol particles in the atmosphere that interact with greenhouse gases, enhancing or sapping their warming power.¶ The Hadley Centre is at the forefront of efforts around the world to develop such complex climate models. "**It's really pushing the envelope**", says Andrew Weaver, a climate modeller at the University of Victoria in British Columbia, Canada.

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## 2NC Case

### 2NC Glut

**Chinese economy resilient**

**Xinhua 08** (General News Service, 9/“China economy "slowing but resilient," HSBC report says.” Lexis.)

China's economy will maintain strong growth thanks to resilient investment and exports and the government's strong fiscal position, an HSBC report said on Wednesday. Fixed-asset investment will remain resilient despite the sluggish property sector because there is still plenty of room for more investment in infrastructure such as mass transit networks, said the global banking group in "China Economic Spotlight". For example, only 15 of 660 cities in Chinahave or are building subway systems. Real growth in urban fixed-asset investment has slowed from 22 percent year-on-year in 2007 but was "still over 17 percent year-on-year" in the first seven months of this year, according to the report. Export growth eased to 22.7 percent year-on-year in the first seven months of 2008 from 28.7 percent a year earlier. "China's exports to the United States and European Union are expected to dip further in coming quarters, but exports to other global emerging markets should remain strong, providing a floor to the slowing but still resilient export sector," said the report. The government, which is still in a good fiscal position, can prevent growth from slowing below 8 percent to 9 percent by boosting spending or cutting taxes, it noted. Government revenues grew 32.4 percent in 200China's economic growth decelerated in the past three quarters, from 11.3 percent in the last quarter of 2007 to 10.6 percent in the first quarter of 2008 and 10.1 percent in the second quarter.

**Chinese economy resilient – growth fundamentals are strong**

**DBA 08** (Daily Business Alerts [Australia], 10/20. “China to weather economic storm: CommSec.” Janelle Macri. Lexis.)

The Chinese economy is expected to remain resilient over the next financial year and is well placed to weather a downturn in the global economy, according to CommSec. CommSec's latest economic insight report, released today, showed China continued to grow solidly in the September quarter, with gross domestic product expanding at 9 per cent from a year earlier despite the shutdown for the Olympics. Retail sales remained robust, up 23.2 per cent on a year earlier, but just shy of the record pace of growth hit in July. Nonetheless, Chinese retail sales still grew close to the fastest pace in a decade, thanks in part to sustained strong income growth. Industrial output expanded by 11.4 per cent in the year to September, down from 12.8 per cent in the year to August, and just below expectation of around 13.4 per cent. China's trade surplus climbed to a record $29.3 billion in September as import growth matched the slowest pace in a year. While many countries around the world that are skirting recession territory, China is certainly not immune to the slowdown noted in the global economy, the report said. But, with further rate cuts and the possibility of a fiscal stimulus package on the agenda, the Chinese economy is expected to remain resilient over the next financial year, with annual growth of between 8 -9 per cent. "The long term fundamentals for the China story still remain broadly positive. With a population of 1.3 billion consumers, Chinese authorities continue to re-iterate their plans for income growth, not just in urban centres but also driving wealth and growth further into rural sectors," the report said. "China is in an enviable position of being much better positioned than most emerging or advance nations. The government will focus on supporting growth through a number of measures. Expect rate cuts and fiscal stimulus policies to be on the agenda."

### 2NC DG

**No lash out or power vacuums – the US will slowly retreat**

**MacDonald and Parent 11** [Paul, Assistant Professor of Political Science at Williams College; Joseph, Assistant Professor of Political Science at the University of Miami, "Resurrecting Retrenchment: The Grand Strategic Consequences of U.S. Decline," May, Policy Brief, Belfer Center for Science and International Affairs]

To date, there has been no comprehensive study of great power retrenchment and no study that defends retrenchment as a probable or practical policy. Using historical data on gross domestic product, we identify eighteen cases of "acute relative decline" since 1870. Acute relative decline happens when a great power loses an ordinal ranking in global share of economic production, and this shift endures for five or more years. A comparison of these periods yields the following findings: Retrenchment is the most common response to decline. Great powers suffering from acute decline, such as the United Kingdom, used retrenchment to shore up their fading power in eleven to fifteen of the eighteen cases that we studied (61–83 percent). The rate of decline is the most important factor for explaining and predicting the magnitude of retrenchment. The faster a state falls, the more drastic the retrenchment policy it is likely to employ. The rate of decline is also the most important factor for explaining and predicting the forms that retrenchment takes. The faster a state falls, the more likely it is to renounce risky commitments, increase reliance on other states, cut military spending, and avoid starting or escalating international disputes. In more detail, secondary findings include the following: Democracy does not appear to inhibit retrenchment. Declining states are approximately equally likely to retrench regardless of regime type. Wars are infrequent during ordinal transitions. War broke out close to the transition point in between one and four of the eighteen cases (6–22 percent). Retrenching states rebound with some regularity. Six of the fifteen retrenching states (40 percent) managed to recapture their former rank. No state that failed to retrench can boast similar results. Declining great powers cut their military personnel and budgets significantly faster than other great powers. Over a five-year period, the average nondeclining state increased military personnel 2.1 percent—as compared with a 0.8 percent decrease in declining states. Likewise, the average nondeclining state increased military spending 8.4 percent—compared with 2.2 percent among declining states. Swift declines cause greater alliance agreements. Over a five-year period, the average great power signs 1.75 new alliance agreements—great powers undergoing large declines sign an average of 3.6 such agreements. Declining great powers are less likely to enter or escalate disputes. Compared to average great powers, they are 26 percent less likely to initiate an interstate dispute, 25 percent less likely to be embroiled in a dispute, and markedly less likely to escalate those disputes to high levels. IMPLICATIONS FOR POLICYMAKERSFrom the analysis above, three main implications follow for U.S. policy. First, we are likely to see retrenchment in U.S. foreign policy. With a declining share of relative power, the United States is ripe to shift burdens to allies, cut military expenditures, and stay out of international disputes. This will not be without risks and costs, but retrenchment is likely to be peaceful and is preferable to nonretrenchment. In short, U.S. policymakers should resist calls to maintain a sizable overseas posture because they fear that a more moderate policy might harm U.S. prestige or credibility with American allies. A humble foreign policy and more modest overseas presence can be as (if not more) effective in restoring U.S. credibility and reassuring allies. Second, any potential U.S.-Sino power transition is likely to be easier on the United States than pessimists have advertised. If the United States acts like a typical retrenching state, the future looks promising. Several regional allies—foremost India and Japan—appear capable of assuming responsibilities formerly shouldered by the United States, and a forward defense is no longer as valuable as it once was. There remains ample room for cuts in U.S. defense spending. And as China grows it will find, as the United States did, that increased relative power brings with it widening divisions at home and fewer friends overseas. In brief, policymakers should reject arguments that a reduction in U.S. overseas deployments will embolden a hostile and expansionist China. Sizable forward deployments in Asia are just as likely to trap the United States in unnecessary clashes as they are to deter potential aggression. Third, the United States must reconsider when, where, and how it will use its more modest resources in the future. A sensible policy of retrenchment must be properly prepared for—policymakers should not hastily slash budgets and renounce commitments. A gradual and controlled policy of reprioritizing goals, renouncing commitments, and shifting burdens will bring greater returns than an improvised or imposed retreat. To this end, policymakers need to engage in a frank and serious debate about the purposes of U.S. overseas assets. Our position is that the primary role of the U.S. military should be to deter and fight conventional wars against potential great power adversaries, rather than engage in limited operations against insurgents and other nonstate threats. This suggests that U.S. deployments in Iraq and Afghanistan should be pared down; that the United States should resist calls to involve itself in internal conflicts or civil wars, such as those in Libya and elsewhere in North Africa; and that the Asia-Pacific region should have strategic priority over Europe and the greater Middle East. Regardless of whether one accepts these particular proposals, the United States must make tough choices about which regions and threats should have claim to increasingly scarce resources. CONCLUSION Retrenchment is probable and pragmatic. Great powers may not be prudent, but they tend to become so when their power ebbs. Regardless of regime type, declining states routinely renounce risky commitments, redistribute alliance burdens, pare back military outlays, and avoid ensnarement in and escalation of costly conflicts. Husbanding resources is simply sensible. In the competitive game of power politics, states must unsentimentally realign means with ends or be punished for their profligacy. Attempts to maintain policies advanced when U.S. relative power was greater are outdated, unfounded, and imprudent. Retrenchment policies—greater burden sharing with allies, less military spending, and less involvement in militarized disputes—hold the most promise for arresting and reversing decline.

**The alternative to hegemony is regional cooperation – not war**

**Buzan 11** [Barry, Professor of International Relations at the London School of Economics, "The Inaugural Kenneth N. Waltz Annual Lecture A World Order Without Superpowers Decentred Globalism," International Relations, 4-1, vol. 25 no. 1 3-25]

In 2004 I argued, in line with much mainstream thinking, that the most likely scenario for the coming decades was continuation of the US as the sole superpower accompanied by several great powers. This idea still forms the core of the debates about polarity. Its main theme is whether or not the US will be able to preserve its sole superpower status, or whether rising challengers, mainly China, will soon return the world order to bipolarity. It is typical of the Western part of this debate to be looking for ways to preserve US hegemony/leadership either by maintaining and exploiting a power advantage or by relegitimizing its leading role using institutions to accommodate rising powers. 1 My second most likely scenario from 2004 was one in which there would be no superpowers, only great powers, and I argued that this would produce a rather uncertain world. I now think that this scenario is becoming more likely, but can be seen in a more positive light. I argue here that it offers an alternative third way of thinking about the coming world order: not whether there will be one superpower or more, but no superpowers, only great powers. We may be heading quite quickly into such a world, and this may be no bad thing. The mainstream polarity debates typically ignore the fact that there is an alternative to having either to balance against the US or bandwagon with it. Others can, and increasingly do, use the diminished power and authority of the US as a reason to ignore or circumscribe it, and to carve their own pathways in regional and global politics. 2 Continued US leadership is neither necessary nor, arguably, desirable to keep the world order from falling into 1930s-style imperial competition. This argument, therefore, steps outside the main lines of the current debates about polarity. It also steps outside the neorealist framework created by Waltz in two ways. First, I differentiate between superpowers and great powers in a way that neorealists cannot, and see that distinction as being crucial to understanding an international system operating on a truly global scale. By superpower I mean a polity whose political, military, cultural and economic reach extends across the whole international system; by great power I mean one whose reach extends only across more than one region. 3 Second, I reject the neorealist assumption that the major powers of the day will necessarily fall into competition to dominate the whole system. I focus instead on the underpinnings within such a regionalized world order for a coexistence international society with some elements of cooperation. The main part of the article defines superpowers and great powers, and shows why superpowers are dying out. The second section argues that a world with only great powers is likely to take a more regionalized form, and the third section explores why this might work quite well. The fourth section suggests the possible downsides of a more regionalized international society, and the conclusions reflect on some policy implications.

**And other factors ensure stability   
Preble 10** [Christopher, director of foreign policy studies at the Cato Institute, professor of history at St. Cloud State and Temple University , former commissioned officer in the Navy, Ph.D. in history from Temple University, “U.S. Military Power: Preeminence for What Purpose?” 8-3, <http://www.cato-at-liberty.org/u-s-military-power-preeminence-for-what-purpose/>]

Most in Washington still embraces the notion that America is, and forever will be, the world’s indispensable nation. Some scholars, however, questioned the logic of hegemonic stability theory from the very beginning. A number continue to do so today. They advance arguments diametrically at odds with the primacist consensus. Trade routes need not be policed by a single dominant power; the international economy is complex and resilient. Supply disruptions are likely to be temporary, and the costs of mitigating their effects should be borne by those who stand to lose — or gain — the most. Islamic extremists are scary, but hardly comparable to the threat posed by a globe-straddling Soviet Union armed with thousands of nuclear weapons. It is frankly absurd that we spend more today to fight Osama bin Laden and his tiny band of murderous thugs than we spent to face down Joseph Stalin and Chairman Mao. Many factors have contributed to the dramatic decline in the number of wars between nation-states; it is unrealistic to expect that a new spasm of global conflict would erupt if the United States were to modestly refocus its efforts, draw down its military power, and call on other countries to play a larger role in their own defense, and in the security of their respective regions.

### 2NC Warming

#### CO2 won’t cause acidification. There’s just not enough from emissions.

**Monckton ’10** (Christopher, Chief Policy Advisor – Science and Public Policy Institute, former Special Advisor to UK Prime Minister Thatcher, “ANSWERS TO A FISHERMAN’S TESTIMONY ABOUT OCEAN ACIDIFICATION”, 4-28, http://scienceandpublicpolicy.org/images/stories/papers/originals/answers\_to\_fishermans\_testimony.pdf)

Research shows that CO2 emissions from burning of fossil fuels and other manmade sources of CO2 are absorbed into the ocean from the atmosphere. In the ocean, the CO2 reacts to form carbonic acid. The acid changes the ocean’s chemistry.

CO2 from whatever source, natural or manmade, is exchanged between the atmosphere and the ocean. Some 30% of all manmade CO2 emissions can be expected to accumulate in the oceans. However, the oceans already contain 70 times as much CO2 as the atmosphere. If, therefore, we were to double the CO2 concentration in the atmosphere, an additional partial pressure equivalent to just 30% of today’s atmospheric concentration would end up in the oceans – an increase amounting to less than 0.48% of what is already there. That would simply not be enough, on any view, to cause any appreciable “acidification” of the oceans.

## 1NR Case

### Glut

**Not key to the global economy**

**Davis 04** (Joseph, Analyst @ Vanguard China's slowing economy, September, https://institutional5.vanguard.com/iip/pdf/chinaslowdown.pdf)

Overall, our simulations indicate that a Chinese hard landing would have a minimal impact on the U.S. economy. There would be the usual temporary effects of dramatic economic news-a few days or weeks of market swings, together with much dire prophesizing in the media. But, as stated above, the true result of a sharp drop in China's GDP should be much like that of past emerging-market hard landings, which have not significantly detracted from U.S.-and hence, global-economic growth. Despite the initial drop-off in local demand, global deflationary pressures would quickly act to stimulate demand worldwide. Indeed, the VAR model demonstrates that the second-round feedback effects of lower commodity and import prices would reduce input costs world-wide sufficiently to create a bounce-back effect: The lower costs eventually would counteract the first-round fall-off in Chinese demand. Conclusion. While recent Chinese policy responses suggest that a soft landing is the most likely outcome for the nation's economy, the risks to this assessment lie overwhelmingly on the downside. Regardless of the path that China's economy takes over the next year, our analysis shows that the potential ramifications for long-term investors are more modest and short-lived than commonly feared. Using quantitative techniques, we find that the implications of a soft landing in China are relatively benign for the global economy. A potential hard landing would have more harmful effects on the Asian economy and emerging markets generally, but relatively minor impact on the U.S. economy.

## 1NR Politics

### 2NC—Bioweapons O/V

#### Bioweapons comparatively outweigh war—

#### B. Control

Ochs 2—Richard Ochs, member of the Baltimore Emergency Response Network and founding chairman of the Students for a Democratic Society in 1964 at the University of Maryland in College Park [June 9, 2002, “Biological Weapons Must Be Abolished Immediately,” http://www.freefromterror.net/other\_articles/abolish.html]

Of all the weapons of mass destruction, the genetically engineered biological weapons, many without a known cure or vaccine, are an extreme danger to the continued survival of life on earth. Any perceived military value or deterrence pales in comparison to the great risk these weapons pose just sitting in vials in laboratories.

While a "nuclear winter," resulting from a massive exchange of nuclear weapons, could also kill off most of life on earth and severely compromise the health of future generations, they are easier to control. Biological weapons, on the other hand, can get out of control very easily, as the recent anthrax attacks has demonstrated. There is no way to guarantee the security of these doomsday weapons because very tiny amounts can be stolen or accidentally released and then grow or be grown to horrendous proportions. The Black Death of the Middle Ages would be small in comparison to the potential damage bioweapons could cause.

#### C. Geography

Washington Times 8 [“Worse than nuclear threat” http://www.washingtontimes.com/news/2008/jul/10/worse-than-nuclear-threat/]

Of the three sorts, biological weapons might be the easiest to reproduce safely in a lab, assuming one knows what to do. A biological agent, as a weapon of mass destruction or a terror weapon, is the least expensive as well as the easiest to disseminate. A biological agent does not need a delivery mechanism and can be transported by one person. It can pass undetected through customs and border guards, given that it is odorless and colorless.

All that is needed to spread an epidemic of botulism, for example, or mad cow disease is to hang around a truck stop for a few hours until a semi pulling a load of cattle on its way to market drives in. Wait until the driver leaves his load unattended, then shortage scrub a previously infected rag around the railings and the mouths of a few of the cattle, and let nature do the rest. The disadvantage, for the terrorist, is that the person carrying the rag is likely to become infected. However, with no of jihadists queuing up to become “martyrs,” finding two or three volunteers willing to die a horrible, slow and excruciatingly painful death should be no problem.

From a financial and cost-effective perspective, biological agents remain the cheapest and, in all probability, the most likely agents of mass destruction to become available to terrorist groups.

In their haste to leave training camps and bases of operation in Afghanistan in the wake of rapidly advancing U.S. forces, al Qaeda agents left behind piles of documents, including videotapes showing tests and the effects of chemical agents on animals.

Chemical weapons are more cumbersome to produce, require larger amounts to cause enough damage to leave a psychological scar and require a delivery mechanism such as an artillery shell.

**A biological agent can cause far more deaths than a nuclear weapon, because it is not limited geographically, unlike a nuclear bomb**. For example, an infected truck driver in Omaha, Neb., infects an Army sergeant he meets in a diner outside Tulsa, Okla.

The sergeant travels by plane to New York, where he changes planes, boarding one bound for Frankfurt, Germany. Again, he changes planes, this time flying to Kuwait, where he joins up with several members of his unit heading into Iraq. Along the way, the sergeant has infected scores of people at every airport between Omaha and Baghdad.

Those people in turn would have traveled on to Australia, South America, Canada, European cities and other parts of the world. Within a few days, people from Sydney, Australia, to Seattle could start dying.

A nuclear device, on the other hand, would devastate the immediate area and, depending on its size, contaminate everything in a radius of several miles, but the damage would be confined to the immediate area of detonation, plus the fallout zone. In addition, depending on the wind direction and speed, radioactive particles could be carried hundreds, if not thousands, of miles. But the image of a nuclear blast carries greater impact psychologically.

### Turns case

Turns china

Los Angeles Times, 11/9/2012 (Other countries eagerly await U.S. immigration reform, p. <http://latimesblogs.latimes.com/world_now/2012/11/us-immigration-reform-eagerly-awaited-by-source-countries.html>)

"Comprehensive immigration reform will see expansion of skilled labor visas," predicted B. Lindsay Lowell, director of policy studies for the Institute for the Study of International Migration at Georgetown University. A former research chief for the congressionally appointed Commission on Immigration Reform, Lowell said he expects to see at least a fivefold increase in the number of highly skilled labor visas that would provide "a significant shot in the arm for India and China." There is widespread consensus among economists and academics that skilled migration fosters new trade and business relationships between countries and enhances links to the global economy, Lowell said. "Countries like India and China weigh the opportunities of business abroad from their expats with the possibility of brain drain, and I think they still see the immigration opportunity as a bigger plus than not," he said.

#### Immigration reform spurs military nanotech – turns all heg args

**Carafano 7** (James, Ph.D., Deputy Driector – Institute for International Studies and Director of the Center for Foreign Policy Studies – Heritage Foundation, and Andrew Gudgel, “Nanotechnology and National Security: Small Changes, Big Impact”, Heritage Backgrounder, 9-21, http://heritage.org/Research/Reports/2007/09/Nanotechnology -and-National-Security-Small-Changes-Big-Impact)

Nanotechnology is an emerging transformational technology that promises wide and dual-use applica­tions in many fields, particularly national security. The United States is the world's acknowledged leader in nanoscience, but stiff international competition is nar­rowing America's lead. Many other countries, specifi­cally European nations and China, have large, established nanotechnology initiatives. Most commer­cial applications of nanotechnology are still nascent. In the near term, the most promising develop­ments for national security will likely come from government research rather than from the applica­tion of commercial off-the-shelf nanotechnologies. To meet national security needs in the near term, the U.S. government needs to adopt new legislative and policy innovations, including promoting long-term research, distributing federal grants more widely, and promoting scientific travel and exchanges to maintain a supply of skilled experts. Over the long term, the government should remove capital and regulatory barriers to lower the cost of research and emerging technologies and should address safety and environmental issues. What Is Nanotechnology? "Nanotechnology" is derived from "nano," the Greek word for dwarf. It involves manipulating and manufacturing particles at the microscopic and even atomic levels, between 1 nanometer and 100 nanom­eters. By comparison, a human hair is roughly 100,000 nanometers wide. Combining the ability to manipulate molecular structures with advances in genomics and other bio­logical sciences has created a wealth of new research opportunities. By putting these unique properties to work, scientists are developing highly beneficial dual-use products in medicine, electronics, and many other industries that will also provide enor­mous defense and homeland security capabilities. These scientific developments are creating new industries. The market opportunities are so sub­stantial that many government and business lead­ers describe nanotechnology as "the next industrial revolution." Nanotechnology was incorporated into manu­factured goods worth more than $30 billion in 2005, and this figure is projected to reach $2.6 tril­lion by 2015.[[1]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn1" \o ") However, since nanotechnology is relatively new, government research is critical for developing applications of this new technology, par­ticularly in the field of national security. A Small Beginning The birth of nanotechnology can be traced to 1981, when Gerd Binning and Heinrich Rohrer, sci­entists at IBM Research, Zurich, created the scan­ning tunneling microscope (STM). The STM was the first instrument capable of performing opera­tions at the atomic scale, such as adding or remov­ing individual electrons to or from atoms and molecules. It gave researchers the unprecedented ability to change materials "from the bottom up." The two scientists won the Nobel Prize in physics for their invention in 1986.[[2]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact#_ftn2) Within a few years, scientists had demonstrated the capability to manufacture nanoparticles. The discovery of fullerines (isomers or molecules of pure carbon that can be manipulated into unique structures, such as "buckyballs") in 1985 and car­bon nanotubes (manufactured one-atom-thick sheets of carbon rolled into cylinders) in 1991 sparked further interest in nanotechnology. These molecules have novel properties that make them potentially useful in a wide variety of applica­tions, including electronics, optics, and other fields of material science. They also exhibit extraordinary strength and unique electrical properties. Carbon nanotubes are 100 times stronger than steel at one-sixth the weight, while buckyballs are hollow, mak­ing them well-suited for use as carriers of drugs or other materials.[[3]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact#_ftn3) Nanotechnology Today Current commercial nanotechnological prod­ucts are limited to first-generation passive applica­tions, such as nanoparticles, coatings, catalysts, and nanocomposites (materials formed from organic and inorganic components at the nanos­cale). Products include cosmetics, automobile parts, clothing, and sports equipment. Research is quickly leading nanotechnology to converge with other fields, including biotechnology, information technology, and cognitive science. Using techniques commonly found in semicon­ductor manufacture, researchers have created adjustable "quantum dots" by making "wells" and "corrals" on silicon chips where individual elec­trons can be trapped and held. The shell of elec­trons around every atom determines its properties, such as color and electrical conductivity. By filling these quantum corrals with differing numbers of electrons, researchers can create artificial "atoms" that have the same properties as any element on- or beyond-the periodic table, although these "atoms" are temporary and lack nuclei. Simply adding or subtracting electrons from these wells changes the type of "atom." Grids of quantum corrals built across the surface of a silicon semiconductor chip would allow the creation of artificial molecules, which would theoretically allow the entire chip to have-at least on its sur­face-the physical properties of almost any mate­rial imaginable. Some aspects of current nanotechnology also blur the line with biotechnology. For example, nanoparticles (clusters of tens to hundreds of indi­vidual atoms) have been used in medical research to fight diseases, including cancer. Researchers are also exploring ways to manipulate the genetic code that have tremendous implications in the diagnosis and treatment of diseases. A nanoparticle that encapsu­lates medication with biomolecules could be designed to bind only to the cells that need the medicine. Such research could also affect other dis­ease research and possibly change the medical response to national catastrophic disaster.[[4]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact#_ftn4) Nanophotonics is another growing field of nano­technology research. Photonics, which uses light, is the ability to control photons for the purpose of car­rying, processing, storing, or displaying informa­tion. Well-known applications of photonics include fiberoptic cable, television screens, computer dis­plays, and laser and imaging systems. In nanophotonics, scientists control the mor­phology of materials and, as a result, can now change how a material refracts light. Thus, nano­photonics is not simply the scaling-down of existing systems, but utilizing physics, functionalities, and design strategies that are different from regular pho­tonics to produce tiny waveguides, microscopes on a single chip, better optical communications equip­ment, and chemical and biological sensors.[[5]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn5" \o ") National Security Implications In 2000, the federal government established the National Nanotechnology Initiative (NNI) to pro­mote nanotechnology research at the federal level. The NNI is managed by the Nanoscale Science Engineering and Technology Subcommittee of the National Science and Technology Council, an inter­agency organization of 26 federal agencies that coordinates planning, budgeting, and program implementation among defense and national secu­rity stakeholders. This structure is vital to dissemi­nating information and fostering cross-disciplinary networks and partnerships. Both the Department of Defense (DOD) and Department of Homeland Security (DHS) are NNI members. In addition to funding research, federal support through the NNI provides crucial funds for the cre­ation of nanotech support infrastructure, such as nanoscale research labs, and for educational re­sources to develop a skilled workforce capable of advancing nanotechnology. These programs en­courage business, including small business, to pur­sue nanotechnology opportunities.[[6]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn6" \o ") Military Applications. All branches of the U.S. military are currently conducting nanotechnology research, including the Defense Advanced Research Projects Agency (DARPA), Office of Naval Research (ONR), Army Research Office (ARO), and Air Force Office of Scientific Research (AFOSR). The Air Force is heavily involved in research of composite materials.[[7]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn7" \o ") Among other projects, the Navy Research Laboratory's Institute for Nanoscience has studied quantum dots for application in nanopho­tonics and identifying biological materials.[[8]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn8" \o ") In May 2003, the Army and the Massachusetts Institute of Technology opened the Institute for Soldier Nano­technologies, a joint research collaboration to develop technologies to protect soldiers better.[[9]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn9" \o ") Nanotechnology has numerous military applica­tions. The most obvious are in materials science. Carbon nanotubes and diamond films and fibers have higher strength-to-weight ratios than steel, which allows for lighter and stronger armor and parts for vehicles, equipment, and aircraft. Such upgraded military Humvees would better protect soldiers from improvised explosive devices (IEDs) and small-arms fire. In another application, adding nickel nanostrands (ropes of material no wider than a few molecules), which can conduct electricity, could make aircraft more resistant to lightning strikes. The nickel strands also have magnetic properties that may prove useful in filters and energy storage devices.[[10]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn10" \o ") The U.S. Army is actively pursuing nanotech­nology for use in soldiers' uniforms, equipment, and armor. As part of the planned Objective Force Warrior Soldier Ensemble, the Army hopes to cre­ate a uniform that provides flexible armor protec­tion for soldiers' limbs through the use of shear thickening liquids that solidify when force is applied to them. This would greatly reduce the weight that a soldier must carry. (Current body armor weighs around 25 pounds.) Other features of the planned uniform include medical sensors, medical treatment capabilities, communications, and individual environmental control for the soldier and integrated thermal, chemical, and biological sensing systems woven into the garment's fabric.[[11]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn11" \o ") Nanotechnology would allow for more precise control of fuel combustion and detonation of explosives. Explosives and propellants could be constructed atom by atom to optimal particle sizes and ratios of ingredients so that the materials approach their theoretical limits of energy release. This would lead to smaller, more powerful rock­ets, propellants, warheads, bombs, and other explosive devices. For slower release of energy, nanotechnology would allow for more powerful batteries, fuel cells, photovoltaic panels, and perhaps even more exotic methods of generating electrical power. Researchers at the Georgia Institute of Technology recently developed piezoelectric fibers, which someday may be used in fabrics that generate their own electricity, completely eliminating the need for batteries.[[12]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn12" \o ") In electronics, nanotechnology would allow the creation of ever-smaller computers and sensors, leading to integrated packages that could sense, dis­criminate, decide, report information, and provide control input to other devices. For example, tires that sense the surface over which they are traveling could automatically adjust tire pressure to maintain optimal traction. Smart sensors could be used in single-chip chemical and biological agent laboratories that would be smaller, faster, and more accurate than current testing methods. They could also be attached to miniature disposable sensor platforms, allowing monitoring of a large battlespace at mini­mal cost, effort, and danger to soldiers. In the more distant future, combining nanocom­puters, sensors, and nanomechanical architectures into one system would make possible autono­mously targeted and guided projectiles, such as bul­lets and rockets. Nanotechnology could also improve communications and information process­ing, whether on the battlefield or with the Oval Office, through microscopic computers, switches, lasers, mirrors, detectors, and other optical and electrical devices. The laws of physics and optics change funda­mentally at the near-atomic level. Instead of being masked by the manipulation of particles on the sur­face, materials can be changed at the optical elec­tronic level. Materials that display one optical or electronic property at the macro level may display a different property at the nanometer level. Remark­able mechanisms become possible, such as nega­tively refractive optics that bend light at angles and in directions otherwise impossible.[[13]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn13" \o ") Such devices could lead to the development of lenses that focus almost instantaneously and light-bending camou­flage that changes as the solider or vehicle moves. One theoretical and exotic use of nanophotonic materials would be fiberoptic waveguides that actu­ally strengthen the light beams passing through them. These could be used for long-distance, strate­gic-level communications systems or high-power narrow-beam lasers. With nanophotonics, optical computing, data storage, and signal processing become possible. If the Defense Department is to remain a leader in exploiting nanotechnology, the Pentagon must ensure that it adequately understands how nano­technology could be exploited for U.S. security and competitive advantage. Homeland Security Applications. Only 0.25 percent of the government's 2004 funding for nan­otechnology goes to the Department of Homeland Security. This is inadequate given that nanotechnol­ogy could play a major role in advancing the DHS capabilities. Nanomaterials could be used to create highly sensitive sensors capable of detecting hazard­ous materials in the air. For example, carbon-based nanotubes are relatively inexpensive and consume minimal power. Other areas of nanotechnology pertinent to homeland security are emergency responder de­vices. Lightweight communications systems that require almost no power and have a large contact radius would give rescuers more flexibility. Nano­tech robots could be used to disarm bombs and save trapped victims, reducing the risks to rescue workers. Enlisting the Private Sector In the United States, the commercial nano­science industry is composed of traditional indus­trial sectors, newly formed startups, Fortune 500 companies, and academic research institutions. These groups will play a significant role in future developments of nanotechnology. The most recent analysis estimates that nanoscience will produce $2.6 trillion in economic output by 2015.[[14]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn14" \o ") The U.S. is currently the global leader in nano­technology. The National Nanotechnology Initiative coordinates over $1 billion in annual federal research and grants. Total U.S. public and private spending on nanotechnology research and develop­ment totals about $3 billion annually, or one-third of the estimated $9 billion that is spent worldwide.[[15]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn15" \o ") Global competition in nanotechnology is fierce, and many countries are challenging the U.S.'s supremacy, specifically in the European Union and Asia. The EU is strengthening its research and development capabilities by promot­ing partnerships among companies and universi­ties through its Nanosciences/Nanotechnology Action Plan for Europe. The Chinese government has implemented initiatives that employ over twice as many engineers as are working in nano­technology in the U.S.[[16]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn16" \o ") Thus, U.S. government-sponsored research is still vital if America is to remain a global leader in the national security applications of nanotechnology. Toward the Future Congress and the Administration have done much to encourage the development of nano­science. The challenge is to maintain this momen­tum, facilitating commercial innovation and the application of new advances for national security purposes. A few key initiatives would bolster Amer­ica's global leadership in the science of small things. Smarter Funding. In the near term, government research and development funds will continue to play a critical role in jump-starting national security innovations in nanotechnology. Congress should continue to provide strong support for nanoscience research programs in the Department of Defense and other federal agencies that support national security purposes. Big Industry is currently averse to risk and is not providing the innovations needed for national secu­rity. In fact, investments in the private sector have been concentrated in just a few mature nanotech companies. In the first quarter of 2005, almost all of the venture capital invested in the nanotech indus­try went to four companies: NanoTex ($33 millon), Nanomix ($17 million), Nantero ($17 million), and NanoOpto ($12 million).[[17]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn17" \o ") The NNI needs to focus grants on the companies willing to pursue national security research. In doing so, however, it must walk a fine line between fostering cutting-edge technology advances and establishing a form of corporate welfare. Funding of the private sector should be limited to projects with such prohibitive risk and entry costs that companies would otherwise be unable to pursue them on their own. Interagency Coordination. The DOD recently cited maintaining a consistent vision and stable funding as critical to future nanotechnology research and development.[[18]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn18" \o ") Although federal agencies con­tinue to coordinate through the NNI, each agency retains full control of its own budget decisions and sets its own research priorities. The National Academy of Sciences has con­cluded that the "NNI is successfully establishing R&D programs with wider impact than could have been expected from separate agency funding with­out coordination." Increased coordination within the NNI would produce a centralized list of priori­ties and leverage resources even more effectively.[[19]](http://heritage.org/Research/Reports/2007/09/Nanotechnology-and-National-Security-Small-Changes-Big-Impact" \l "_ftn19" \o ") Reform of Visa Issuance and Management. Congress needs to promote policies that continue to bring the best and the brightest in nanotechnology to study and work in the United States. Current visa policies are making it increasingly difficult to recruit students and scientists and to hold scientific confer­ences in the United States. The nation's security and competitiveness relies heavily on people's ability to travel to the United States, but the current visa system is unnecessarily challenging, depriving the United States of many of the world's best and brightest scientists, students, and entrepreneurs. Long wait times for personal interviews are among the most frequently cited fac­tors that make travel to the United States difficult.

#### And it solves warming

Norris 10--Teryn, "Racing for Clean Tech Jobs: Why America Needs an Energy Education Strategy", Daily Kos, March 18th, <http://www.dailykos.com/story/2010/3/18/847363/-Racing-for-Clean-Tech-Jobs:-Why-America-Needs-an-Energy-Education-Strategy>

In the aftermath of the Great Recession, the United States faces serious questions about the future of its economy and jobs market. Where will the good jobs of the future come from, how do we prepare the American workforce, and what is our strategy to maintain economic leadership in an increasingly competitive world? A growing consensus suggests that clean tech will be one of our generation's largest growth sectors. The global clean-tech market is expected to surpass $1 trillion in value within the next few years, and a perfect storm of factors - from the inevitability of a carbon-constrained world, to skyrocketing global energy demand, to long-term oil price hikes - will drive global demand for clean-energy technologies. That is why the national debate about global clean-tech competitiveness is so important, sparked by the rapid entry of China and other nations. My colleagues and I recently contributed to the discussion with "Rising Tigers, Sleeping Giant," a large report providing the first comprehensive analysis of competitive positions among the U.S. and key Asian challengers. In order to compete, we found, "U.S. energy policy must include large, direct and coordinated investments in clean-technology R&D, manufacturing, deployment, and infrastructure." But even if the United States adopts a real industrial policy for clean energy, there is little evidence that our workforce is skilled enough to compete. Unfortunately, according to the Department of Energy, "The U.S. ranks behind other major nations in making the transitions required to educate students for emerging energy trades, research efforts and other professions to support the future energy technology mix." A competitive energy workforce requires much more than technicians and building retrofitters. Scientists, engineers, high-tech entrepreneurs, and advanced manufacturers will play a critical role, just as they have in strategic sectors like infotech, aerospace, and biotech. The federal government has started to address the need for green technician and efficiency retrofit training, such as with the Green Jobs Act, but it has not implemented an education strategy to keep the U.S. at the leading edge of energy science, technology, and entrepreneurship. Unfortunately, the majority of our colleges and universities lack degree programs focused on energy, and the U.S. power engineering education system is on the decline. Over the next five years, 45 percent of electric utility engineers will be eligible for retirement, along with 40 percent of key power engineering faculty at U.S. universities, according to a report by IEEE. "Engineering workforce shortages are already occurring," the report concludes. "We need more electrical engineers to solve industry challenges, and to build the 21st century electric power grid... Meeting these needs requires long-term investment now." Meanwhile, other countries are producing a substantially larger portion of scientists, engineers, and researchers that will benefit their clean-tech industries. Science and engineering make up only about one-third of U.S. bachelor's degrees, compared to 63 percent in Japan, 53 percent in China and 51 percent in Singapore, and the number of Chinese researchers is now on par with the United States (though some have pointed out that the quality of these graduates and researchers is not always comparable). "Over time," stated a recent report by the National Science Board, "the United States has fallen from one of the top countries in terms of its ratio of natural science and engineering degrees to the college-age population to near the bottom of the 23 countries for which data are available." The energy workforce deficit and STEM education gap will substantially limit the nation's ability to lead the clean-tech industry and accelerate clean energy development. As Nobel Laureate Paul Krugman put it, "If you had to explain America's economic success with one word, that word would be 'education.'" In order to succeed in the clean-tech industry, the U.S. must develop an energy education strategy to develop tens of thousands of advanced energy scientists, engineers, and entrepreneurs, as well as technicians.

### 1nr Yes

#### Will pass – politics key to getting over the hurdles

FRAGA 3 – 4 – 13 NC Register Staff [Brian Fraga, Obama’s Immigration Plan Faces Obstacles (2929), <http://www.ncregister.com/daily-news/obamas-immigration-plan-faces-obstacles/>]

A comprehensive immigration-reform bill may pass through Congress this year, but significant obstacles remain, including the Obama administration’s intent to extend the bill’s legal protections to same-sex couples.

The proposed frameworks for immigration reform that have emerged thus far from the White House and a bipartisan group of U.S. senators share many of the same basic components. Both plans include the so-called pathway to citizenship — which critics decry as amnesty — that would grant legal residency to the estimated 11 million undocumented immigrants in the United States.

“We’re very optimistic that something is going to be done, finally. I think both sides have a lot of political cover to get it done,” said Allen Sanchez, executive director of the New Mexico Conference of Catholic Bishops.

However, there are still difficult issues to be worked out, especially as to whether the pathway to citizenship should be contingent on securing the border.

“We are certainly sensitive to those issues in making sure we have a secure border, but I don’t think you make any progress on the immigration issue by making things contingent on each other. These are pretty straightforward, important issues that should be pursued independently of one another,” said Jeffery Patterson, executive director of the Texas Catholic Conference.

The politics also remain tricky; the leading Republican senators in the bipartisan group, nicknamed the Gang of Eight, were rankled recently by the White House leaking drafts of its own bills to the press. Meanwhile, any legislation granting legal residency to undocumented immigrants — even with a bipartisan imprimatur — will probably still face opposition from conservative members in the Senate and House of Representatives.

Patterson said the Catholic Church, at the state and national levels, has advocated for a sensible immigration policy that keeps families together and grants opportunities for undocumented immigrants who want to become American citizens.

“I think the Catholic Church’s position in the United States has been consistent,” Patterson said. “Immigration reform has to be done in an open, transparent process in which people’s lives and dignity are upheld.”

#### Will pass – politics are key

ACIERNO 3 – 7 contributing writer at Highbrow Magazine. [Gabrielle Acierno, Why Comprehensive Immigration Reform Should Matter to Every American, <http://highbrowmagazine.com/2231-why-comprehensive-immigration-reform-should-matter-every-american>]

There is reason for activists to remain optimistic going into President Obama’s second term. Following an unprecedentedly liberal inauguration speech outlining an assertive progressive agenda, President Obama gave a powerful speech in the end of January reclaiming the demand for immigration reform as the next logical step in the American story. He reframed the debate over immigration as one of American values, history, and identity. Obama responded directly to conservative criticisms, recasting the idea of granting of citizenship as not a capitulation to lawbreakers, but as an act of mercy and compassion entrenched in American tradition, and something that has made the country stronger. Obama also alluded to previous waves of diligent immigrants who “built this country hand by hand, brick by brick,” a couched rebuttal to the conservative argument that legalizing undocumented immigrants will create a class of Americans forever dependent on government welfare programs, and by proxy the Democratic Party.

The plan outlined on the White House website contains four major components, including strengthening border security; cracking down on employers hiring undocumented workers; earned citizenship; and streamlining legal immigration. The concept of “earned citizenship” is controversial and responsible for stalled reform in the past, so its execution must be handled with care.

Following Obama’s speech, a bipartisan group of senators known as the "Gang of Eight," presented their plan, which also offers a path to citizenship. Although bipartisan attempts at a path to citizenship are not novel, this time around there is a more expansive and diverse coalition backing the measure. The group is made up of Senators Charles Schumer (D-NY), Lindsey Graham (R-SC), John McCain (R-AZ), Richard Durbin (D-IL), Robert Menendez (D-NJ), Michael F. Bennet (D-CO), Marco Rubio (R-FL), and Jeff Flake (R-AZ). Both President Obama and the Gang of 8 will hold undocumented immigrants seeking citizenship to certain responsibilities, including passing a national security and criminal background checks, paying taxes, and learning English. The framework has drawn praise from the U.S. Chamber of Commerce, a key business lobby, and the AFL-CIO union. The tension between business leaders and union leaders has thwarted reform in the past, so their mutual consensus will be crucial to the legislative process.

The senators’ announcement comes as a bipartisan group of House members is also working on an immigration proposal. House Speaker John A. Boehner (R-OH) said that they “basically have an agreement.” House Majority Leader Eric Cantor (R-VA) also appears to have recalibrated his rhetoric surrounding immigration, recently to support provisions of the DREAM Act, which he previously voted against, an inference that he intends to cooperate with looming comprehensive reform.

President Obama appeared resolute to accomplish immigration reform in his State of the Union speech on February 12th saying, “If you send me a bill, I will sign it.” The weekend following the State of the Union, a copy of the White House’s draft immigration proposal was leaked. Predictably, Republicans like Marco Rubio with political gains to be made by publicly defying the President, rebuffed the plan. Rubio, who has been anointed “The Republican Savior” by TIME magazine, issued a statement saying that if the president's eventual proposal follows the draft described in the leak, it "would be dead on arrival in Congress.” This dramatic and reflexive statement comes despite the fact that the leaked draft was just that, a draft. President Obama called the lack of CIR “the biggest regret” of his first term, and he is likely trying to send a message to the legislative branch that he does not want CIR to become another legacy of a “do-nothing” Congress.

According to USA Today, the leaked proposal creates a “Lawful Prospective Immigrant” visa that puts undocumented immigrants on a path to legal permanent residency within eight years if they pass a background check, pay a fine and back taxes, learn English and wait in line (just like the earned citizenship requirements in the Gang of 8’s plan). It also expands security funding and requires business owners to check the legal status of new employees. Republicans complain the draft omits any provisions involving future flow of immigration. Spokespeople for the White House emphasize that there is still time for bipartisan agreement, but the President will simply not stand for inaction this time around.

Republican complaints with the draft do speak to a central caveat of the bill yet to be fleshed out, whether undocumented immigrants would have to wait to begin acquiring citizenship until the U.S. border with Mexico is secure. The Senate bipartisan plan makes a pathway to citizenship conditional on border security first, while Obama's immigration proposals do not. However, it is incredibly difficult to explicitly define how secure the border really is. President Obama has followed through with almost all of the border security that the Bush administration had requested. Violent crime in border cities has also dropped steadily in recent years. However, it is tricky to gauge exactly how any policies have contributed to border security, and it will be crucial to define the parameters that make for a “secure border.” Immigration activists fear that Republicans will obstruct passage of a bill by placing unreasonable and out-of-reach constraints on the border security clause. Supporters of reform are insistent upon addressing root problems of immigration, rather than continuing to invest and pour resources into what has become a never-ending cycle.

Illegal (and legal) immigration from Mexico is at a historic low, something border security proponents should be comforted by. Although draconian security measures have escalated over the last several decades, there’s another arguably more compelling explanation for the decline in illegal immigration. The phenomenon is likely less a result of border security than it is of economics. What drives immigration from Mexico and Latin America is the drastic imbalance of social and economic opportunity among the nations. In the past several years, with the U.S. economy struggling, that disparity has grown less glaring, and illegal immigration is now at a net 0.

Protracted recession should not be lauded as an ideal border-control strategy. It is a reminder that mass migration is driven by economics, which is why such issues with Canada are virtually nonexistent. A huge component often left out of the immigration discussion is the idea that in order to control immigration we must address its economic roots. Putting undocumented immigrants on a path to citizenship, regulating immigration flows to suit the needs of industry and agriculture, and finally holding employers fully accountable for the legal status of their employees are the most effective border-safety strategies the U.S. could put in place.

Thus, the true triumph of immigration reform isn’t contingent on first “securing the border.” What must be accomplished first is a system that ensures the legal status of workers, with a regulated supply of migrants and strident penalties for employers who violate the law. The notion that the border can be made fully secure by law enforcement and technology alone is a farce perpetuated by the imaginations of misguided groups like the Minutemen. If we want to secure the border, Congress and the President must first secure Comprehensive Immigration Reform.

Pitching immigration reform to many white, conservative Americans, who would be largely responsible for pushing a candidate through a presidential primary in 2016, is a delicate dance for Republicans like Rubio who recognize the demographic gravity of the times. Even Mitt Romney was praised in the 2012 primaries by the GOP base for his hardline opposition to immigration reform and use of incendiary terms like “self-deportation.”

As a response to concerns that immigrants detract from the economy, weighing down already frail social services and “stealing jobs” from “real” Americans, policymakers must appeal to studies that show CIR would in fact boost the economy. Although immigrants are usually associated with menial labor, studies show the industrious spirit of 19th century immigrants engrained in textbooks and oral history still holds true for today’s newcomers.

A 2012 study by the Fiscal Policy Institute, “found that there were 900,000 immigrants among small-business owners in the United States, about 18 percent of the total, ” a higher percentage than the total immigrant share of the population, which is 13 percent. Hamilton Place Strategies, a Washington research group, argued in a recent paper that low-skilled immigrant workers in agriculture also boost the economy by increasing work for Americans in other sectors, such as transportation and marketing.

Any objection to immigration reform is likely a relic of a prejudiced and provincial attitude about those who are different from us. This attitude has oppressed and challenged every wave of immigrants entering the United States since our inception, and it is one that no longer resonates. The American Dream prescribes this nation as a beacon of hope, presenting opportunity and freedom for anyone willing to work for it. To continually punish people who have sought that opportunity is directly antagonistic to our very most fundamental ideals and values. There is no justice in keeping millions of hardworking people in perpetual fear and uncertainty, there is no justice in destroying families, there is no justice in denying opportunity to people who treasure the American Dream.

American policymakers have a historic opportunity to answer for the mistakes and inertia of the past. The only remaining barrier is the cowardice of politicians, who cower to xenophobia and grandstand for political gamesmanship. "Can we leave 11 million people in the shadows forever?" John McCain asked at a recent conference in Washington, "The people that wash our dishes, cut our lawns, take care of our children -- is it right to leave them in the shadows forever? I don't think so."

#### Will pass – multiple reasons

TPM 3 – 5 – 13 <http://tpmdc.talkingpointsmemo.com/2013/03/5-reasons-immigration-reform-looks-like-it-might-actually-pass.php>

No one would blame supporters of immigration reform if they were pessimistic about the chances of getting a comprehensive bill passed this year. After all, in recent years they’ve already seen one bill go down in flames, another never get off the ground, and just last year endured a presidential election in which Republican candidates were attacked for showing even the slightest sympathy towards undocumented immigrants.

And yet, activists and politicians working on a bill are sounding increasingly confident — even cocky — about their chances. There’s a bipartisan Senate plan already making the rounds, a House group readying a bill of their own, and a broad coalition of powerful interests from churches to big business to Republican fundraisers marketing the whole project.

The House Is Actually Passing Stuff

Politicians Are Fighting Away From The Ledge

Opponents Are Keeping Quiet

Labor And Business Aren’t Killing Each Other

There’s A Path To A Path To Citizenship

Along with the guest worker fight, the next most contentious issue is a path to citizenship for undocumented immigrants. Democrats and immigration activists say they’ll walk without a clear route to citizenship at some point, even if it’s not an immediate one (Obama’s plan would take at least 13 years to kick in). It’s less clear how the Senate’s plan works, but it does commit to a path to citizenship as well, including an expedited route for young undocumented immigrants and agricultural workers.

The House side is still a mystery, though. There’s a bipartisan group working on a bill that contains an odd mix of pro-reform progressives and border hawk conservatives and they’ve yet to leak any significant details about their plan. There’s a lot more skepticism about a path to citizenship on the House side, but key Republicans are leaving at least some wiggle room for them to adopt one. This is made somewhat easier by the fact “path to citizenship,” like “amnesty” is a vague, malleable term. Some Republicans, for example, say they’re against a “special path to citizenship,” but that they’d let undocumented immigrants “get in the back of the line” behind legal applicants for green cards and citizenship under a process that actually might give them a chance of being approved.

As for House leadership, top Republicans including Boehner, Cantor, and especially Ryan are going out of their way to encourage bipartisan talks, even if they haven’t pledged to support the results.

#### Will pass – multiple groups getting on board

LATINO POST 3 – 7 – 13 Immigration Reform News 2013: Support for Reform Coming From Unexpected Sources, <http://www.latinospost.com/articles/13851/20130307/immigration-reform-news-2013-support-coming-unexpected-sources.htm>

As both parties wrangle over immigration reform, proponents are gaining new allies, sometimes from unexpected sources.

The Obama White House is reaching out to the tech industry to support the Senate's bipartisan reform bill, which would offer a path to citizenship for many of the 11 million undocumented immigrants in the country.

Tech companies tend to prefer more lax immigration restrictions, since many immigrants have advanced technical skills useful in Silicon Valley, but often companies cannot win approval from the federal government to sponsor highly-skilled workers.

Obama is offering additional help to get companies the people they need in exchange for support from the industry for legalizing the status of immigrants who may not have had the same educational opportunities. In the past tech leaders have tended to focus solely on their own industry and not the immigration issue as a whole, but the White House is trying to change that, and influential and wealthy tech sector could provide strong support.

Bloomberg reports that evangelical Christians are also gathering support for immigration reform. There are perhaps half a million Latino evangelicals in the country, and perhaps 40 percent of the ones who identify as Southern Baptist are undocumented.

Traditional conservative churches are finding themselves on the progressive side of the immigration issue, as they are forced to confront the difficult situations of many people in their own congregations.

Phone calls to the office of Republican Florida Senator Marco Rubio now include a recorded message referencing Biblical admonitions to "welcome the stranger" before connecting to a receptionist.

Evangelicals and socially conservative Christians have a huge public relations network in place, and pro-immigration members of the community are trying to convince legislators that they will have the support of the evangelical community if they support a path to citizenship.

Finally, the immigration reform movement is gaining support from the LGBT community. Many Latinos and undocumented immigrants have been strong supporters of the fight for gay rights and same-sex marriage, and the LGBT community is becoming more aware of and active in immigration issues. Perhaps 5 percent of undocumented immigrants are LGBT, and many originally came to the United States fleeing persecution or physical threats in their home countries.

In addition, the Obama administration wants to allow same-sex partners of American residents to apply for residency, though the Senate bill does not contain that provision.

### Key to bill

#### The whole bill falls apart

REUTERS 2 – 5 – 13 [House Republicans try to chip away at immigration reform, <http://www.reuters.com/article/2013/02/06/us-usa-immigration-idUSBRE9130V620130206>]

Republicans in the House of Representatives are questioning a core element of the immigration plan: a path to citizenship for undocumented residents, most of them Hispanic, who are already in the United States.

Bob Goodlatte, Republican chairman of the Judiciary Committee, raised the possibility of a "middle ground" between the current U.S. policy of deporting illegals and of placing them on a path to citizenship, as Obama demands.

"Are there options to consider between the extremes of mass deportation and pathway to citizenship?" the Virginia lawmaker asked during a session on immigration reform.

Any challenge to the Democrats' goal of providing a route to citizenship might derail reform at a time when other divisive issues like gun control and deficit reduction share the legislative agenda.

Some House Republicans are wary of a repeat of the last big immigration push in 1986, when about 3 million illegal immigrants were granted legal status.

#### Trying to pass parts kills passage – Obama is against piecemeal

REUTERS 2 – 5 – 13 [House Republicans challenge Obama immigration plan's citizenship goal, <http://www.reuters.com/article/2013/02/05/us-usa-immigration-idUSBRE9130V620130205>]

Other Republicans in the House Judiciary Committee raised additional ideas that could complicate comprehensive immigration reform this year, or make it impossible.

Representative Spencer Bachus, an Alabama Republican, suggested splitting immigration reform into pieces so that the "more toxic and contentious issue" of citizenship for the 11 million was separated from reforms that have more widespread support.

Those reforms include efforts to encourage foreigners earning advanced degrees in mathematics, and science at American universities to stay in the United States and work for American companies.

Cantor also hinted at a piecemeal approach, rather than the comprehensive action that Obama and his fellow Democrats want.

He called for starting with legalization and citizenship for children who were brought illegally into the United States by their parents, an action that Obama last summer approved temporarily.

"One of the great founding principles of our country was that children would not be punished for the mistakes of their parents," Cantor said.

While Cantor's call marked movement for Republicans, many of whom opposed citizenship for the youths, it also falls well short of Obama's drive for broader legislation.

#### Obama will veto any bill that doesn’t include pathway – means we get an internal link to everything

FOLEY 2 – 7 – 13 Huffington Staff [Elise Foley, Obama On Immigration Reform: Politics Not Easy, But 'Now Is The Time', <http://www.huffingtonpost.com/2013/02/07/obama-immigration-reform_n_2638843.html>]

Obama has reiterated repeatedly, both in public and in private meetings with advocates and members of Congress, that he will not accept a bill without a pathway to citizenship, although he did not get into the issue on Thursday.

He acknowledged that the politics of the issue were difficult, as he did later when discussing the need for gun control. But, like Vice President Joe Biden the day before him, he encouraged Democrats to think of what's right first and their own political aspirations second.

#### Being held hostage to broader reform

**AFP 2-18** [Silicon Valley keeps eye on 2013 for H-1B visa reform, <http://timesofindia.indiatimes.com/tech/careers/job-trends/Silicon-Valley-keeps-eye-on-2013-for-H-1B-visa-reform/articleshow/18553846.cms>]

SAN FRANCISCO: Silicon Valley's long crusade to break open doors to America for foreigners with key technology skills hinges on a political battle in Washington over broader immigration reform.¶ For more than a decade, the tech sector has been struggling to get more visas and green cards for immigrants with engineering, math or science skills.¶ While Silicon Valley has been largely backing reform-minded Democratic candidates including president Barack Obama, Republicans have begun paying attention to broader immigration reform, an issue dear to US Latinos.¶ "The election happened and the Republicans took a shellacking from Hispanics," said Robert Atkinson, president of the Information Technology and Innovation Foundation thinktank in Washington.¶ "It was a wake-up call," he continued. "A comprehensive approach to immigration reform became viable."¶ The new political landscape hobbled efforts to push through stand-alone legislation focussed just on high-skilled workers.¶ "High-skill immigration is definitely being held hostage to broader reform," Atkinson said.¶ Stanford University fellow and Singularity University vice president Vivek Wadhwa champions STEM immigration.¶ "Who is behind the US tech boom right now? Immigrants," Wadhwa said. "Just as the US is reinventing itself with a whole range of technologies, we are cutting off the circulation in Silicon Valley."¶ A Republican-backed House bill to expand visas for foreigners graduating from US universities with advanced degrees in science and technology was killed in the Senate by Democrats in the name of broader immigration reform.¶ "We need visas and a new-and-improved immigration arrangement for Silicon Valley and the high-tech sector, but the only way we will win reform is to fight for top-to-bottom overhaul of our immigration system," Democratic congressman Luis Gutierrez said in an editorial on technology news website TechCrunch.¶ Gutierrez is chairman of the Immigration Task Force of the Congressional Hispanic Caucus and was responding to comments by Wadhwa, who testified in Washington this month.

#### Only get high-skilled as part of a larger bill

PILKINGTON 2 – 14 – 13 Guardian Staff [Ed Pilkington, Obama's Google Hangout: a primer, <http://www.guardian.co.uk/commentisfree/2013/feb/14/obama-state-of-the-union-google-hangout>]

Obama has said he wants to fix the problem of America's outdated approach to legal immigration, which is causing major headaches for Silicon Valley and other big US businesses because they cannot attract the skilled workers they need to remain ahead of the global tech game. He is proposing to "staple" a green card to the degrees or PhDs achieved by foreign students in the core "STEM" subjects of science, technology, engineering and maths. But he'll only get this proposal through if Congress backs his broader, comprehensive package of reforms including the crucial pathway to citizenship for the 11 million undocumented immigrants in this country.

### Link wall

#### Renewable energies spark massive congressional backlash.

Macneil 12—Professor at the University of Sydney [Robert, Alternative climate policy pathways in the US, Climate Policy, Volume No. 10 Sep 2012]

The election of Barack Obama in November 2008 to the Presidency of the US (along with strengthened majorities in both its House and Senate) led many in both the mainstream and academia to cautiously speculate that perhaps the country's hitherto woeful performance on climate-related issues might finally take a turn for the better (e.g. Bomberg and Super, 2009; Matisoff, 2010).1 Indeed, even those analysts who were rather skeptical of the ability of the US to play a leading role in the international climate change negotiations after 2008 emphasized the likelihood that, at the very least, Washington would pass a comprehensive domestic programme featuring the country's most important contribution to contemporary climate policy: a national market for GHG emissions trading (e.g. Paterson, 2009). As with all the serious contenders for the Democratic presidential nomination, Obama had campaigned for the need to enact comprehensive climate legislation. A mere 5 weeks into his first term, he had already requested, in a speech before a joint session of Congress, that a system-wide bill be delivered to him to sign as soon as possible. With large Democratic majorities in both houses, it appeared that the US was indeed all but certain to finally turn over a new leaf on climate and establish the type of emissions trading market that it had sold to the rest of the world a decade earlier at Kyoto. Yet, even the most ostensibly advantageous and progressive legislative dynamic in a quarter of a century proved fruitless, as the famed Senate sister bill of Waxman–Markey (formally known as the American Clean Energy and Security Act of 2009, H.R. 2454)—the Kerry-Boxer Bill (formally known as the Clean Energy Jobs and American Power Act of 2009, S. 1733)—promptly died in the upper chamber with (as noted in Economist, 2010) ‘barely the bathos of a whimper’. Soon after the Republican-dominated 112th House of Representatives rose to power in January 2011, the President stated publicly that such a bill would be unlikely to win passage until 2013 at the earliest. While the factors that led to the death of the bill are often described in fairly idiosyncratic terms—typically blamed on the Democrats’ relative lack of political capital following the debates over healthcare, the stimulus bill, and the auto sector bailout, for example (see Pooley, 2010)—the actual root causes are considerably more structural and complex and stem, inter alia, from the broad nature of energy production and consumption in the US, the emergence of environmentalism as an intensely partisan ‘wedge issue’ over the past three decades, the nature of the Democratic Party's contemporary electoral coalition, and the uniquely prohibitive nature of the legislative process in Washington. From this perspective (to be further discussed below), the US administration's request that such a programme be passed legislatively looks like a fool's errand (or, at least, an extremely optimistic view of the legislative situation), with an exceptionally low probability of success.

#### Their link turns are useless—hurting traditional fossil fuels guarantees the link to politics—regional, party dynamics. Even if some are happy with the plan, the majority will be furious across the spectrum of politics

Macneil 12—University of Sydney [Robert Macneil, Alternative climate policy pathways in the US, Climate Policy, Volume No. 10 Sep 2012]

3. US energy production, consumption, and legislation

When assessing the prospects of any type of comprehensive national policy in the US, one ever-present factor is the potential for inter-regional conflict among the country's half-dozen or so distinct regions. As Lee (2001) notes, the history of national policy in the US has been one of heated regional battles over the direction of legislation, and relatively small regions with particular vested interests have often gained control over specific issue areas. While managing such battles has remained a difficult task even for relatively simple issues, the remarkably broad distribution of fossil energy resources across the US mainland has made climate policy a uniquely complicated endeavour. With four states responsible for producing the lion's share of the country's oil and gas supplies (Louisiana, Alaska, Texas, and California7), eight responsible for the majority of natural gas production (Colorado, Louisiana, New Mexico, Oklahoma, Pennsylvania, Utah, Texas, and Arkansas8), and another 15 responsible for the country's coal supply (see Table 1), attempts to regulate and reform US energy production have been perceived as tantamount to an assault on the economies and employment bases of more than 20 states. Although consumer states outnumber producer states by a decent ratio, representatives from producer states in Congress are dramatically over-represented in the Senate (the producer states alone have enough senators to seriously inhibit any form of climate regulation) and, historically, have managed to establish themselves on important committees with jurisdiction over energy and natural resource policy (Lee et al., 2001). This regional over-representation has had the effect of pushing Congress to support policies that have been aimed at supporting conventional energy (both to increase demand and bring down energy and gasoline prices in the short term) as well as to remain timid on issues such as climate and long-term energy security (e.g. Tomain, 2010).

The zeal with which producing states have guarded against changes to the country's energy policy has been compounded by the history of US energy consumption. Indeed, there are deeply entrenched structural differences in the US mode of energy use that render the goal of decarbonization comparatively more difficult than in other parts of the Western world. Thus, policies that aim at achieving decarbonization are potentially more onerous to voters. In contrast to Western Europe's project of ‘ecological modernization’, the Anglo-American world has embraced ‘carboniferous capitalism’ (Dalby and Paterson, 2008). Whereas development of the former has typically involved highly dense settlement areas (which started as ‘walking cities’ and have become increasingly dense with the advent of steel-framed architecture), the latter's dominant settlement pattern began with late-19th-century ‘saucer cities’ and, later, post-war suburbanization and excessive land development, all of which have proceeded on the presumption of ever-cheap and ever-abundant fossil fuel resources (see also Nivola, 2010). The result of these divergent development patterns is two rather distinct models of energy use and economic development, and therefore two very different structural starting points for climate regulation. With more than 50% of the US population residing in suburban areas and another 20% in rural areas, a natural or artificial rise in the cost of energy would have considerably greater negative impacts on US industry and lifestyles compared with other parts of the West.9 This obviously has important implications for the perceived legitimacy (or lack thereof) of policy makers who wish to raise the price of fossil energy for a public that is dependent on its cheap availability. This has lent a great deal of credibility to often exaggerated studies by right-wing think tanks, which have highlighted the supposedly harmful economic impacts of climate legislation, particularly on individuals and families.10

In relation to the legislative process itself, it is worth noting that—with the brief exception of the Depression and post-war eras—the legislative process in Washington has historically been uniquely ill-equipped to execute formal comprehensive regulatory packages such as a system-wide climate bill. Indeed, with a federal governmental structure carefully designed to guard against the acquisition of excessive centralized power (complete with a disaggregated executive and legislative branch and a series of prohibitive checks and balances that require either exceptional cooperation or a series of lopsided electoral victories to pass major legislation), the proposition of a comprehensive climate bill implies a legislative gauntlet that has little parallel elsewhere in the West.

The first and most obvious element of passing a bill is successfully moving it through the House and Senate11. However, this is a considerably more complicated process today than it has been at most points in US history. The consolidation of the major parties’ contemporary coalitions over the past 30 years has ushered in an era of partisan gridlock, largely unknown in recent US history, which has proved to be a particular anathema to progressive state-building.12 As Hacker and Pierson (2006) note, while the first 200 years of US legislative politics were (with obvious exceptions) characterized by loose, interchangeable coalitions that generally traversed geography and lacked fixed identities, the modern crystallization of ‘liberal’ and ‘conservative’ coalitions (based on rigid values and identities) has led to the emergence of highly ideological, ‘lock-step’ party disciplines in Congress. Although these are reminiscent of European-style parliamentary democracies, they lack the historical tendency towards mixed coalition building that lies at the heart of multi-party parliamentary systems.

Climate legislation has predictably evolved along these broad partisan battle lines, but specific changes in the organizational structures of the two major parties over the past three decades have had uniquely prohibitive knock-on implications for environmental policy. Whereas the ‘golden age’13 of American environmentalism saw a tidal wave of regulatory measures passed with relative bipartisan support, the extensive redrawing of the federal electoral map throughout the 1980s served to render environmental policy a particularly intractable wedge issue. Among the most crucial elements of this shift has been the ‘southern realignment’, which began in the 1980s: the Democrats consolidated a more homogeneously liberal base in the Northeast, parts of the Midwest, and the West Coast and began to cede control over their century-old ‘solid south’ base to the ‘Grand Old Party’ (GOP), as the Republican Party engaged in a near-wholesale takeover of the South, Rocky Mountain west, and Farmbelt (Campbell, 2007).

The South's shift towards the GOP during this period has been of particular importance in relation to the climate and the environment for at least two reasons. First, while the Republican Party has shifted towards a broadly antiregulation platform, this broad anti-state philosophy has interacted—in a particularly detrimental way—with the South's specific historical position on environmental issues. As Klyza and Sousa (2008) have noted, although the US public has tended to claim a broad sympathy for environmental issues (despite rarely supporting them electorally; see Guber, 2003), southerners, by and large, have displayed much more antipathy in opinion polls towards such issues.14 Much the same can be said of the citizens of the Rocky Mountain west and Appalachia regions, which, from 1980, have also increasingly embraced the Republican Party. As a result, over the past three decades, while the antiregulation philosophy of the GOP has broadly influenced the South's position on regulation, the South, in turn, has influenced the party's specific position on the environment. With this dynamic in place (and with the party's leadership largely dominated by individuals from these regions), GOP opposition to environmental regulation has become increasingly aggressive over the past 30 years. This has been compounded further and accelerated by the massive purge of the party's moderate wing across much of the country (and its near total disappearance in the Northeast, Midwest, and West Coast), which has led to an extremely narrow internal debate on environmental issues. The issue of climate change, with its potential to incite broad state regulation over massive swaths of the economy and curtail certain personal freedoms, has led to a particularly strong form of reactionary indignation from the Republican Party, effectively constituting an affront to its entire contemporary political–economic philosophy.

#### And we’ll win a few shielding issues—

#### A. Just because an issue is popular with someone doesn’t mean it be net popular—our link proves the plan still causes a fight due to ­­\_\_\_\_\_\_.

#### B. Media spin means only the bad parts will be discussed

Grunwald 8/14/12—Senior Nat'l Correspondent for Time [Michael Grunwald, “The New New Deal,” http://www.slate.com/articles/news\_and\_politics/interrogation/2012/08/the\_new\_new\_deal\_a\_book\_argues\_that\_president\_obama\_s\_stimulus\_has\_been\_an\_astonishing\_success.2.html]

That said, the national media should have tried to look past that, but it didn’t, because the national media sucks at covering public policy. The stimulus included $27 billion to computerize our pen-and-paper health care system, which should reduce redundant tests, dangerous drug interactions, and fatalities caused by doctors with chicken-scratch handwriting. It doubled our renewable power generation; it increased solar installations over 600 percent; it essentially launched our transition to a low-carbon economy. It provided a new model for government spending—with unprecedented transparency, unprecedented scrutiny, and unprecedented competition for the cash. Experts predicted that as much as 5 percent of it would be lost to fraud, but so far, investigators have documented less than $10 million in losses, about 0.001 percent. Despite all the controversy over the lack of shovel-ready projects, the Obama administration has met every spending deadline, and it’s kept costs so far under budget that it’s been able to finance over 3,000 additional projects with the savings. But the media coverage of the stimulus was almost exclusively gotcha stuff, usually without a real gotcha. And when the media did notice long-term investments in the stimulus, like Race to the Top or clean-energy research, it rarely mentioned the stimulus connection.

Except, of course, when it was noticing Solyndra. After a year of screaming headlines about crony capitalism and shady deals, even Republican investigators have admitted there’s no evidence of any political interference or other wrongdoing. A slew of independent reviews—including one led by John McCain’s finance chairman—have concluded that the clean-energy loan program is working well. Everyone knew that some of its loans would go bad. But the Solyndra scandal—which isn’t even a scandal—is probably the best-known product of the stimulus.

#### C. Adding energy to the agenda will destroy Obama’s agenda

POLMAN 1 – 18 – 13 News Works Staff [Dick Polman, Will Obama talk about climate change?. <http://www.newsworks.org/index.php/national-interest/item/49770>]

There once was a time when people invoked the weather just to make conversation. But now the weather is deadly serious business, which is why President Obama should give it a substantive mention in his Monday Inaugural address - and substantive attention in his State of the Union policy address.

But will he? I'm not holding my breath.

Climate change - the more accurate term is climate disruption - deserves to be on Obama's front burner because the factual evidence compels it. The ferocity of Hurricane Sandy was merely the worst recent manifestation of the new reality that confronts us. The National Oceanic and Atmospheric Administration reported last week that 2012 was the hottest year on record in the continental United States (the tabulations began in 1895). Nationwide last year, 356 high-temperature records were tied or broken. But climate disruption isn't just about heat; it's about all kinds of extremes. Nationwide, 2012 shattered more than 3,500 monthly records for heat, rain, and snow.

Meanwhile, the National Climate Assessment and Developmental Advisory Committee, mandated by Congress to report on the climate every four years, is currently drafting a new report (vetted by 240 scientists). It warns: "Climate change is already affecting human health, infrastructure, water resources, agriculture, energy, the natural environment and other factors - locally, nationally, internationally....The climate change of the past 50 years is due primarily to human activities."

No doubt, the loons and trolls and deniers will continue to scoff, but the fact is, even the business sector is finally sounding the alarm. Munich Re, a giant corporate reinsurance firm in Germany, concluded in a report last autumn that human-caused climate change "particularly affects formation of heat waves, droughts, intense precipitation events, and in the long run, most probably, tropical cyclone activity." And care to guess where the most havoc is being wreaked? "Nowhere in the world is the rising number of natural catastrophes more evident than in North America." That report was released two weeks before Sandy flooded North America's financial and media headquarters. Indeed, Sandy prompted Bloomberg Businessweek to run a cover story titled "It's Global Warming, Stupid," and to rightly warn that the economic costs of inaction are demonstrably greater than the costs of taking action.

Some environmentalists believe that a tipping point has finally occurred, and that Obama will accordingly take the lead. Ken Allen, writing recently on The Huffington Post, confidently declared that Sandy "marks the beginning of the end of climate change denial as a potent political force," and that Obama - freed from the worries of getting re-elected - will seize the political advantage.

Yeah, we'll see about that. His track record does not inspire much confidence.

Obama rarely challenged the fossil fuel industry during his first term, rarely highlighted climate change in any of his speeches, and largely went mum after cap-and-trade died in the Senate back in 2010. He didn't raise the issue in any of the presidential debates (nor was he asked about it), and he gave it only a passing mention in his triumphant speech on election night (our kids should inherit a world "that isn't threatened by the destructive power of a warming planet").

He is indeed freed from the worries of re-election, but now he has to worry about over-spending whatever political capital he has accrued from winning re-election. Climate change might be one political expense too far.

Like any second-term president, Obama has an 18-month window to get anything done before the congressional midterms capture lawmakers' limited attention spans. The fiscal fight - which is really a proxy fight about the proper role of government - will suck up a lot of oxygen, especially if (as expected) we continue to lurch from crisis to crisis. Plus, Obama now has the gun fight. He didn't seek it out, but the slaughter of 20 schoolchildren has forced his hand. If not for Newtown, he'd arguably be freer to stump nationwide about climate change, and make the compelling case that extreme weather - aided and abetted by human activity - is palpably affecting millions of lives.

And Americans (reality-deniers aside) are now prepared to listen. According to an autumn report from the Yale Project on Climate Change Communication, 83 percent say that climate change is happening, 65 percent say it's caused by human activity, and 61 percent of swing-voting independents say that Obama and Congress should do more to combat it. Clearly, most people are receptive on this issue, if only Obama is willing to lead on it.

The big question, however, is whether he has sufficient political capital to fight House Republicans on yet another front, with little chance of success and with great risk to the rest of his agenda. Climate change clearly warrants his full attention, as evidenced by the wild fluctuations in 2012 - but we may soon discover, yet again, that a policy imperative has been trumped by the art of the possible.

#### Obama pushing immigration – ignoring energy key

HARDER 2 – 6 – 13 National Journal Staff [Amy Harder, In Washington, Energy and Climate Issues Get Shoved in the Closet, <http://www.nationaljournal.com/columns/power-play/in-washington-energy-and-climate-issues-get-shoved-in-the-closet-20130206>]

At a news conference where TV cameras in the back were nearly stacked on top of each other, an influential bipartisan group of five senators introduced legislation late last month to overhaul the nation’s immigration system. The room was so crowded that no open seats or standing room could be found.

A week later, one senator, Republican Lisa Murkowski of Alaska, was standing at the podium in the same room to unveil her energy-policy blueprint. There were several open seats and just a few cameras. At least one reporter was there to ask the senator about her position on President Obama’s choice for Defense secretary, former Republican Sen. Chuck Hagel.

“I’m doing energy right now,” Murkowski responded. “I’m focused on that.”

Almost everyone else on Capitol Hill is focused on something else. Aside from the broad fiscal issues, Congress and the president are galvanizing around immigration reform.

Four years ago, the White House prioritized health care reform above comprehensive climate-change legislation. The former will go down in history as one of Obama’s most significant accomplishments. The latter is in the perpetual position of second fiddle. “To everything,” Murkowski interjected fervently when asked by National Journal Daily whether energy and climate policy was second to other policies in Washington’s pecking order.

Murkowski, ranking member of the Senate's Energy and Natural Resources Committee, said she hoped the Super Bowl blackout would help the public understand the importance of energy policy.

“This issue of immigration: Why are we all focused on that? Well, it’s because the Republicans lost the election because in part we did not have the Hispanic community behind us,” Murkowski said this week. “What is it that brings about that motivation? Maybe it could be something like a gap in the Super Bowl causes the focus on energy that we need to have. I can only hope.”

It will take more than hope. Elections have consequences, but so far the only kind of electoral consequence climate and energy policy has instigated is one that helped some lawmakers who supported cap-and-trade legislation to lose their seats in the 2010 midterm elections. For the pendulum to swing the other way—for lawmakers to lose their seats over not acting on climate and energy policy—seems almost unfathomable right now.

Billions of dollars are invested in the fossil-fuel power plants, refineries, and pipelines that the country depends on today. The companies that own this infrastructure have a business interest in keeping things the way they are. Immigration reform doesn’t face such formidable interests invested in the status quo.

“They [businesses] have employees—real, visible people—who they value and who they want to make legal as soon as possible,” said Chris Miller, who until earlier this year was the top energy and environment adviser to Senate Majority Leader Harry Reid, D-Nev.

On energy and climate-change policy, Miller added, “You’re probably never going to have anything like the fence in the Southwest or the border-control issue that pushes action and debate on immigration, because climate-change impacts will likely continue to be more abstract in the public's mind until those impacts are so crystal-clear it’s too late for us to do anything.”

Another, tactical reason helps build momentum on immigration and not on other issues. Obama can capitalize on immigration as it becomes more of a wedge issue within the GOP. On energy and climate policy, Obama faces a unified Republican Party.

“The president has cracked the code on how to push his agenda items through. He learned from his victories on the payroll tax and the fiscal cliff that the key is to stake out the political high ground on issues that poll in his favor while exploiting the divisions within the GOP,” said a former Republican leadership aide who would speak only on the condition of anonymity. “With this in mind, the next logical place for him to go is immigration. Unlike issues like energy or tax reform where the GOP is united, he can claim a big win on immigration reform while striking a political blow to Republicans.”

### A2 Hirsh

**Pc key**

BECKMANN & KUMAR 11 Professor of Political Science, UC, Irvine [Matthew N. Beckmann and Vimal Kumar, How presidents push, when presidents win: A model of positive presidential power in US lawmaking, Journal of Theoretical Politics 2011 23: 3

Fortunately for those inside the West Wing, some researchers paint a more optimistic picture regarding presidents’ potential for passing important planks of their legislative agenda. Covington et al. (1995), Barrett and Eshbaugh-Soha (2007), Edwards III and Barrett (2000), Kellerman (1984), Light (1982), Peterson (1990), and Rudalevige (2002) all observe that presidents secure greater support for their ‘priority’ items, and when they exert ‘effort’ pushing them. In addition, Covington (1987) concludes that White House officials can occasionally win greater support among legislators by working behind the scenes, while Canes-Wrone (2001, 2005) shows that presidents can induce support from a recalcitrant Congress by strategically ‘going public’ when advocating popular proposals (see also Kernell (1993)). Sullivan (1987, 1988) finds that presidents can amass winning congressional coalitions by changing members’ positions as a bill moves through the legislative process.

However, even among these relative optimists, the prescription for presidents appears to be an ephemeral combination of luck and effort, not a systematic strategy. In discussing the challenge for a president looking to push legislation on Capitol Hill, Samuel Kernell offers a comparable assessment. He writes, The number and variety of choices place great demands upon [presidents’] strategic calculation, so much so that pluralist leadership must be understood as an art…an ability to sense ‘right choices’. (Kernell, 1993: 36) Furthermore, the seemingly paradoxical findings noted above, that is, a general (if modest) pattern of president-supported legislative success on passage and policy content, but not on ‘key’ roll-call votes, remain unexplained.

This paper aims to demystify the White House’s legislative strategies, both their logic and their effects. Developing a non-cooperative game in which the president allocates scarce ‘political capital’ to induce changes in legislators’ behavior, we deduce two lobbying strategies White House officials may execute and, in turn, investigate their impact on the laws that result. Interestingly, we theorize that presidents’ foremost influence comes from bargaining with congressional leaders over policy alternatives before bills reach the floor, not bargaining with pivotal voters for their support once they do. Precisely because so much of the presidents’ influence comes in the legislative earlygame (rather than the endgame), we theorize that typical roll-call-based tests of presidents’ legislative influence have missed most of it.

#### A. Insiders believe it’s true – so it de-facto is

SCHIER 11 Dorothy H. and Edward C. Congdon Professor of Political Science at Carleton College [Steven E. Schier, The Contemporary Presidency: The Presidential Authority Problem and the Political Power Trap, Presidential Studies Quarterly, Volume 41, Issue 4, pages 793–808, December 2011]

The concept of political capital captures many of the aspects of a president's political authority. Paul Light defines several components of political capital: party support of the president in Congress, public approval of the president's conduct of his job, the president's electoral margin, and patronage appointments (Light 1999, 15). Light derived this list from the observations of 126 White House staff members he interviewed (1999, 14). His indicators have two central uses. First, Light's research reveals that they are central to the “players' perspective” in Washington. That is, those “in the game” view these items as crucial for presidential effectiveness. Second, they relate to many central aspects of political authority as defined by Skowronek. So on both theoretical and practical levels, the components of political capital are central to the fate of presidencies. The data here will reveal that presidents over the last 70 years have suffered from a trend of declining levels of political capital, a trend that is at the heart of their political authority problem.

Many scholars have examined particular aspects of presidential political capital, from congressional support (for example, Bond and Fleisher 1992, 2000; Mayhew 2005; Peterson 1993) to job approval (Brace and Hinckley 1991; Kernell 1978; Nicholson Segura and Woods 2002). From these, we know that presidential job approval is influenced by economic performance, tends to drop over time, and that divided government can boost job approval. Also, job approval and control of Congress by fellow partisans boosts presidential success in floor votes but does not produce more important legislation than does periods of divided government. These “micro” findings, however, comport with a “macro trend” of declining presidential political capital over time. This analysis explores that macro trend and relates it to previous micro findings.

#### B. Losing capital hurts

BECKMANN & KUMAR 11 Professor of Political Science, UC, Irvine [Matthew N. Beckmann and Vimal Kumar, How presidents push, when presidents win: A model of positive presidential power in US lawmaking, Journal of Theoretical Politics 2011 23: 3

Before developing presidents’ lobbying options for building winning coalitions on Capitol Hill, it is instructive to consider cases where the president has no political capital and no viable lobbying options. In such circumstances of imposed passivity (beyond offering a proposal), a president’s fate is clear: his proposals are subject to pivotal voters’ preferences. So if a president lacking political capital proposes to change some far-off status quo, that is, one on the opposite side of the median or otherwise pivotal voter, a (Condorcet) winner always exists, and it coincides with the pivot’s predisposition (Brady and Volden, 1998; Krehbiel, 1998) (see also Black (1948) and Downs (1957)). Considering that there tends to be substantial ideological distance between presidents and pivotal voters, positive presidential influence without lobbying, then, is not much influence at all.11

#### 3. Hirsh admits that controversial actions HURT the presidents agenda – here is an article FROM HIM that fighting for Rice’s nomination would have hurt Immigrations chances

HIRSH 12 – 14 – 12 [Michael Hirsh, Obama Gets a Solution to His Susan Rice Problem, <http://www.nationaljournal.com/whitehouse/obama-gets-a-solution-to-his-susan-rice-problem-20121213>]

It was a classic Washington exit: stealthy and swift, with few fingerprints. President Obama didn’t want to be seen as backing down. So Susan Rice — one of his most devoted aides since 2007 — gave him the way out, seemingly all on her own.

“If nominated, I am now convinced that the confirmation process would be lengthy, disruptive, and costly — to you and to our most pressing national and international priorities,” Rice wrote on Thursday in a letter withdrawing her name from consideration as secretary of State.

In a statement in response, Obama said that “while I deeply regret the unfair and misleading attacks on Susan Rice in recent weeks,” he “accepted her decision.” He added that Rice will continue as his U.N. ambassador for the time being.

This was all the part intended for public consumption. The underlying reality is this: The president is almost certainly furious about this turn of events — which represents the first major defeat he’s suffered since his reelection — but he’s a savvy enough politician to know how to back off without seeming to back down. While floating Rice’s name for secretary of State in the media was always something of a trial balloon — she was never formally nominated or even publicly declared by the administration to be the leading candidate to replace Hillary Rodham Clinton — Obama appeared to really want to appoint her, calling her “extraordinary” and excoriating GOP attacks on her with unusual (for him) personal pique.

But as the weeks passed, it became clearer that Rice’s biggest political problem was no longer just the klatch of Republican senators, led by John McCain, who were fiercely criticizing her for allegedly misleading statements on the attack at the U.S. consulate that killed U.S. Ambassador Christopher Stevens and three other Americans in Benghazi, Libya on Sept. 11.

After a series of strikingly unsuccessful meetings on Capitol Hill in which she failed to impress even moderate Republicans such as Susan Collins of Maine, Rice also found herself facing resistance from foreign-policy elites who questioned her temperament and her record. In addition, human-rights critics were up in arms over her behavior toward African dictators, particularly her role in allegedly holding up publication of a U.N. report that concluded the government of Rwandan President Paul Kagame, with whom she has a long and close relationship, was supplying and financing a brutal Congolese rebel force known as the M23 Movement.

That may have been the tipping point, though an official on Rice's team declined to say so. As she put it herself in her letter to Obama, the president had some other “pressing national international priorities.… It is far more important that we devote precious legislative hours and energy to enacting your core goals, including comprehensive immigration reform, balanced deficit reduction, job creation, and maintaining a robust national defense and effective U.S. global leadership.”

In other words, the Obama team was quickly coming to realize that, even though it appeared he had considerable leverage over the Republicans following a more-robust-than-thought reelection victory, a Rice nomination was simply going to cost him too much political capital, especially when it came to a long-term budget deal.

#### 4. Other’s reading of that article to support PC finite

FOURNIER 2 – 8 – 13 National Journal Staff [Ron Fournier, <http://www.nationaljournal.com/politics/stung-by-media-s-focus-on-liberal-agenda-obama-pivots-back-to-economy-20130208>]

“He needs to get back to jobs, jobs and middle-class jobs,” the Democrat said, speaking on condition of anonymity to avoid retribution from the White House.

Regardless of his approval ratings, there are limits to Obama’s political capital, as Michael Hirsh explained in this week’s National Journal magazine. I have been questioning the limits of a presidential mandate since Election Day. But the White House is confident that Obama has the upper hand against a GOP that is significantly less popular than the Democratic Party, according to polls.

#### Plan isn't a win --- this isn't an argument until they prove that the plan is something Obama wants

#### Energy policies overload

Mann 9—Senior Fellow in Governance Studies at Brookings [Thomas E., “From Campaigning to Governing: Politics and Policymaking in the New Obama Administration”]

New presidents who get off to a good start almost always have agenda control. They focus on a limited number of issues, keep extraneous matters from stepping on their priorities, and avoid overloading the circuits in Congress. Carter sent a flood of proposals to Capitol Hill with little concern for priority or sequencing. He reaped little in the way of legislative harvest from them and the public began to wonder if he was up to the job. Reagan focused relentlessly on cutting taxes and spending, ultimately succeeding in shifting policy for decades. Clinton allowed the issue of gays in the military to overwhelm his policy priorities at the outset of his administration and then misjudged the market for a small economic stimulus in the Senate and suffered a humiliating defeat. Obama identified stabilizing the financial markets and shortening the recession as his highest initial priority. His early efforts to ensure the release of $350 billion in TARP funds, pass a large economic stimulus bill, and develop a new strategy for dealing with the troubled banking system reflected that priority. Nonetheless, he was widely criticized for diluting his focus on economic crisis management by linking it to reform of health policy, energy and education.

Critics argued that his economic recovery leadership and proposals were not up to the seriousness of the crisis, that the staggering costs of the recession and bailout made health, energy and education reform wildly unrealistic, and that his huge agenda would overwhelm the capacity of Congress to deliver on its central components. Obama insisted that the linkage was essential to long-term economic security and prosperity and refused to back down. At his insistence, the stimulus bill contained very generous allocations for health technology, renewable energy and education.

#### Health care disproves and takes too long to rebuild

Lashof 10—director of the National Resource Defense Council's climate center, Ph.D. from the Energy and Resources Group at UC-Berkeley (Dan, “Coulda, Shoulda, Woulda: Lessons from Senate Climate Fail.” NRDC Switchboard Blog, http://switchboard.nrdc.org/blogs/dlashof/coulda\_shoulda\_woulda\_lessons.html)

Lesson 2: Political capital is not necessarily a renewable resource.

Perhaps the most fateful decision the Obama administration made early on was to move healthcare reform before energy and climate legislation. I’m sure this seemed like a good idea at the time. Healthcare reform was popular, was seen as an issue that the public cared about on a personal level, and was expected to unite Democrats from all regions. White House officials and Congressional leaders reassured environmentalists with their theory that success breeds success. A quick victory on healthcare reform would renew Obama’s political capital, some of which had to be spent early on to push the economic stimulus bill through Congress with no Republican help. Healthcare reform was eventually enacted, but only after an exhausting battle that eroded public support, drained political capital and created the Tea Party movement. Public support for healthcare reform is slowly rebounding as some of the early benefits kick in and people realize that the forecasted Armageddon is not happening. But this is occurring too slowly to rebuild Obama’s political capital in time to help push climate legislation across the finish line.

### PC Finite

#### Politicians think so

Schier 11—Dorothy H. and Edward C. Congdon Professor of Political Science at Carleton College [Steven E. Schier, The Contemporary Presidency: The Presidential Authority Problem and the Political Power Trap, *Presidential Studies Quarterly*, Volume 41, Issue 4, pages 793–808, December 2011]

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Political capital finite --- tons of research

Beckmann & Kumar 11—Professor of Political Science, UC, Irvine [Matthew N. Beckmann and Vimal Kumar, How presidents push, when presidents win: A model of positive presidential power in US lawmaking, *Journal of Theoretical Politics* 2011 23: 3]

Fortunately for those inside the West Wing, some researchers paint a more optimistic picture regarding presidents’ potential for passing important planks of their legislative agenda. Covington et al. (1995), Barrett and Eshbaugh-Soha (2007), Edwards III and Barrett (2000), Kellerman (1984), Light (1982), Peterson (1990), and Rudalevige (2002) all observe that presidents secure greater support for their ‘priority’ items, and when they exert ‘effort’ pushing them. In addition, Covington (1987) concludes that White House officials can occasionally win greater support among legislators by working behind the scenes, while Canes-Wrone (2001, 2005) shows that presidents can induce support from a recalcitrant Congress by strategically ‘going public’ when advocating popular proposals (see also Kernell (1993)). Sullivan (1987, 1988) finds that presidents can amass winning congressional coalitions by changing members’ positions as a bill moves through the legislative process. However, even among these relative optimists, the prescription for presidents appears to be an ephemeral combination of luck and effort, not a systematic strategy. In discussing the challenge for a president looking to push legislation on Capitol Hill, Samuel Kernell offers a comparable assessment. He writes, The number and variety of choices place great demands upon [presidents’] strategic calculation, so much so that pluralist leadership must be understood as an art…an ability to sense ‘right choices’. (Kernell, 1993: 36) Furthermore, the seemingly paradoxical findings noted above, that is, a general (if modest) pattern of president-supported legislative success on passage and policy content, but not on ‘key’ roll-call votes, remain unexplained. This paper aims to demystify the White House’s legislative strategies, both their logic and their effects. Developing a non-cooperative game in which the president allocates scarce ‘political capital’ to induce changes in legislators’ behavior, we deduce two lobbying strategies White House officials may execute and, in turn, investigate their impact on the laws that result. Interestingly, we theorize that presidents’ foremost influence comes from bargaining with congressional leaders over policy alternatives before bills reach the floor, not bargaining with pivotal voters for their support once they do. Precisely because so much of the presidents’ influence comes in the legislative earlygame (rather than the endgame), we theorize that typical roll-call-based tests of presidents’ legislative influence have missed most of it.

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#### Financial incentives are this list- the aff is not on it

Gouchoe 2k—North Carolina State University, National Renewable Energy Laboratory [Susan, December 2000, Local Government and Community Programs and Incentives for Renewable Energy— National Report, http://seg.fsu.edu/Library/casestudy%20of%20incentives.pdf]

EXECUTIVE SUMMARY

This report presents a summary of the renewable energy programs and incentives of 45¶ communities in 23 states as collected and catalogued by the Interstate Renewable Energy¶ Council’s (IREC) Database of State Incentives for Renewable Energy (DSIRE) project. Also included are summaries of state initiatives that impact implementation of renewable energy¶ technologies on the local level. Programs and incentives in this report include:

COMMUNITY INVESTMENT & AWARENESS PROGRAMS

v Renewable Energy Projects

v Education & Assistance

v Green Pricing Programs

v Green Power Purchasing

FINANCIAL INCENTIVES

v Rebates, Grants, & Loans

v Tax Incentives

v Green Building Incentives

v Industrial Recruitment

RULES, REGULATIONS & POLICIES

v Solar & Wind Access

v Net Metering

v Construction & Design

v Contractor Licensing

v Equipment Certification

v Public Benefits Funds

v Renewable Energy Portfolio Standards

v Disclosure & Certification

Established in 1995, DSIRE is an ongoing project to summarize incentives, programs, and¶ policies for renewable energy. The project is funded by the U.S. Department of Energy’s¶ Office of Power Technologies and is managed by the North Carolina Solar Center. DSIRE on¶ Line makes the DSIRE database accessible via the web at:¶ http://www.ncsc.ncsu.edu/dsire.htm. The website is updated daily and includes search¶ capabilities for all incentives. In addition to state and local programs, the website features¶ utility programs and a searchable bibliography.

#### VOTE NEGATIVE

#### PREDICTABLE LIMITS—the word incentives in the resolution is modified by financial to make it manageable. Going beyond makes the topic unpredictable.

#### GROUND—financial incentives insure the aff has links to market disads and counterplans which are the only core negative ground across bi-directional energies. Holding the line key

### Politics

#### Obama pushing compromise and working together – key to getting House GOP on board for his agenda – Immigration’s only chance

AFP 3 – 7 – 13 Obama tries new tack -- talking to Republicans, http://www.google.com/hostednews/afp/article/ALeqM5js8Vq2BpvFfWBXu5jLLYKRSN\_sMA?docId=CNG.da8c946c1afca2a51f978806a1ab4ca4.311

President Barack Obama has hit on a novel antidote to Washington's endless cycle of political crises: breaking bread with Republicans

Since his re-election triumph in November, Obama has used his political capital to harangue his foes, holding rallies across the country at which he accused rival Republicans of obstructing legislation and serving the rich.

His strategy worked up to a point -- securing new higher tax rates for the wealthy as he pocketed a political win in December over the fiscal cliff showdown.

But with the glow of his re-election waning, Obama came up short in the sequester clash last week as Republicans refused to bend on raising taxes -- and $85 billion in economy-sapping austerity was set in motion.

Two years of incessant budget melodrama between Obama and his foes on Capitol Hill have poisoned the political well but done little to tackle the debt load endangering America's future prosperity.

Now, Obama and conservative Republicans in the House of Representatives are left staring across a seemingly unbridgeable ideological divide.

Since Obama's ambitious second term agenda must clear a divided Congress, the onus is on the president to plot a way through Washington's dysfunction.

So Obama, who disdains the superficiality of backslapping politics, has embarked on a charm offensive -- and on Wednesday night he bought dinner for a dozen Republican senators out of his own pocket.

At an expensive hotel, Obama supped with senators John McCain, Lindsey Graham and others, vocal foes who have also expressed frustration at being stuck in the political purgatory of a Washington where nothing gets done.

Next week, the president will make a rare foray into enemy territory on Capitol Hill to address Republicans from both the Senate and the House.

For now, Obama appears to have dropped the "outside" game of campaigning to move public opinion against Republicans, instead probing whether there is any space for a deal on key issues.

Steven Smith, a former congressional staffer who is now a professor of political science at Washington University, St Louis, said the president had little choice but to try to change the political climate in Washington.

"If you can't deal with the House Republicans in the current political environment -- see if you can change the political environment," he said.

"What (Obama) is hoping is that Republicans in the Senate can start serving almost as opinion leaders for a new way of tackling these fiscal challenges."

Obama is courting Republican senators who may be willing to deal on issues like the national debt, the deficit and growing costs threatening entitlement programs like health care for the elderly.

"The President is interested in finding the members of the 'caucus of common sense,'" said White House spokesman Jay Carney.

A person familiar with Obama's thinking said the White House believes there may be a window for action since -- after the sequester and fiscal cliff dramas -- Washington is finally not on the cusp of an immediate crisis.

Obama aides also think some Senate Republicans may be ready to compromise -- a feeling bolstered by Graham's recent comment that he would swap $600 billion in new revenues in return for entitlement reform.

It is not the first time that Obama has tried dialogue with Republicans -- he tried unsuccessfully to conclude a grand bargain with House Speaker John Boehner aimed at $4 trillion in deficit reduction during his first term.

Obama says that offer is still on the table, but so frayed are his relations with Boehner that it seems doubtful the two of them share the necessary trust to strike a bargain.

Should he fare better with Senate Republicans, Obama hopes his new dance partners can build pressure on their brethren in the House to compromise, which might also ease the way for other top initiatives, like immigration reform.

Republicans, who have long accused Obama of hectoring them, welcome his change of tone.

"Where this goes, I don't know," said Graham, who recently met Obama along with McCain at the White House.

"I do believe (in) what the president has been doing lately, getting off the campaign trail (and) back into the normal way of doing business up here, of talking to each other."

Moderate Republican Senator Susan Collins agreed.

"The important thing is, for the first time in a very long time, the president appears to be doing some outreach to both Republicans and Democrats, and that's long overdue," she said.

Wednesday's dinner might have been a good start, but such is the philosophical gulf between Obama and Republicans that any deal still seems a long shot.

And with mid-term congressional elections in 2014, the window for bipartisan comity is short.

#### Capital is key – Obama is spending it now

CBS NEWS 3 – 4 – 13 <http://www.cbsnews.com/8301-250_162-57572441/white-house-obama-not-focused-on-2014-right-now/>

Carney today said that Mr. Obama does believe his agenda -- which includes a plan to reduce gun violence, immigration reform and measures like raising the minimum wage -- would be easier to enact with Democrats in control of both chambers. "But it is also the president's belief, and it is established in fact in recent history, that you can achieve important policy objectives with divided government," he said.

Carney insisted the president is expending "great political capital and energy" on working quickly to pass immigration reform. Republicans have shown interest, he noted, in both immigration reform and some gun control measures.

#### SMRs are politically nuclear.

Schmid 11— Sonja Schmid, Assistant professor in Science and Technology Studies at Virginia Tech [Ross Carper (rosscarper@gmail.com), a writer based in Washington state, is the founding editor of the creative nonfiction project BeyondtheBracelet.com. [“The Little Reactor That Could?” Issues in Science and Technology, http://www.issues.org/27.4/carper.html]

Historically, nuclear energy has been entangled in one of the most polarizing debates in this country. Promoters and adversaries of nuclear power alike have accused the other side of oversimplification and exaggeration. For today’s industry, reassuring a wary public and nervous government regulators that small reactors are completely safe might not be the most promising strategy. People may not remember much history, but they usually do remember who let them down before. It would make more sense to admit that nuclear power is an inherently risky technology, with enormous benefits that might justify taking these risks. So instead of framing small reactors as qualitatively different and “passively safe,” why not address the risks involved head-on? This would require that the industry not only invite the public to ask questions, but also that they respond, even—or perhaps especially—when these questions cross preestablished boundaries. Relevant historical experience with small compact reactors in military submarines, for example, should not be off limits, just because information about them has traditionally been classified.

focus is."

#### Key to relations and economic growth in China and India.

Los Angeles Times, 11/9/2012 (Other countries eagerly await U.S. immigration reform, p. <http://latimesblogs.latimes.com/world_now/2012/11/us-immigration-reform-eagerly-awaited-by-source-countries.html>)

"Comprehensive immigration reform will see expansion of skilled labor visas," predicted B. Lindsay Lowell, director of policy studies for the Institute for the Study of International Migration at Georgetown University. A former research chief for the congressionally appointed Commission on Immigration Reform, Lowell said he expects to see at least a fivefold increase in the number of highly skilled labor visas that would provide "a significant shot in the arm for India and China." There is widespread consensus among economists and academics that skilled migration fosters new trade and business relationships between countries and enhances links to the global economy, Lowell said. "Countries like India and China weigh the opportunities of business abroad from their expats with the possibility of brain drain, and I think they still see the immigration opportunity as a bigger plus than not," he said.

#### US/India relations averts South Asian nuclear war.

**Schaffer**, Spring **2002** (Teresita – Director of the South Asia Program at the Center for Strategic and International Security, Washington Quarterly, p. Lexis)

Washington's increased interest in India since the late 1990s reflects India's economic expansion and position as Asia's newest rising power. New Delhi, for its part, is adjusting to the end of the Cold War. As a result, both giant democracies see that they can benefit by closer cooperation. For Washington, the advantages include a wider network of friends in Asia at a time when the region is changing rapidly, as well as a stronger position from which to help calm possible future nuclear tensions in the region. Enhanced trade and investment benefit both countries and are a prerequisite for improved U.S. relations with India. For India, the country's ambition to assume a stronger leadership role in the world and to maintain an economy that lifts its people out of poverty depends critically on good relations with the United States.

#### China decline causes global war

[**Lee**](http://www.demos.org/ann-lee) **12** - Senior fellow @ Demos [[Ann Lee](http://www.demos.org/ann-lee), “Instability in China Would Be Devastating,” New York Times, May 11, 2012, pg. http://tinyurl.com/b8gstqn

The complexity and fragility of China’s political system is something that is often underappreciated by Western observers.

The scandal and rapid downfall of Bo Xilai, a top Chinese government official of Chongqing who was once widely considered for the Standing Committee, was a rare glimpse of the deep political divisions that exist within the Chinese central government. Although these power struggles have usually been shielded from the public, the political battles within the party are no less fierce than in multiparty systems in democratic societies. And while some China observers believe that the ousting of Bo Xilai is a watershed moment for the reformists to continue their development goals unhindered, the reality is that the Maoists could potentially unite and strike back when everyone least expects such an event to happen.

If they are successful in harnessing the disgruntled farmers and unemployed factory workers in China to rally behind them, it is remote but not impossible for the civil unrest to turn into another civil war. In such a scenario, China’s miraculous growth would grind to a halt.

A halt to China’s growth would spell instant and devastating inflation for the rest of the world. All the major economies -- the United States, Japan and Europe -- have been printing money with abandon because China’s productivity exported deflation to the world. However, if China’s cheap labor force disappears because of civil war, all the cheap goods that they produced and exported would suddenly be scarce.

The manufacturing in China would not be relocated easily anywhere else in the world for lack of a knowledge base and supply chain network that even comes close to matching China’s base. As a result, hyperinflation of the kind that has given the Germans nightmares would come back with a vengeance. The rest that can follow we already know from history.

### DOD T/O

#### Budgets are tight – right now biofuels are winning

Peterka 1/22/2013 [Amanda Peterka, E&E reporter, Airlines piggyback on DOD's test flights, push for expanded production

http://www.eenews.net/Greenwire/2013/01/22/archive/5?terms=biofuels]

The military also depends on Congress for funding to test and purchase biofuels, said John Heimlich, vice president and chief economist at Airlines for America, a consortium of 11 airlines that has entered a strategic alliance with the Navy to advance aviation biofuels.

"That's one thing that makes the military effective," Heimlich said. "It's not just their know-how and commitment. It's their balance sheet."

But although the Pentagon could guarantee a market for aviation biofuels, the effort could be toppled by Washington budget battles.

So far, though, news from Washington has been encouraging for biofuel promoters. President Obama signed a defense authorization act last month that included funding for the military's biofuel programs. And early this month, Obama signed a "fiscal cliff" package that extended tax incentives for the cellulosic biofuel and biodiesel industries.

To keep momentum going in the industry, Holland said, the military needs to be aggressive about putting those biofuel programs in place. The commercial aviation industry also needs to get off the ground, he said.

#### They force a tradeoff with the fuel budget

**Eoyang 12** – National Security Director @ Third Way [Mieke Eoyang, Julie Zelnick (Policy Advisor for National Security @ Third Way), & Ryan Fitzpatrick (Senior Policy Advisor for the Third Way Clean Energy Program), “Fuel Costs Squeeze Defense Budget,” Third Way Digest, May 2012, pg. 1

In 2011, Congress passed the Budget Control Act, which put long-term limits on defense spending as part of a broader effort to curb the $15.7 trillion federal budget deficit. Though DOD’s budget will grow over the next 10 years, it will rise at a smaller rate than previously projected. This means DOD’s topline budget going forward will be more flat. Rising costs in one area will come at the expense of others.1

Given such constraints, DOD must carefully scrutinize every cost and find efficiencies where it can. One of those costs is fuel—a critical component of military operations, especially for ground vehicles, ships, and aircraft. DOD spends about $16 billion on fuel each year—more than double what UPS, FedEx, and DHL spend on global shipping operations, combined.3

#### Biofuels will lose out

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| **Erwin 12** - Editor of National Defense Magazine [Sandra I. Erwin, [‘Policy Uncertainty’ Could Choke Development of Military Biofuels](http://www.nationaldefensemagazine.org/blog/Lists/Posts/Post.aspx?ID=844),” National Defense, 7/26/2012, pg. http://tinyurl.com/d82e34n |

To outsiders, the NDAA debate is just one more partisan battle in Washington’s larger political wars. But anti-biofuel sentiments on Capitol Hill are raising serious alarm bells within the alternative-fuel industry and stirring concerns among Pentagon officials who support green energy because of the chilling effect that the political divide could have on private investment.  
“If there is a lot of uncertainty, we are going to lose private capital,” said Phyllis Cuttino, director of the Pew Project on National Security, Energy, and Climate.   
The Defense Department’s plan to become a consumer of alternative fuels is predicated on the ability of the private sector to scale up production and on commercial airlines transitioning to biofuels so prices become more competitive. All that requires substantial private investments that might be at risk if venture capitalists decide that the politics of biofuels pose too big a financial risk.  
Assistant Secretary of Defense for Operational Energy Plans and Programs Sharon Burke said she does have concerns that legislative restrictions could jeopardize the Defense Department’s goals to diversify its sources of energy.  
“For the future, our military will need alternatives to petroleum to keep our supplies diverse, especially for our legacy fleet of ships and planes, which will be with us for decades to come,” Burke said in a statement to National Defense. “The private sector will be the leaders in developing a commercially viable alternative fuels industry, and we have concerns that restrictions on the department's ability to obtain the milspec fuel we need to achieve our mission may reduce the development and availability of these alternatives over the long term.”  
The Defense Department began to step up its pursuit of alternative fuels in 2007, and over the past two years the [Navy and the Air Force have made headlines for their embrace of aviation biofuels](http://www.nationaldefensemagazine.org/blog/lists/posts/post.aspx?ID=832) as a future hedge against rising oil prices and unreliable foreign oil suppliers.   
In the wake of the House and Senate NDAA amendments, Pew has mobilized biofuels supporters and [released a letter this week that was signed by more than 350 veterans](http://www.nationaldefensemagazine.org/blog/Lists/Posts/energy-innovation-seen-as-needed-to-reduce-dependence-on-foreign-oil-save-money-85899406931), including retired generals and admirals, as well as former Senate and House Armed Services Committee chairmen Sen. John Warner and Rep. Ike Skelton, urging the president and Congress to support the Pentagon’s initiatives to diversify its energy sources. The letter echoes biofuel producers’ belief that the military is needed as an essential anchor customer.  
Lawmakers in the House and Senate have argued that biofuels are cost prohibitive at a time when the military’s budget is stretched. The Navy’s “great green fleet” effort was particularly criticized by members of the House Armed Services Committee as an example of misplaced priorities when the Navy is cutting back on new ship buys and other modernization programs.   
The Senate Armed Services Committee agreed to add anti-biofuel provisions to the NDAA. Biofuel supporters’ best hope now lies with Sens. Jeanne Shaheen, D-N.H., and Susan Collins, R-Maine, who vowed in a recent op-ed article that they would fight to protect the Defense Department’s biofuel funds, including a Navy commitment of more than $200 million as part of joint $500 million effort with the Departments of Energy and Agriculture.   
Cuttino said the green-energy community has been taken aback by the partisan tenor of an issue that has national security implications.   
“We’ve been dismayed by the politicization of these [military biofuel] efforts,” Cuttino said July 24 during a conference call with reporters. “These issues should not be politicized,” she said. “To have these innovations singled out is unfortunate.”  
The Pentagon’s financial commitment is being blown out of proportion, she said. Biofuel expenditures are a tiny fraction of what the Defense Department spends on fuel each year, Cuttino said. The Pentagon’s annual energy bill is about $15 billion, three-quarters of which is spent on liquid fuels. Pew estimated that Defense Department biofuel expenditures last year were $1.2 billion, up from $400 million two years ago. A Pew study projects military biofuel purchases will reach $10 billion annually by 2030.  
When Congress was fighting a year ago over the nation’s debt ceiling, investors were alarmed. The battle over biofuels creates a similar cloud of policy uncertainty that could be damaging to an industry that is just getting off the ground, Cuttino said.  
The trends in private investment in alternative energy in G-20 countries are cause for concern, she said, as they indicate that investors tend to flee when they see policy indecision. “What we know from all our research over several years is that if there is a question of uncertainty when it comes to policy, private investment will move on to another country where there is more policy certainty.”  
The United States currently is a world leader in attracting private capital to alternative energy, she said. The European economic crisis might keep the United States in the lead for some time, but venture capitalists also may be souring on U.S. biofuels investments, according to analysts.

Interest in capital-intensive industries such as energy is fading, said a July report by Dow Jones VentureSource. Investors are raising red flags about biofuel investment because of the large amounts of capital needed to build infrastructure. “The second quarter is the worst for investment in energy and utilities start-ups since the first quarter of 2009,” said VentureSource.  
The Commercial Aviation Alternative Fuels Initiative — a coalition of airlines, aircraft and engine manufacturers, energy producers and U.S. government agencies — cautions that project financing is still the “biggest remaining challenge to the deployment of alternative aviation fuels.” Nevertheless, CAAFI is “confident that environmentally friendly alternative jet fuel derived from several feedstocks will be available in the next two to five years,” the group said in a statement on its website. The barrier to deployment, said CAAFI, is the availability of capital, as production plants cost on the order of $100,000 per barrel per day.  
FlightGlobal.com reported that, since 2007, more than 1,500 passenger flights have been made using biofuels produced from feedstocks such as household waste and algae. “The major challenge now is to work out how to produce large quantities of sustainable biofuel at a cost that is commercially competitive to airlines,” FlightGlobal noted.  
Lufthansa, one of the world’s largest airlines, has projected that renewable jet fuel will replace up to 5 percent of the market in the next five to seven years.   
In the United States, the biofuel industry needs the military to commit to long-term purchases so it can secure investors, Pew said in a statement. “The military’s leadership, cooperation with the private sector, and early adoption have been critical to the commercialization of many technologies such as semiconductors, nuclear energy, the Internet, and the Global Positioning System,” Pew noted. “Maintaining energy innovation, inside and outside the Defense Department, is critical to our national security.”

#### Biofuels will end oil wars

**Ventura 12** – Essayist and cultural critic @ Austin Chronicle [[Michael Ventura](http://www.austinchronicle.com/authors/michael-ventura/), “Letters at 3AM: A Big Picture and a Long Game,” Austin Chronicle, [Fri., Oct. 19, 2012](http://www.austinchronicle.com/issues/2012-10-19/), pg. http://tinyurl.com/col9hvh

It's like Alice watching the Queen of Hearts play cards and croquet: "Three times so far this year, the Joint Chiefs of Staff and the regional war-fighting commanders have assembled at [Marine Corps Base Quantico, Va.], where a giant map of the world, larger than a basketball court, was laid out on the ground. ... The generals and admirals walked the world and worked their way through a series of potential national security crises. ... 'Strategic seminar' is the name Gen. Martin E. Dempsey, chairman of the Joint Chiefs of Staff, has chosen for these daylong sessions" (The New York Times online, Sept. 12).

Let's walk this immense map. We'll stroll roughly 5,500 miles from the Strait of Gibraltar eastward to the Afghan-Pakistani border. Then let's amble another 7,000 miles from Kazakhstan in Asia to Angola in Africa. In the area we've walked, alliances overlap and contradict one another – and are further complicated by trade routes, oil fields, rebels, pirates, and terrorists – and the United States has positioned itself in such a way that its chain can be yanked from almost any direction.

Focus on oil. According to the U.S. Energy Information Administration ([www.eia.gov](http://www.eia.gov/)), in 2011, 69% of U.S. oil originated in five countries, listed by volume: Canada, Saudi Arabia, Mexico, Venezuela, and Nigeria. Of the next 10 largest sources, six are in the area we've walked: three in the Persian Gulf – Iraq, Kuwait, and Oman; three in Africa – Angola, Algeria, and Chad.

Imagine some general scenarios: A destabilized Tunisia impacts bordering Algeria. A destabilized Libya impacts bordering Algeria and Chad. Chad, destabilized by a destabilized Libya, in turn destabilizes Nigeria.

Move west from Africa. A destabilized Yemen impacts neighboring Saudi Arabia and Oman. A belligerent Iran impacts Iraq, Kuwait, Saudi Arabia, and Oman.

Draw lines of possible crises this way and that, and the generals, admirals, and war commanders walking the big map must be bumping into one another with alarming frequency any way they turn. All for imported oil.

Oil dependence has put the United States in a strategically vulnerable and ultimately untenable position. There's no way we can cover all that turf indefinitely. We've neither the money nor the manpower.

One issue is clear: The cessation of our participation in Iraq and Afghanistan won't affect the overall situation.

"Large numbers of MRAPs [armored troop carriers] ... in Iraq and Afghanistan [will be] stored in Italy, where they could be transported for contingencies across Africa" (The New York Times online, July 27). "Contingencies" is a neutral word for war.

In 2008, President George W. Bush authorized "the newest regional headquarters, Africa Command" (The New York Times, Oct. 5, 2008, p.8). "Africom" is based in Stuttgart, Germany, "owing to local [African] sensitivities." Its commander, Gen. William E. Ward, "rejected criticisms that Africa Command would result in a militarization of foreign policy, and he said it was specifically structured for cooperative efforts," though he didn't define what that meant.

Whatever it meant, President Obama has appointed a new commander. Gen. David M. Rodriguez is an officer of "extensive combat experience. ... [He] served two tours in Iraq and two tours in Afghanistan ... and later [was] deputy commander of allied forces there with responsibility for day-to-day management of the war. ... [Rodriguez] was one of the architects" of Obama's Afghan surge (The New York Times online, Sept. 19).

Sounds like the Pentagon and the White House anticipate action in Africa.

The July 27 report cited above added that "MRAPs would be sent to warehouses in the western Pacific" and "significant numbers are stored in Southwest Asia."

The U.S. is building a base in Darwin, on the northwest tip of Australia, "as a new center of operations in Asia as it seeks to ... grapple with China's rise" (The New York Times, Nov. 15, 2011, p.6).

Recently, Secretary of State Hillary Rodham Clinton and Secretary of Defense Leon E. Panetta crisscrossed the western Pacific from China to New Zealand assuring everybody that we're not trying to "contain" China; we're merely, in Panetta's words, continuing "to be what we have been now for seven decades: the pivotal military power in the Asia-Pacific region" (The New York Times online, Sept. 13).

But something is true today that has not been true for most of those seven decades. According to the Central Intelligence Agency ([www.cia.gov](http://www.cia.gov/)), China is the No. 1 trading partner of Australia, Japan, South Korea, Malaysia, the Philippines, the Solomon Islands, Taiwan, and Thailand. And China is a major commercial player with everybody else in the region.

We're defending these Pacific countries against their major trading partner?

"'What worries us is having to choose [between the U.S. and China] – we don't want to be in that position,' said the foreign minister of Indonesia" (The New York Times online, June 1). You bet they don't.

China, Japan, and others are jockeying for some seemingly worthless (even uninhabited) islands in the South and East China seas.

"Quarrels over these hunks of volcanic rock wouldn't matter much except that China, Vietnam, and the Philippines are running into one another in the race for oil" (The New York Times, Nov. 13, 2011, p.SR4). It's about offshore drilling, that report says. "The South China Sea alone is estimated to have 61 billion barrels of petroleum – oil and gas – plus 54 billion yet to be discovered." Oil again.

In the long game, who wins influence over the area? The United States or China? Put it another way: Who wins? The depleted, financially struggling, politically deadlocked nation many thousands of miles away or the money- and manpower-rich rising nation playing in its own pool? (After all, the disputed areas are called the South and East China Seas.)

Again, the U.S. is setting itself up in a strategically untenable position.

Navy Secretary Ray Mabus said, "We buy too much fossil fuels from potentially or actually volatile places on earth" (NPR online, Sept. 26, 2011).

But the unexpected always happens, and that NPR report reveals something most unexpected: Of all U.S. federal institutions, the Navy and Air Force lead in seeking a nonviolent, eco-friendly path out of America's strategic morass. They "have been busy testing their aircraft ... on jet biofuel. ... [T]he Navy has launched a project to invest up to half a billion dollars in biofuel refineries. Mabus says he is committed to getting 50 percent of the Navy's fuel for aircraft and surface ships from renewable sources by 2020 because dependence on foreign oil makes the U.S. military vulnerable."

Predictably, "the biofuel program has struck a nerve among Republicans," who are trying to limit military biofuel use by law (The New York Times online, Aug. 27). Their Big Oil donors know that if a military market makes biofuels cheap, then America's airlines, railways, and truckers will want it too, and other oil-dependent nations will follow our lead.

Mostly for the sake of oil, the Obama administration's strategies extend U.S. military reach beyond practical limits – limits that Mitt Romney, if elected, plans to strain still further. But the military has come up with an elegant solution: Strategically and environmentally, a U.S. military powered by biofuels could be a 21st century game-changer that ends the oil wars and drains Big Oil's political dominance.

That is a real possibility. It is also possible that, walking a map bigger than a basketball court, our commanders will bump into one another indefinitely, attempting to defend an indefensible strategy.

#### AND, It reduces CO2

**Alic 12** [Jen Alic “4 Biofuels That Don't Take Food Off People's Tables,”  Oilprice.com Published: Wednesday, 12 Sep 2012 | 3:53 PM ET, pg. http://tinyurl.com/d4pmjqm

Algae: Growing on Us  
Algae produces some carbon dioxide when burned, but it takes the same carbon dioxide in to grow. So when algae farms grow massive quantities to be turned into biofuels, the end result is that they actually suck greenhouse gas out of the air. It also has other advantages over biofuels from corn or soybeans, in that it does not require soil or fresh water to grow. It also has the potential to produce more energy per hectare than any land crop.

### Accidents

#### Nuclear power is dead now

#### Schneider et al 12 [Mycle, Antony Froggatt, independent consultants, and Julie Hazemann, Director of EnerWebWatch,“The World Nuclear Industry Status Report 2012,” http://www.worldnuclearreport.org/IMG/pdf/2012MSC-WorldNuclearReport-EN-V2-LQ.pdf]

Prior to the March 2011 (3/11) Fukushima disaster, the nuclear industry had made it clear that it could not afford another major accident. Over the past ten years the industry has sold a survival strategy to the world as the nuclear revival or its renaissance. In reality many nuclear companies and utilities were already in great difficulties before the triple disaster hit the Japanese east coast in 2011. Fifteen months after 3/11, it is likely that the decline of the industry will only accelerate. Fukushima continues to have a significant impact on nuclear developments everywhere. Fifteen years ago, nuclear power provided over one third of the electricity in Japan, but as of May 2012 the last operating reactor was closed. The Japanese government is facing massive opposition to nuclear power in the country, thus making the restart of any reactors difficult. The controversy over the restart permission for the Ohi reactors in the Kansai region illustrates the dilemma. Germany shut down half of its nuclear fleet after 3/11. Japan and Germany could be leading a new trend. The German direction is clear with the possibility of Japan following: an electricity system based on highly efficient use and renewable energy technologies, even if many questions remain, including the timescale, local versus centralized, grid transformation and smart system development. It appears increasingly obvious that nuclear systems are not competitive in this world, whether from systemic, economic, environmental or social points of view. The nuclear establishment has a long history of failing to deliver. In 1973-1974, the International Atomic Energy Agency (IAEA) forecasted an installed nuclear capacity of 3,600-5,000 GW in the world by 2000, ten times what it is today. The latest example was from Hans Blix, former Director General of the IAEA, who stated two months after 3/11: “Fukushima is a bump in the road…”. The statement is both crass and far from today’s reality.

#### Civilian nuclear globalization risks nuclear terrorism and miscalculation

Sokolski 10—Henry Sokolski, executive director of the Nonproliferation Policy Education Center, serves on the U.S. congressional Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism and is editor of *Falling Behind: International Scrutiny of the Peaceful Atom* [March 2010, “Nuclear Weapons Proliferation, Energy Security, and Carbon Emission Reduction: How to Overcome the Civilian-Military Nuclear Dilemma,” Heinrich-Böll-Stiftung, European Union, Brussels, pg. 45-62, http://www.boell.org/downloads/HBS-Nassauer-Sokolski\_web.pdf]

Finally, in 20 years, there could be more nuclear weapons-ready states – countries that could acquire nuclear weapons in a matter of months, like Japan and Iran. In addition, more than 25 states have announced plans to launch large civilian nuclear programs. If they all realize their dreams of bringing their first nuclear power reactors on line by 2030, it would constitute a near doubling of the 31 states that currently have such programs, most of which are in Europe (see figures 4 and 5). If this civilian nuclear expansion is realized, it could have major military implications. Every current weapons state first brought a large reactor on line prior to acquiring its first bomb. The United Kingdom, France, Russia, India, Pakistan, and the United States all made many of their initial bombs from reactors that also provided power to their electrical grids. The United States still uses a power reactor, a ‘proliferation resistant’ light-water reactor operated by the Tennessee Valley Authority, to make all of its weapons-grade tritium for its nuclear arsenal. Other plants besides large power reactors, of course, would be needed to chemically separate out weapons-usable plutonium from the spent power-reactor fuel or to enrich the uranium used to power such machines. Yet, as the recent cases of Iran and North Korea demonstrate, such fuel-making plants can be built – and in ways that can be difficult to detect – and operated to make timely detection of illicit production unlikely. Certainly, if all of the announced civilian nuclear power programs are completed as planned, the world in 2030 would be far less stable. Instead of there being several confirmed nuclear weapons states (most of which the United States can claim are either allies or strategic partners) there could be an unmanageable number of additional nuclear weapons-capable states – armed or weapons-ready (i.e., able to acquire weapons in 12 to 24 months) – to contend with, as figures 6 and 7. In such a world, the United States, its allies and the EU might know who their friends and potential adversaries might be but they would have difficulty knowing what such states might do in a crisis – close ranks, go their own way developing weapons options, or follow the lead of some other nuclear-capable nation. As for possible adversaries, the United States, its allies and the EU would have difficulty determining just how lethal these adversaries’ military forces might be. Finally, these nuclear trends would surely aggravate the prospects for nuclear terrorism. Not only would there be more opportunities to seize nuclear weapons and nuclear weapons materials, there would be more military and civilian nuclear facilities to sabotage. In addition, the potential for miscalculation and nuclear war could rise to a point where even non-nuclear acts of terror could ignite larger conflicts that could turn nuclear. This sort of international volatility is similar to that which preceded World War One and Two. These were periods in which overly ambitious arms-control objectives were pursued while states completed major covert and overt military preparations that heightened tensions and subsequently were employed in unrestricted warfare. The difference would be that over the next 20 years, the ammunition in these conflicts would not just be highly explosive, but nuclear.

#### Nuclear expansion increases the risk of meltdowns—kills thousands immediately

Lyman 8—Edwin Lyman is Senior Global Security Scientist with the Union of Concerned Scientists (UCS). He specialises in nuclear proliferation, nuclear terrorism, and nuclear power safety. He has published many articles in journals and magazines and written many reports. Lyman was president of the Nuclear Control Institute. He has a Ph.D. in physics from Cornell University. [September/October 2008, “Can nuclear plants be safer?” *Bulletin of the Atomic Scientists*, Vol. 64, No. 4, pp. 34-37, http://www.psr.org/nuclear-bailout/resources/can-nuclear-plants-be-safer.pdf]

Even with subsidies provided by Congress, $5 billion–$9 billion for each new nuclear plant is still a staggeringly expensive proposition. Utilities will be under tremendous pressure to cut costs wherever they can. Unfortunately, **in the past the industry has tried to save money all too often by cutting corners on safety**. Can a nuclear expansion be carried out without either breaking the bank or exposing the public to unacceptable risk?

Because there hasn’t been a serious core-melt accident in the United States since Three Mile Island in 1979, some nuclear power advocates assert that safety concerns are overblown. Although such accidents are unlikely, they are far from impossible. According to NRC estimates, the annual average chance that one of the 104 nuclear reactors in the country will experience a core melt while operating at full power is about 1 in 500 due to internal events such as pipe breaks. Taking into account the risks of external events such as earthquakes and floods and the risks during shutdowns (which are high because the fuel remains hot but some emergency cooling systems may be down for maintenance), this chance rises to almost 1 in 100 per year. In addition, today’s reactors are vulnerable to sabotage from the ground or the air in ways that cannot be eliminated by simply increasing the numbers of guns, guards, and gates.

U.S. nuclear power promoters argue that a massive release of radioactive material, comparable to the 1986 Chernobyl disaster in the Soviet Union, can’t happen here because U.S. reactors, unlike Chernobyl-type reactors, have robust containment structures. Yet not all U.S. containments could survive the most severe events that can occur, such as a hydrogen explosion. For some containment types, in certain accident scenarios the chance of containment rupture or bypass is nearly 100 percent. A core-melt accident could occur when a reactor is being refueled and the containment hatch is open. Terrorists armed with explosives and seeking to inflict maximum harm would encounter little difficulty breaching a containment structure.

A 9/11-style attack on a nuclear plant could pose a serious threat of breaching any containment structure that is not designed to withstand the deliberate impact of a large passenger jet. Although the NRC has proposed requiring all new plant designs to be evaluated with regard to their vulnerability to aircraft attacks, the rule would not require designers to make changes to their designs to fix deficiencies they may find. Plant designs that have already received NRC certification, such as the AP1000, would be exempt (although Toshiba-Westinghouse has committed to doing the assessment on a voluntary basis).

The consequences of such events at a U.S. nuclear plant could be grave. About 5 million Americans—more than 1 percent of the population—live within 10 miles of a nuclear plant. A 2004 study by this author for the Union of Concerned Scientists and Hudson Riverkeeper found that an event leading to a core melt and containment breach at the Indian Point nuclear plant 25 miles from New York City could be far worse than the 9/11 attacks. It could cause tens of thousands of deaths within weeks from acute radiation syndrome and hundreds of thousands of deaths within decades from cancer. Children could receive high exposures to radioactive iodine as far as hundreds of miles downwind of the plant. Such an event would have a chilling effect on prospects for a U.S. nuclear plant revival.

Unless new nuclear reactors are designed to be significantly safer and more secure against accidents and attacks than the current fleet, **a large U.S. nuclear expansion could make the risk of a Chernobyl-scale release of radioactivity** uncomfortably high. But the NRC and the nuclear industry are squandering the opportunity to lock in major safety and security improvements for the next generation of nuclear plants. According to a 1986 policy statement, the NRC “expects” new nuclear plants to be safer than current plants but does not require them to be safer. In fact, the NRC sets the bar for acceptable risk of core damage in new plants so low that most operating plants would meet it. Apparently the NRC fears that requiring new plants to be safer than current plants would imply that current plants are not safe enough. But this timid policy has discouraged reactor vendors from designing new plants that are clearly safer than current ones. Consequently, the next generation of plants likely to be built in the United States— which will operate for 60 years or longer—will not provide the major advances in safety and security that are needed.

#### Risks all life on Earth

#### Adams 11 [Mike, Editor of NaturalNews.com “Solar flare could unleash nuclear holocaust across planet Earth, forcing hundreds of nuclear power plants into total meltdowns,” 9-13, <http://www.naturalnews.com/033564_solar_flares_nuclear_power_plants.html>]

Forget about the 2012 Mayan calendar, comet Elenin or the Rapture. The real threat to human civilization is far more mundane, and it's right in front of our noses. If Fukushima has taught us anything, it's that just one runaway meltdown of fissionable nuclear material can have wide-ranging and potentially devastating consequences for life on Earth. To date, Fukushima has already released 168 times the total radiation released from the Hiroshima nuclear bomb detonated in 1945, and the Fukushima catastrophe is now undeniably the worst nuclear disaster in the history of human civilization.

### Adv CP

#### The United States federal government should establish a nitrogen fertilizer tax of 16 cents per pound of nitrogen, and use the revenue from that tax to provide loan guarantees for farmers to procure biocharcoal technology.

#### The United States federal government should substantially increase funding for the Nuclear Infrastructure and Education Program.

#### The United States federal government should expand the NRC university program.

Solves the expertise advantage

**Mtingwa ‘9** (Chair of the POPA study on the Readiness of the U.S. Nuclear Workforce for 21st Century Challenges. He is an accelerator physicist and Senior Lecturer at MIT. "Readiness of the U.S. Nuclear Workforce for 21st Century Challenges," January, <http://www.aps.org/units/fps/newsletters/200901/mtingwa.cfm>)

On another front, the tragedy of September 11, 2001, has brought an intense focus on the issue of national preparedness against terrorism. For emergencies involving a terrorist action or an accident at a nuclear reactor, experts must be ready to respond. Thus it is important to attend to the nuclear workforce needs of the Department of Homeland Security, the Department of Defense, the NRC, and specialized areas of the Department of Energy. An important example of the latter is the Nuclear Emergency Support Team from DOE’s National Nuclear Security Administration that travels to the site of a suspected nuclear or radiological weapon to mitigate the situation. Thus, the nation will need to expand its nuclear workforce to initiate new efforts in nuclear forensics and other parts of the Homeland Security portfolio, and to replace many retiring members of the weapons workforce. For many years, funding for U.S. university nuclear science and engineering research and education has been heavily dependent upon a single source: previously DOE and now the NRC. Therefore, it is no accident that the vitality of the nation’s university nuclear science and engineering education and infrastructure program closely tracked funding support provided by DOE over the last 15 years. As shown in Fig. 1, as DOE’s funding increased in the decade 1997 through 2007, undergraduate student enrollment in nuclear engineering increased – from a low of 480 students in 1999 to a high of 1,933 in 2007. For nuclear engineering students at minority-serving institutions, DOE support created new opportunities. While other factors also contributed to the dramatic increase in undergraduate enrollments, university administrators indicate that increases in Federal funding were indeed an important factor. Fig. 1. Past DOE investments in university programs and undergraduate enrollments in nuclear engineering . In FY 2007 the DOE university budget was $16.5 million. For FY 2008, aside from $ 2.9 million remaining at DOE for university reactor fuel services, Congress transferred $15 million for the remaining university programs to the NRC. In the aftermath of the accidents at Three Mile Island in 1979 and Chernobyl in 1986, DOE support for nuclear science and engineering education declined precipitously as industry construction of new plants ceased and student interest and career opportunities declined. In 1997, the President’s Committee of Advisors on Science and Technology issued a report that urged President Clinton to reinvest in university nuclear science and engineering research and education . PCAST also urged him to establish the Nuclear Energy Research Advisory Committee to provide advice to DOE on this reinvestment. In the mid-1990s, the Clinton Administration recognized the potential for a resurgence in nuclear technology, and constituted NERAC in 1998 to advise DOE as it began reinvesting both funds and management attention to rebuilding the educational infrastructure for nuclear science and engineering. This support was implemented by creating a suite of eleven targeted programs, among which perhaps the most influential was the Innovations in Nuclear Infrastructure and Education (INIE) program, which encouraged the development of strategic consortia among universities, DOE national laboratories, and industry. When DOE released its FY2007 budget request, it announced that it had completed its mission in the area of nuclear science and engineering education and made plans to terminate the program. DOE proposed essentially zero funding for nuclear science and engineering education for both FY2007 and FY2008. This signaled a significant reversal of fortune not seen since the early 1990s. DOE proposed to return to the practice of those years by providing only basic fuel services for university research reactors under a new infrastructure program. In FY2007, Congress rejected DOE’s proposal to terminate the program and instead provided $16.5 million – far less than the $27 million the program received in FY2006. In FY2008, Congress again rejected ending the program and allocated $17.9 million in the FY2008 Consolidated Appropriations Act. Of this amount, $2.9 million remained at DOE for university reactor fuel services, and Congress transferred to the NRC $15 million for the rest of the programs. While these funds would defer to some extent the erosion of nuclear science and engineering education in the U.S., they are not sufficient to maintain vital elements of the nation’s programs, particularly the highly successful INIE program. It was last funded in FY2006. As for nuclear chemistry and radiochemistry, these are two fields that overlap in many ways. Simply put, radiochemistry is the study of radioactive elements using chemical techniques, focusing on their radioactive characteristics. Nuclear chemistry is the study of the fundamental properties of nuclei, both radioactive and non-radioactive, using chemical techniques. It is quite close to the field of nuclear physics. There has been a continuing dramatic decrease in the number of Ph.D.s earned annually in nuclear chemistry, as shown in Fig. 2. It reflects the fact that only a handful of U.S. university chemistry departments currently have professors with active research programs in nuclear chemistry. Thus, advanced education in nuclear chemistry education is all but extinct in the United States. Fig. 2. Numbers of nuclear chemistry Ph.D.s earned at U.S. universtities: 1961-2003. If nuclear chemistry and radiochemistry education programs are not reinvigorated, the U.S. will lack the expertise required to pursue promising advanced R&D in a myriad of disciplines. In addition to processing both fresh and spent fuel for nuclear reactors, including basic research on spent fuel separations and transmutation technologies, nuclear chemistry and radiochemistry are also extremely important to the nation’s security and health in the following cross-cutting roles: (1) nuclear weapons stockpile stewardship, (2) nuclear forensics and surveillance of clandestine nuclear activities, (3) monitoring of radioactive elements in the environment, (4) production of radioisotopes, and (5) preparation of radiopharmaceuticals for therapeutic and diagnostic medical applications.

#### Solves through sequestration without reducing coal emissions.

Technology Review, 4/26/2007. “The Case for Burying Charcoal,” published by MIT, http://www.technologyreview.com/news/407754/the-case-for-burying-charcoal/.

Several states in this country and a number of Scandinavian countries are trying to supplant some coal-burning by burning biomass such as wood pellets and agricultural residue. Unlike coal, biomass is carbon-neutral, releasing only the carbon dioxide that the plants had absorbed in the first place. But a new research [paper](http://dx.doi.org/10.1016/j.biombioe.2007.01.012) published online in the journal Biomass and Bioenergy argues that the battle against global warming may be better served by instead heating the biomass in an oxygen-starved process called pyrolysis, extracting methane, hydrogen, and other byproducts for combustion, and burying the resulting carbon-rich char. Even if this approach would mean burning more coal--which emits more carbon dioxide than other fossil-fuel sources--it would yield a net reduction in carbon emissions, according to the analysis by [Malcolm Fowles](http://technology.open.ac.uk/tm/mf.htm), a professor of technology management at the Open University, in the United Kingdom. Burning one ton of wood pellets emits 357 kilograms less carbon than burning coal with the same energy content. But turning those wood pellets into char would save 372 kilograms of carbon emissions. That is because 300 kilograms of carbon could be buried as char, and the burning of byproducts would produce 72 kilograms less carbon emissions than burning an equivalent amount of coal. ¶ Such an approach could carry an extra benefit. Burying char--known as black-carbon sequestration--enhances soils, helping future crops and trees grow even faster, thus absorbing more carbon dioxide in the future. Researchers believe that the char, an inert and highly porous material, plays a key role in helping soil retain water and nutrients, and in sustaining microorganisms that maintain soil fertility. ¶ Johannes Lehmann, an associate professor of crops and soil sciences at Cornell University and an expert on char sequestration, agrees in principle with Fowles's analysis but believes that much more research in this relatively new area of study is needed. "It heads in the right direction," he says.¶ Interest in the approach is gathering momentum. On April 29, more than 100 corporate and academic researchers will gather in New South Wales, Australia, to attend the first international conference on black-carbon sequestration and the role pyrolysis can play to offset greenhouse-gas emissions. Lehmann estimates that as much as 9.5 billion tons of carbon--more than currently emitted globally through the burning of fossil fuels--could be sequestered annually by the end of this century through the sequestration of char. "Bioenergy through pyrolysis in combination with biochar sequestration is a technology to obtain energy and improve the environment in multiple ways at the same time," writes Lehmann in a research paper to be published soon in [Frontiers in Ecology and the Environment](http://www.frontiersinecology.org/). Fowles says that there would be an incentive for farmers, logging communities, and small towns to convert their own dedicated crops, agricultural and forest residues, and municipal biowaste into char if a high enough price emerged for the sale of carbon offsets. "Every community at any scale could pyrolyse its biowaste ... motivated by doing their bit against global warming," he says. Fowles believes that storing black carbon in soil carries less risk, would be quicker to implement, and could be done at much lower cost than burying carbon dioxide in old oil fields or aquifers. And he says the secondary benefits to agriculture could be substantial: "Biochar reduces the soil's requirement for irrigation and fertilizer, both of which emit carbon." Fowles adds that it has also been shown to reduce emissions of greenhouse gases from decay processes in soil. This would include nitrous oxide, a potent greenhouse gas. "Biochar has been observed to reduce nitrous-oxide emissions from cultivated soil by 40 percent."

### Warming

**Can’t solve – eliminating every coal plant would only be a POINT 2 degree change**

RAPIER 12 Chief Technology Officer at Merica International – a Renewable Energy Company, Master’s in Chemical Engineering from Texas A&M University [Robert Rapier, Study: Eliminating Coal-Fired Power is Worth 0.2 Degrees in 100 Years, <http://www.consumerenergyreport.com/2012/03/05/study-eliminating-coal-fired-power-is-worth-0-2-degrees-in-100-years/>]

Who could have dreamed solving climate change would be so easy? A new paper in Environmental Research Letters called “Greenhouse gases, climate change and the transition from coal to low-carbon electricity” concludes that replacement of all of the world’s currently operating coal-fired power plants — which produce about 40% of the world’s electricity — and replacing them with renewable energy would have an impact of 0.2 degrees Celsius 100 years from now.

Cherry-Picking Conclusions According to One’s Viewpoint

However, a number of climate change websites took away a very different message than I took away from the paper. Here is Joe Romm’s view:

Bombshell: You Can’t Slow Projected Warming With Gas, You Need ‘Rapid and Massive Deployment’ of Zero-Carbon Power

I seem to recall another “bombshell” that he recently reported upon on the same theme: Natural Gas Bombshell: Switching From Coal to Gas Increases Warming for Decades, Has Minimal Benefit Even in 2100. I debunked that by showing that in that particular study, every possible alternative — including wind power, solar power, and even simply shutting down all of the coal plants — was projected to increase global warming in the short term: BOMBSHELL: Solar and Wind Power Would Speed Up, Not Reduce, Global Warming.

But Joe is back with the hyperbolic titles and exaggerations (which I get into below), and he missed the biggest story in the paper.

Coal and Sunlight-Reflecting Pollutants

The subject of Romm’s earlier “natural gas bombshell” was a paper written by Tom Wigley that concluded that shutting down coal-fired power plants would cause the global temperature to increase in the short term because of the loss of sunlight-reflecting pollutants.

In that particular paper, Dr. Wigley modeled what would happen if coal-fired power was replaced with natural gas. He did indeed project short-term warming in that scenario, yet it was a result of the air becoming cleaner and allowing sunlight through as the coal was phased out. Thus, the media really got that story wrong, which was not about a deficiency of natural gas, but rather about the peculiarity of burning coal — that the particulate emissions reflect sunlight. Those who fixated on natural gas as the culprit could have written the same story about solar power — which the study’s author confirmed for me. Hence, I made that my “Bombshell” to illustrate the point.

However, that particular study didn’t actually model the temperature impact of shutting down coal plants and replacing them with anything other than natural gas. So, I posed the following question to Dr. Wigley:

What does the graph look like in 2100 if all coal-fired plants were replaced with zero emission sources (as the idealized study)? I am just wondering what the potential actually is. Are we talking about 1 or 2 degrees lower? I just have no idea of the relative context.

We had several email exchanges over his paper, and he said that my questions were intriguing and he would look into them. I never heard back from him on that, but this new paper answers the question.

Shuttering All the World’s Coal Plants Wouldn’t Do Much

The authors of this newest study modeled the replacement of coal-fired power plants with either natural gas, coal with carbon capture and storage, hydropower, solar PV, solar thermal, wind power, or nuclear power. You can see from Joe Romm’s headline how the story is being spun, but let’s break it down in a more objective fashion.

The following graphic from the paper tells the story. Pay particular attention to the temperature scale.

The graphic indicates — as Tom Wigley’s previous paper indicated but which was only reported relative to natural gas — that in every single case, it doesn’t matter what coal-fired power plants are replaced with, the temperature is projected to increase for almost the next 40 years. This is true even in the baseline “Conservation” case, which involves merely idling the coal-fired plants and not replacing them with anything.

The paper projects that if coal-fired power plants continue to operate, the expected temperature rise relative to the baseline (i.e., relative to the expected temperature increase from other sources) in 50 years is 0.15 degrees C, and in 100 years is about 0.33 degrees C. If coal is phased out and replaced with natural gas, the relative 50 and 100 year temperature rise is projected to be 0.14 degrees C and 0.24 degrees C, respectively. So the paper shows slightly less warming when natural gas is used, which Climate Progress Tweeted as “Switch from coal to natural gas would have zero effect on global temperatures by 2100” and included a link to Joe’s “bombshell.” That is obviously an exaggeration, as the graphic clearly shows that the effect is not zero. If it was, the natural gas line would overlay the coal line.

Shocking Implications

One shocking implication from the paper was the projection that hydropower would be worse than coal for the next 60 years. The study’s authors cited methane emissions from organic matter buried under water as the reason for this apparent anomaly. But that’s not the really shocking thing about the study for me.

The most shocking conclusion was the magnitude of the numbers we are talking about. Even if you could in theory shut down all of the coal-fired power plants in the world and replace them with wind, solar, and hydropower — in 50 years the projected temperature is only one-twentieth of a degree C cooler than the base case of continuing to use coal. In 100 years, if I could replace all global coal-fired power plants with firm, renewable power — the temperature is only projected to be about 0.2 degrees cooler than under the coal base case. And the way this is being spun is that the 0.09 degree reduction from switching to natural gas is equivalent to an effect of “zero”, but the 0.2 degree reduction in hypothetically replacing everything with wind and solar power 100 years from now is significant. About the natural gas case, Romm literally said the 0.09 degree lower temperature in switching to natural gas means that “natural gas is a bridge fuel to nowhere”, but the 0.2 degree lower temperature in switching to renewables is “the world’s only plausible hope to avert catastrophic temperature rise.”

Nuclear & Natural Gas to the Rescue — But Most Environmentalists Hate Them

A big irony here is that there are only two power sources that are today capable of achieving the study’s conclusion that we must rapidly replace coal-fired power plants: Nuclear power and natural gas. If people really believe that we must urgently address this issue — and they don’t believe that the change from going to natural gas is enough — that leaves nuclear power as the only option capable of achieving a rapid replacement.

Bear in mind that this is for a global replacement of coal — most of which is used in Asia. Good luck trying to sell China and India on a 0.2 degree temperature difference in 100 years if they quickly abandon their coal-fired power plants and replace them with wind power.

Conclusion: Study is a Major Downer for Activists Battling Climate Change

To be honest, if I was devoting my life to fighting against the threat of climate change, this would be one of the most depressing papers I have ever read. If we could convince everyone in the world to shut down their coal-fired power plants — which we can’t — and replace them with renewable power — which isn’t available in quantities sufficient to replace coal-fired power — then by the end of my life there would still be no statistically significant temperature change to even be able to tell if my life’s work was successful.

But let’s be realistic, shall we? The people who are concerned about global warming have dug in their heels over natural gas, and they are generally opposed to nuclear power. Because of the sheer impossibility that we will rapidly replace coal with wind and solar power (especially since “we” is the world), then we will in all likelihood be left with the status quo. As I have said before, emissions are much higher in Asia Pacific than they are in the U.S. and Europe combined, and they are rising rapidly. Unless we can figure out a way to convince them to develop without fossil fuels — something no country has done — then global carbon emissions will continue to rise. This is why — even though I accept the science behind climate change — it isn’ t my focus. I just don’t see how the West can possibly do anything about it.

#### Nuclear too slow to solve warming—multiple factors

Froggatt and Schneider 10—\*Antony Froggatt is a Senior Research Fellow at Chatham House, London. For over 20 years he has worked extensively on EU energy policy for NGOs and think tanks and as a consultant to European governments, the European Commission and Parliament and commercial bodies. \*\*Mycle Schneider works as an independent international consultant on energy and nuclear policy, based in Paris. He is currently advising the USAID funded program ECO-Asia on energy efficiency and renewable energy policy. Between 1983 and April 2003, Mycle Schneider was executive director of the energy information service WISEParis and chief editor of the web-based Plutonium Investigation. Between 2000 and 2009 he has been an advisor to the German Environment Ministry. Since 2004 he has also been in charge of the Environment and Energy Strategies Lecture of the International Master of Science for Project Management for Environmental and Energy Engineering at the French école des Mines in Nantes, France. In 2006/2007 he was part of a consultants’ consortium that assessed nuclear decommissioning and waste-management funding issues on behalf of the European Commission. Mycle Schneider has provided information and consulting services to a large variety of clients, including the IAEA, Greenpeace International, UNESCO, World Wide Fund for Nature (WWF), the European Commission, the European Parliament’s General Directorate for Research, and the French Institute for Radiation Protection and Nuclear Safety (IRSN). In 1997 he was honored with the Right Livelihood Award (“Alternative Nobel Prize”) together with Jinzaburo Takagi for their joint work on plutonium issues. [August 2010, “Systems for Change: Nuclear Power vs. Energy Efficiency+Renewables?” Heinrich-Böll-Stiftung, Brussels, http://www.boell.org/downloads/HBS-Frogatt\_web.pdf]

Lead times for scaling up new technologies, experiences and expectations

Nuclear power

Given the need for rapid emission reductions, the time needed to introduce new technologies on a mass scale is an important and highly underestimated factor. There are two major phases for the commissioning of new energy-generating facilities: the pre-development phase and construction.

The pre-development phase can include a wide variety of consultations and potentially involves obtaining the necessary construction and operating licenses, local and national consent, as well as raising the financing package. In some cases, the deployment of a new technology may be sped up as generic safety assessments are made, or alternatively, the pre-development phase may take longer due to local site conditions or new issues coming to light. The IEA has estimated a pre-development phase of approximately eight years for nuclear power.53 However, this includes the time it takes to gain political approval and it assumes an existing industrial infrastructure, workforce and regulatory regimes. In the case of the United Kingdom, then Prime Ministry Tony Blair announced that nuclear power was “back with vengeance” in May 2006, but it was some years before the pre-development phase for nuclear power even began.

Nuclear power has a history of delays in construction, and analysis undertaken by the World Energy Council54 has shown the global trend in increased construction times for nuclear reactors. The significant increase in construction times from the late 1980s until 2000 was in part due to changes in political and public views of nuclear energy following the Chernobyl accident, with subsequent alterations in the regulatory requirements. As we have shown in the World Nuclear Industry Status Report 2009,55 calculating a global average construction time – it would be around nine years for the 16 most recent grid connections – does not make much sense because of the differences between countries. The construction period for four reactors started up in Romania, Russia and Ukraine lasted between 18 and 24 years. In contrast, it took hardly more than five years on average to complete the 12 units that were connected to the grid in China, India, Japan and South Korea.

Increases in construction times can be seen in various countries across the world. In Germany, in the period from 1965 to 1976, construction took 76 months, increasing to 110 months in the period from 1983 to 1989. In Japan average construction time in the period from 1965 to 2004 was in the range of 44 to 51 months. Finally in Russia, the average construction time from 1965 to 1976 was 57 months, then from 1977 to 1993 it was between 72 and 89 months, but the four plants that have been completed since then have taken around 180 months (15 years),56 due to increased opposition following the Chernobyl accident, economic constraints and the political changes after 1992.

The first of the latest design of reactors, the so-called Generation III+ reactors, is under construction in Finland.58 At the time of the ordering of Olkiluoto-3 in December 2003, the contract called for the plant to be on-line by 1 May 2009. However, the latest completion date is now at least three and a half years late and close to 100% over budget (current estimates suggest that by completion, the total will reach €5.7 billion or more, compared to an original estimate of €3 billion). The second Generation III+ reactor, also an EPR as in Finland, is under construction in France. After three years of construction, Flamanville-3 is now officially at least two years behind planning and €2 billion over budget. As a consequence of the building problems, the credit agency Standard & Poor’s downrated nuclear builder AREVA.59

Given the complexities and costs associated with construction, reactors tend to be built in series rather than parallel, i.e., constructors will wait until one reactor is completed until starting the next. Consequently, it will take a number of additional years for a new fleet of reactors to be fully operational.

#### Nuclear causes emissions.

Sovacool 11—an Assistant Professor at the Lee Kuan Yew School of Public Policy at the National University of Singapore. He is also a Research Fellow in the Energy Governance Program at the Centre on Asia and Globalisation (CAG) at the LKY School. (Benjamin K., “Second Thoughts about Nuclear Power,” January 2011)

co2 emissions

It is true that the carbon footprint of electricity generated by nuclear energy is less than that of coal, natural gas and oil fired facilities. However, when emissions from uranium mining, milling and spent fuel conditioning are added to the emissions associated with plant construction, operation and decommissioning, a typical reactor emits about 66g of CO2 equivalent for every kWh of electricity produced. This figure, which is more than any single source of renewable electricity, is likely to increase significantly as more energy intensive uranium enrichment is required once high quality uranium ores are exhausted. The Oxford Research Group9, have estimated that by 2050, nuclear electricity will have the same carbon footprint as natural gas.

#### Not try or die

**Aikman 11** [Amos, “Climate forecasts 'exaggerated': Science journal,” 11-25, <http://www.theaustralian.com.au/news/health-science/climate-forecasts-exaggerated-science-journal/story-e6frg8y6-1226205464958>]

DRAMATIC forecasts of global warming resulting from a doubling of atmospheric carbon dioxide have been exaggerated, according to a peer-reviewed study by a team of international researchers.

In the study, published today in the leading journal Science, the researchers found that while rising levels of CO2 would cause climate change, the most severe predictions - some of which were adopted by the UN's peak climate body in its seminal 2007 report - had been significantly overstated.

The authors used a novel approach based on modelling the effects of reduced CO2 levels on climate, which they compared with proxy-records of conditions during the last glaciation, to infer the effects of doubling CO2 levels.

They concluded that current worst-case scenarios for global warming were exaggerated.

"Now these very large changes (predicted for the coming decades) can be ruled out, and we have some room to breathe and time to figure out solutions to the problem," the study's lead author, Andreas Schmittner, an associate professor at Oregon State University, said.

Scientists have struggled for many years to understand how to quantify "climate sensitivity" - how Earth will respond to projected increases in atmospheric carbon dioxide.

In 2007, the UN's peak climate body, the Intergovernmental Panel on Climate Change, warned that a doubling of CO2 from pre-industrial levels would warm the Earth's surface by an average of 2C to 4.5C, although some studies have claimed the impact could be 10C or higher.

Professor Schmittner said it had been very difficult to rule out these extreme "high-sensitivity" scenarios, which were very important for understanding risks associated with climate change.

The study found high-sensitivity models led to a "runaway effect" under which the Earth would have been covered in ice during the last glacial maximum, about 20,000 years ago, when CO2 levels were much lower.

"Clearly that didn't happen, and that's why we are pretty confident that these high climate sensitivities can be ruled out," he said.

Professor Schmittner said taking his results literally, the IPCC's average or "expected" value of a 3C average temperature increase for a doubling of CO2 ought to be regarded as an upper limit.

"Many previous climate-sensitivity studies have looked at the past only from 1850 through to today, and not fully integrated paleoclimate data, especially on a global scale," he said. "If these paleoclimatic constraints apply to the future, as predicted by our model, the results imply less probability of extreme climatic change than previously thought."

#### Statistical studies disprove – no climate conflicts

#### Theisen et al 11 [Ole Magnus, doctoral candidate at the Norwegian University of Science and Technology (NTNU) and Associate Researcher at the Centre for the Study of Civil War (CSCW) at the Peace Research Institute Oslo, Helge Holtermann and Halvard Buhaug, “Climate Wars? Assessing the Claim That Drought Breeds Conflict,” Winter, International Security Vol 36, No 3, p. 79-106, <http://www.mitpressjournals.org/doi/pdfplus/10.1162/ISEC_a_00065>]

Climate change is hot. Twice in recent years, the Nobel Peace Prize has been awarded to environmental activists: in 2004 to Wangari Maathai and in 2007 to the United Nations’ Intergovernmental Panel on Climate Change (IPCC) and former U.S. Vice President Al Gore. In April 2007, the UN Security Council held its ªrst ever debate on climate security. The chair of this debate, then British Foreign Secretary Margaret Becket, left no doubt as to the connection between climate and conºict: “What makes wars start? Fights over water. Changing patterns of rainfall. Fights over food production, land use.” 1 In the same year, a report by eleven retired U.S. generals and admirals stated that environmental security is no longer soft politics, concluding that climate change is a “threat multiplier” for instability and conflict that will have repercussions for all. 2 And in a speech to the UN on September 22, 2009, U.S. President and Nobel laureate Barack Obama asserted that “the threat from climate changes is serious, it is urgent, and it is growing,” as more frequent droughts and crop failures “breed hunger and conºict.” 3 Surely, such statements must be based on solid scientiªc evidence—much in the same manner as the natural sciences inform the debate on likely physical changes? Not so. As a matter of fact, the policy debate on the security implications of climate change has run far ahead of the scientific evidence base. This study represents one scholarly attempt to catch up with the rhetoric.

At the heart of the climate security discourse lies the issue of water scarcity. A key characteristic of the world’s poorest and most vulnerable societies is their dependence on rain-fed agriculture for income and food supply. Global warming is likely to affect precipitation patterns and increase the unpredictability of extreme weather events, thereby probably having a negative impact on health and food security in many parts of the world. 4 Some argue that these developments might also have implications for peace and security in a stricter sense. The environmental security literature offers several case-based accounts of armed conºict within the context of competition over scarce resources. 5 Yet, it remains unclear whether these cases are exceptions or whether they epitomize a more systematic pattern of resource scarcity and conºict, in general, and drought and violent conºict, in particular. 6

This study offers a rigorous assessment of the claim that drought and water shortages increase the risk of civil war. 7 In contrast to earlier attempts to study the scarcity-conflict nexus in a comparative manner, we explicitly incorporate the role of ethnopolitical structures. Not all groups in a society are equally vulnerable to environmental shocks. Almost all accounts of land and water conflicts in Africa concern peripheral and neglected groups in weak or oppressive regimes—even though the nature of the political system in these narratives often remains implicit. Environmental hardships, such as prolonged drought, tend to accentuate societal divides, as marginalized groups lack alternative means of livelihood and income and are less likely to be at the receiving end of government-sponsored redistribution programs and relief aid. This leads to a second significant improvement of this study: its geographically disaggregated design. Grievances and human suffering will emerge first, and be most acute, in locations where drought coincides with political and economic marginalization. Local, short-term implications could include lowered opportunity cost of rebel recruitment and a higher motivation for using violence to redress grievances. Therefore, if leading politicians, think tanks, and environmental security scholars are correct—if a regular pattern of increasing water scarcity and increasing risk of violent conºict truly exists—this should be observed where drought strikes marginalized populations in poor, agrarian, nondemocratic societies.

To evaluate the empirical validity of this general proposition, we employ a high-resolution gridded dataset of Africa from 1960 to 2004 that combines georeferenced and annualized precipitation data with new data on the point location of civil war onset and the location and political status of ethnic groups. 8 We test a large selection of alternative location-speciªc drought measures and allow for both direct and conditional relationships, where the effect of drought is contingent on various sociopolitical characteristics at the local as well as the national level. In contrast to popular conception, the analysis reveals little evidence of a drought-conflict connection. Although we find strong support for the exclusion perspective—African civil wars break out disproportionately in politically marginalized areas—this statistical regularity is unaf fected by abrupt local water shortages. This finding calls for moderation when discussing security implications of climate change, particularly within the context of policy advice and practice

#### Reducing coal emissions would trigger rapid warming due to reduced aerosol cooling.

N. Chalmers et al,1,2 E. J. Highwood,1 E. Hawkins,1,2 R. Sutton,1,2 L. J. Wilcox1, 8/21/2012. 1Department of Meteorology, University of Reading, Reading, U.K.; 2NCAS-Climate, University of Reading, Reading, U.K. “Aerosol contribution to the rapid warming of 2 near-term climate under RCP 2.6,” Manuscript, accepted for publication in Geophysical Research Letters, [www.met.reading.ac.uk/~ed/home/chalmers\_etal\_2012\_accepted.pdf](http://www.met.reading.ac.uk/~ed/home/chalmers_etal_2012_accepted.pdf).

The period during which global mean surface temperature in RCP2.6 is higher than in 130 RCP4.5, discussed in the previous section, is directly related to a rapid increase in global 131 mean surface temperature in RCP2.6, between around 2010 and around 2025 (Figure 1a). 132 In this section we investigate the causes of this rapid warming, and relate this event to 133 the comparison with RCP4.5. Figure 3 shows maps of the differences between the 10 year 134 means before and after the rapid warming. In this case a positive value indicates a larger 135 value after the sudden warming identified in Figure 1.¶ 136 As expected, there is a large reduction in sulphate load, and corresponding decrease 137 in CDNC over most of the northern hemisphere, consistent with a change in the indirect 138 aerosol effect. An increase in the effective radius is also seen (not shown). This reduces 139 the optical depth of the clouds when they are present, meaning more downward shortwave 140 flux is transmitted to the surface. There is also a prominent decrease in cloud fraction over 141 the subtropical northeastern Pacific Ocean which could be a consequence of the impact 142 of reduced sulphate aerosol on cloud lifetime. Lu et al. [2009] show that drizzle rate from 143 clouds in this region is indeed inversely related to aerosol concentration. Kloster et al. 144 [2010] also suggested that a change in cloud water path in their simulations with aggres-¶ 145 sive aerosol reductions resulted from enhanced drizzle formation. We hypothesise that 146 the localised nature of this feature by comparison with the sulphate and CDNC change 147 is due to the cloud in this region being particularly sensitive to a change in aerosol. Cli- 148 matologically, this region is a transition zone between open and closed mesoscale cellular 149 convection [Rosenfeld et al., 2011], aerosol concentrations being lower in the open celled 150 regions [Woods et al., 2011]. Although the details of these processes are unlikely to be 151 represented explicitly in global models, the localised strong decrease in cloud fraction in 152 the northeastern Pacific ocean would be consistent with a change in cloud regime driven 153 by decreased aerosol. Other regions show increases in cloud fraction, which cannot readily 154 be explained as a direct response to the decrease in sulphate load. It is likely that instead 155 these reflect non-local adjustments of the coupled ocean-atmosphere system in response 156 to the change in forcing.¶ 157 Figure 3 also shows the difference in surface shortwave flux (panel d), surface air tem- 158 perature (panel e), and global energy balance (panel f). The predicted increase in surface 159 downward shortwave radiation is seen in the global mean and particularly in the regions 160 of decreased cloud fraction and sulphate load. A negative anomaly in surface SW is co- 161 located with the positive cloud fraction changes. The pattern of surface air temperature 162 change shows large warming over the northern continents and the Arctic, and also a local 163 maximum over the subtropical northeastern Pacific coincident with the region of reduced 164 cloud fraction. The same localised pattern appears in all the simulations of Kloster et al. 165 [2010] that include aerosol reductions, but is absent from their simulations considering 166 only future changes in greenhouse gases.¶ 167 The surface energy budget shows the expected increases in downward shortwave radia- 168 tion. In addition there is an increase in downward longwave radiation in response to the 169 increase in GHG concentrations between the two periods, and also reflecting changes in 170 clouds. The warming due to increases in net surface downward radiation is balanced by 171 increases in latent and (over land) sensible heat fluxes.¶ 4. Discussion and Conclusions¶ 172 In this study we have compared projections of near term climate in the HadGEM2-ES 173 model under RCP4.5 and RCP2.6. GHG forcing under these scenarios is almost identical 174 until 2020, and then declines in RCP2.6 relative to RCP4.5. However, between 2018 and 175 2037 global annual mean surface air temperature is warmer under RCP2.6. The start of 176 this period **is characterised by a period of particularly rapid warming**.¶ 177 Our results provide compelling evidence that the warming in RCP2.6 is a result of a 178 rapid decrease in sulphate aerosol load. This decrease is caused by a decrease in sulphur 179 emissions in RCP2.6, **as a result of the rapid decrease in coal use** needed to reduce GHG 180 emissions. Thus our results highlight the difficulty of reducing the rate of global warming 181 in the near term in this model, even under extreme scenarios for reducing GHG emissions, 182 and is consistent with previous simulations by Wigley [1991] and Johns et al. [2011].

#### That would double warming and quickly take us above the “2-degree threshold.”

Dr Andrew Glikson, 6/6/2011. Earth and paleoclimate science, Australian National University. “Global warming above 2° so far mitigated by accidental geo-engineering,” Crikey, http://www.crikey.com.au/2011/06/06/global-warming-above-2%C2%B0-so-far-mitigated-by-accidental-geo-engineering/.

According to NASA’s Goddard Institute of Space Science climate reports, global warming is already committed to a rise above two degrees. The magical two degrees ceiling determined by governments **is only holding thanks to effective, if unintended, geo-engineering by sulphur dioxide** emitted from industry, holding global warming to about half of what it would be otherwise. Recent publications by Hansen and his [research](http://www.columbia.edu/%7Ejeh1/mailings/2011/20110415_EnergyImbalancePaper.pdf) [group](http://arxiv.org/ftp/arxiv/papers/1105/1105.0968.pdf) indicate the rise of atmospheric energy (heat) level due to greenhouse gases and land clearing are committed to +2.3 degrees (+3.1 Watt/m2), currently mitigated by the transient effect of sulphur aerosols and the cooling effect of the oceans. Sulphur dioxide is emanated from coal, oil and the processing of minerals (breakdown of sulphides to produce copper, zinc, lead and so on), and from other chemical industries. It combines with water in the atmosphere to produce sulphuric acid, which (being heavier than air) condenses and settles to the ground within a few years. Aerosols stay in the atmosphere and stratosphere on time scales ranging from hours to days and to years, depending on their grain size, chemistry and height in the atmosphere and on the physical state and temperature of the atmosphere at different altitudes and latitudes. The aerosols are short-lived, i.e. on time scales of up to a few years, but since they are continuously emitted from industry the overall level is increasing as burning of fossil fuels is rising. The continuing emission of sulphur aerosols in effect constitute a global geo-engineering process without which the atmosphere would warm by another 1.2 degrees (1.6 Watt/m2) above the present level, **resulting in near-doubling of global warming** ([Figure 1](http://www.columbia.edu/%7Ejeh1/mailings/2011/20110415_EnergyImbalancePaper.pdf)).

[end]

Slowing now due to natural forcings – no risk of runaway warming

Klimenko 11 [VV, Research Assistant at the [Department of Theoretical Astrophysics](http://www.ioffe.ru/astro/) of the [Ioffe Physico-Technical Institute](http://www.ioffe.ru/), “Why Is Global Warming Slowing Down?,” 5-20, Doklady Earth Sciences, 2011, Vol. 440, Part 2, pp. 1419–1422]

The first decade of the present century has ended with a remarkable climatic event: for the first time over the past 65 years, the five year average global temperature over 2006–2010 turned out to be lower than the value for the previous five year interval (2001–2005). In addition, the absolute maximum temperature, which was attained as long ago as in 1998, has not been surpassed for thirteen years. Both these facts seem ingly support the arguments of the opponents of global warming theory, at least those who regard the anthro pogenic origin of warming questionable or even farfetched. Indeed, the anthropogenic emission of carbon dioxide, which is the major greenhouse atmospheric component, has risen by 60% from 5.2 giga tons to 8.5 gigatons of carbon, and its concentration has increased from 339 to 390 ppmv (parts per million by volume). How then do we explain the apparent slowdown in the rate of global warming?

Evidently, the observed global rise in temperature (Fig. 1) is a response of the climatic system to the combined action of both anthropogenic and natural impacts. Some of the latter are precisely the factors responsible for the current climatic paradox. Further, we will attempt to identify these factors and, based on their analysis, forecast the global climatic trends for the next decades.

Figure 2 presents the wavelet spectra yielded by continuously analyzing the time series of global tem perature over 1850–2011 [1]. Here, we analyze only one of three existing global temperature datasets which are continuously updated, namely the HadCRUT3 temperature series provided by the Uni versity of East Anglia (accessible at http://www.cru. uea.ac.uk/cru/data/temperature/), because this is, as of now, the only dataset covering more than a 150-year interval, which is crucial for our study. We note that it only recently became possible to analyze such long time series and, thus, identification of multidecade rhythms became a solvable task. The temperature data were preliminarily rid of the longterm anthropogenic trend associated with the accumulation of greenhouse gases and aerosols in the atmosphere; this trend was calculated from the energybalance climate model developed at the Moscow Power Engineering Institute (MPEI) [2]. The resulting temperature series, free of anthropogenic trends, will contain important infor mation on the influence of natural factors. Figure 2 shows that, throughout the entire interval of instrumental observations since the mid nineteenth century, the data contain rather stable 70 year and 20 year cyclic components. A less significant 9year cycle was present in most observations (during 1870– 1900 and 1940–2000), and a 6year cycle persisted over a considerable part of the entire time span. Closely consistent results were also obtained when analyzing the temperature series by the maximum entropy method (MEM) (Fig. 3). As the order of the auroregression (AR) method is known to significantly affect the result, in our case this parameter was chosen to be onethird the length of the studied data series: according to the long experience in application of MEM in climate research, this value is suitable for providing useful information. All the harmonic com ponents identified above are statistically significant with a confidence level of 90%.

Supposedly, the source of the dominant 70year cycle is the North Atlantic, where this harmonic is reliably identified not only in the ocean [3–5] but also on the continental margins: in Greenland [6], England [7], Finland [8], at the Novaya Zemlya Archipelago, and on the Yamal Peninsula [9]. Moreover, this periodical component is not only recognized in the instrumental data but it is also revealed in the time series of paleotemperature and pressure which date back to over hundreds and even thousands of years ago. We believe that this rhythm is associated with the quasiperiodical changes in the atmospheric and oceanic circulation known as the North Atlantic Oscillation (NAO) and with the related pulsations in the advection of warm waters to the basins of the Nor wegian and Barents seas. Indeed, the time series of the NAO index contain an approximately 60to 70year component [10] and show a strong positive correlation with the time series of temperature in the Northern hemisphere [11]. The positive phases of NAO indices are character ized by a more intense westerly air mass transport and a noticeable warming of the major part of the nontrop ical zone in the northern hemisphere, which is most prominent in the winter–spring season. Incidentally, the most rapid phase of the presentday warming (1975–2005) just featured such seasonal asymmetry, which is more evidence in favor of the hemispherical and global temperatures being related to NAO. Finally, it turns out that the 70year periodicity is present in the globally averaged temperature and in the temperature averaged over the northern hemisphere, whereas in the spectrum for the southern hemisphere, this harmonic component is rather weak (Fig. 3). This is an important additional argument in favor of the North Atlantic origin of the 70year cycle.

The existence of the quasibidecadal oscillations is often attributed to the influence of the Sun. However, the situation is not so simple: in our case, this cycle is almost not recognizable in the northern hemisphere, although clearly pronounced in the southern hemisphere (Fig. 3). This fact motivates one not to con strain the probable origin of this periodicity to the behavior of the Sun, but also to search for its possible correlations to the variability in the Southern Oscillation (SO) whose index has a peak at a period of 22 years [12, 13]. The latter hypothesis is supported by the fact that the temperature series over the equatorial and southern portions of the Pacific as well as those over the entire water area of the Indian Ocean contain a distinctly expressed quasibidecadal oscillation [3]. In turn, the SO, which largely controls the tempera ture regime of the southern hemisphere, is undoubt edly affected by the variations in the rate of the Earth’s rotation, which also have a significant periodical com ponent at 22 years [14].

As of now, the nature of the 9year oscillations is least clear. We suppose it to be a result of superimposi tion of oscillations associated with the lunar–solar tides that have characteristic times of 8.85 (the perigee period of the Moon) and 9.86 years (the period of barycenter of the Sun–Jupiter system), which are cer tainly able to cause significant changes to the atmo spheric circulation and, therefore, temperature. The comparison of the instrumental data series since 1850 with the results of calculations using the energy balance model with superimposed main cyclic components is presented in Fig. 1. The calculated curve in the interval 1850–2011 accounts for more than 75% of the observed variability in the data and clearly demonstrates that the natural factors may considerably enhance or, quite the opposite, reduce the ongoing warming up to its complete disappearing or even shortterm cooling, as has occurred during the last 6–8 years. We suppose warming will resume shortly in the years to come (Fig. 1). However, up to the end of the century, its rate will likely be lower than the value attained in 1975–2005 when the extremely intense positive phases of NAO and SO concurrent with the highest solar irradiation over the last 600 years [15] resulted in a rate of warming as high as in excess of 0.2°C per decade. In the next few decades, the natural forcings will restrain the process of global warming. This will be primarily associated with the decline in solar activity and the transition to the negative phase in NAO, which features a weaker westerly air mass transport. Recent measurements show that both these processes are gaining strength. Indeed, the NAO index has consistently decreased since early 1990 and is now at a 40year low (http://www.cgd. ucar.edu/cas/jhurrell/indices.html). At the same time, the minimal solar constant over the entire 33year his tory of satellite observations has been recorded in the current, solar cycle 24, which started in the fall of 2008 (http://www.pmodwrc.ch/pmod.php?topic=tsi/ composite/SolarConstant/).

#### Not anthropogenic – other factors are more important and there is a diminishing curve. Evidence to the contrary is media hysteria

#### Paterson 11 [Norman R., Professional Engineer and Consulting Geophysicist, PhD in Geophysics from University of Toronto, Fellow of the Royal Society of Canada, “Global Warming: A Critique of the Anthropogenic Model and its Consequences,” Geoscience Canada, Vol 38, No 1, March, Ebsco]

The term ‘global warming’ is commonly used by the media to mean ‘anthropogenic’ global warming; that is, warming caused by human activity. In this article, the writer has chosen to prefix ‘global warming’, where appropriate, by the terms ‘anthropogenic or ‘humancaused’ in order to avoid confusion. We are led today by our media, governments, schools and some scientific authorities to believe that, through his CO2 emissions, man is entirely, or almost entirely, responsible for the modest, modulated rise in global temperature of about 0.7° C that has taken place over the past 100 years. We are told, and many sincere people believe, that if we continue on this path, the planet will experience escalating temperature and dangerous sealevel rise before the end of this century. Over the past 20 years or so, this has become so much a part of our belief system, that to challenge it is to be labelled a ‘denier’ and put in the same category as a member of the Flat Earth Society. Yet, even a cursory review of the peer-reviewed scientific literature will show that the popular anthropogenic global warming dogma is being questioned by hundreds of respected scientists. Furthermore, emerging evidence points directly to other natural phenomena as probably having greater effects on global temperatures than can be attributed to human-caused CO2 emissions. The disproportionate scientific weighting attributed to the anthropogenic warming interpretation, and the general public perception of its validity, could be a serious problem for society, as the human-caused global warming belief is diverting our attention from other, more serious anthropogenic effects such as pollution and depletion of our water resources, contamination of our food and living space from chemicals, and diminishing conventional energy resources.

PROBLEMS WITH THE ANTHROPOGENIC MODEL The fact that the world has undergone cycles of warming and cooling has been known for a very long time, but the question as to man’s influence on climate did not become a hot debate until after the mid-twentieth century, when Revelle and Seuss (1957) first drew attention to the possible effect of greenhouses gases (particularly CO2 ) on the earth’s temperature. Subsequent studies pointed to the increase in atmospheric CO2 from roughly 0.025% to 0.037%, or 50%, over the past 100 years. Much was made of the apparent but crude covariance of atmospheric CO2 and global temperature, and the conclusion was drawn that [hu]man’s escalating carbon emissions are responsible for the late 20 th century temperature rise. Anxiety was rapidly raised among environmentalists, and also attracted many scientists who found ready funding for studies aimed at better understanding the problem. However, scientists soon encountered three important difficulties:

i) To this date, no satisfactory explanation is forthcoming as to how CO2 at less than 0. 04% of atmospheric concentration can make a major contribution to the greenhouse effect, especially as the relationship between increasing CO2 and increasing temperature is a diminishing logarithmic one (Gerlich and Tscheuschner 2009);

ii) Geological records show unequivocally that past temperature increases have always preceded, not followed, increases in CO2 ; i.e. the warming could potentially cause the CO2 increase, but not the reverse. Studies (e.g. Petit et al. 1999) have shown that over the past 400 000 years of cyclical variations, temperature rose from glacial values about 800 years before CO2 concentration increased. A probable explanation is that solar warming, over a long period of time, causes the oceans to outgas CO2 , whereas cooling results in more CO2 entering solution, as discussed by Stott et al. (2007). Averaged over a still longer period of geological time, it has been shown (Shaviv and Veizer 2003) that there is no correlation between CO2 and temperature; for example, levels of CO2 were more than twice present day values at 180 Ma, at a time when temperature was several degrees cooler;

iii) Other serious mistakes in analysis were made by some scientists over the years. Perhaps the worst of these (see Montford 2010 for a thorough discussion) was the publication of the ‘Hockey Stick Curve’ (Fig. 1), a 1000-year record of past temperature which purported to show that “The 20 th century is likely the warmest century in the Northern Hemisphere, and the 1990s was the warmest decade, with 1998 as the warmest year in the last 1000 years” (Mann et al. 1999). This conclusion was adopted by the Intergovernmental Panel on Climate Change (IPCC) in its 2001 report and also by Al Gore in the movie An Inconvenient Truth. Subsequently, Mann et al.’s work has been challenged by several scientists (though to be fair, it is also supported by some). For example, McIntyre and McKitrick (2003) amended Mann’s graph, using all available data and better quality control (Fig. 1), and showed that the 20 th century is not exceptionally warm when compared with that of the 15 th century. However, the IPCC has continued to report a steady increase in global temperature in the face of clear evidence that average temperature has remained roughly level globally, positive in the northern hemisphere and negative in the southern hemisphere, since about 2002 (Archibald 2006; Fig. 2).

WHAT CAUSES WARMING? It is likely that the cyclical warming and cooling of the earth results from a number of different causes, none of which, taken alone, is dominant enough to be entirely responsible. The more important ones are solar changes (including both irradiance and magnetic field effects), atmosphere–ocean interaction (including both multidecadal climatic oscillations and unforced internal variability), and greenhouse gases. All of these factors have been discussed by IPCC, but the first two have been dismissed as negligible in comparison with the greenhouse-gas effect and man’s contribution to it through anthropogenic CO2 . It is claimed (e.g. Revelle and Suess 1957) that the particular infrared absorption bands of CO2 provide it with a special ability to absorb and reradiate the sun’s longer wavelength radiation, causing warming of the troposphere and an increase in high-altitude (cirrus) cloud, further amplifying the heating process. Detailed arguments against this conclusion can be found in Spencer et al. (2007) and Gerlich and Tscheuschner (2009). These scientists point out (among other arguments, which include the logarithmic decrease in absorptive power of CO2 at increasing concentrations), that clouds have poor ability to emit radiation and that the transfer of heat from the atmosphere to a warmer body (the earth) defies the Second Law of Ther-modynamics. They argue that the Plank and Stefan-Boltzman equations used in calculations of radiative heat transfer cannot be applied to gases in the atmosphere because of the highly complex multi-body nature of the problem. Veizer (2005) explains that, to play a significant role, CO2 requires an amplifier, in this case water vapour. He concludes that water vapour plays the dominant role in global warming and that solar effects are the driver, rather than CO2 . A comprehensive critique of the greenhouse gas theory is provided by Hutton (2009).

It is firmly established that the sun is the primary heat source for the global climate system, and that the atmosphere and oceans modify and redirect the sun’s heat. According to Veizer (2005), cosmic rays from outer space cause clouds to form in the troposphere; these clouds shield the earth and provide a cooling effect. Solar radiation, on the other hand, produces a thermal energy flux which, combined with the solar magnetic field, acts as a shield against cosmic rays and thereby leads to global warming. Figures 3 and 4 illustrate both the cooling by cosmic rays (cosmic ray flux, or CRF) and warming by solar irradiation (total solar irradiance, or TSI) in the long term (500 Ma) and short term (50 years), respectively. CRF shows an excellent negative correlation with temperature, apart from a short period around 250 Ma (Fig. 3). In contrast, the reconstructed, oxygen isotope-based temperature curve illustrates a lack of correlation with CO2 except for a period around 350 Ma.

Other studies have highlighted the overriding effect of solar radiation on global heating. Soon (2005) studied solar irradiance as a possible agent for medium-term variations in Arctic temperatures over the past 135 years, and found a close correlation in both decadal (5–10 years) and multi-decadal (40–80 years) changes (Fig. 5). As to the control on this variation, the indirect effect of solar irradiance on cloud cover undoubtedly results in modulations of the sun’s direct warming of the earth. Veizer (2005) estimated that the heat reflected by cloud cover is about 78 watts/m2 , compared to an insolation effect of 342 watts/m2 , a modulation of more than 25%. This contrasts with an IPCC estimate of 1.46 watts/m2 , or about 0.5% of TSI, for the radiative effect of anthropogenic CO2 accumulated in the modern industrial era (IPCC 2001). Veizer concludes: “A change of cloud cover of a few percent can therefore have a large impact on the planetary energy balance.” In addition to solar insolation effects, the intensity of the Earth’s magnetic field (which deflects the charged particles that constitute cosmic rays) and associated sun-spot maxima are correlated with historic periods of global warming such as the Medieval Climate Optimum (Fig. 6), and typically occur mid-way between ice ages (Veizer 2005). Solar magnetic minima have accompanied global cooling, such as occurred during the Little Ice Age between 1350 and 1850 A.D. A proxy for sunspot activity prior to the start of telescope observations in 1610 can be reconstructed from the abundance of cosmogenic 10 Be in ice cores from Antarctica and Greenland (Miletsky et al. 2004).

Global temperature oscillations have been evident in both geologic and recent times, with periods varying from a few years (mostly solar and lunar driven) up to 120 million years (galactic and orbital influences) (Plimer 2009). In addition, ocean– atmosphere interactions are implicated in the control of some shorter-period climatic oscillations. For example, McLean et al. (2009) have studied the El Niño Southern Oscillation (ENSO), a tropical Pacific ocean–atmosphere phenomenon, and compared the index of intensity (the Southern Oscillation Index, or SOI) with global tropospheric temperature anomalies (GTTA) for the 1960–2009 period (Fig. 7). McLean et al. (2009) concluded that “Change in SOI accounts for 72% of the variance in GTTA for the 29-year long record, and 68% for the 50-year record”. They found the same or stronger correlation between SOI and mean global temperature, in which SOI accounted for as much as 81% of the variance in the tropics (Fig. 8). A delay of 5 to 7 months was deduced between the SOI maximum and the associated temperature anomaly. Volcanic influences on temperature are also evident (Figs. 7, 8), probably caused by the injection of sulphur dioxide into the stratosphere, where it is converted into sulphate aerosols that reflect incoming solar radiation (McLean et al. 2009). The GTTA nearly always falls in the year or two following major eruptions.

Both solar irradiation and ocean–atmosphere oscillations have therefore been demonstrated to have effects on global temperature of at least the same order of magnitude as the CO2 greenhouse gas hypothesis, and these alternative mechanisms are supported by well-documented empirical data. Nevertheless, the CO2 hypothesis, the theoretical basis for which is being increasingly challenged, remains the popular explanation for global warming in the public domain.

THE CONTROVERSY The main factors that have led to heated scientific controversy regarding the cause of the mild late 20 th century global warming can be summarized as follows: i) A surge of media coverage and consequent public interest and anxiety, magnified by productions such as Al Gore’s An Inconvenient Truth.

ii) Fear and concern on the part of environmentalists, who were already aware of many other harmful aspects of industrial, commercial and other human activities. Environmentalists, including NGOs such as Greenpeace and the World Wildlife Fund, exploited the open disagreements that existed among scientists as to the scale of the warming and its impacts, disagreements that inevitably arose because climate science is complex and empirical data were in short supply until recently.

### Expertise

I’m pretty sure the cx proves this advantage is a disad to the plan- the aff increases the number of scientists that tell Russia they haven’t complied with deals- Drell doesn’t say they change how the deals happen

#### There is a disconnect in their internal link --- their Anders and Breetz evidence says SMR development is critical to maintain expertise on engineering SMRs --- they have no spill-over internal link to broader nuclear physics, nuclear forensics, or lab retention.

#### Testing moratorium overwhelms recruitment issues.

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The directors of the two U.S. nuclear weapons labora- tories gave their support to a test ban conditioned on two criteria: a fully funded SSP and the ability to test if there were a need to do so. President Clinton's safeguard F allows for making the political decision to test, and safeguard C requires maintaining the capability to test. **In the absence of testing, however, the capabilities to test cannot be maintained**. In addition, safeguard F sets an enormously difficult standard to be met before a test can proceed. The ability to test requires more than just having a test site. It requires people with high levels of expertise and specialized skills, as well as unique and complex equipment. As Hecker has stated,

Merely preserving facilities and support infra- structure at NTS [the Nevada Test Site] will not provide readiness. In spite of our best efforts, some special skills such as test containment reside in only a few individuals today, and some of the special equipment is no longer maintained or available from private industry.19

It should be noted that the United States previously learned the hard lesson of not being ready to conduct a nuclear test. President Kennedy's address to the American people in March 1962 summed up the U.S. experience with the 1958-61 moratorium: On September 1 of last year, while the United States and the United Kingdom were negotiating in good faith at Geneva, the Soviet Union callously broke its moratorium with a two-month series of more than 40 tests. Preparations for these tests had been secretly underway for many months. . . . Some may urge us to try it [a moratorium] again, keeping our preparations to test in a constant state of readiness. But in actual practice, particularly in a society of free choice, **we cannot keep top-flight scientists con- centrating on the preparation of an experiment which may or may not take place on an uncertain date in the future**. Nor can large technical laboratories be kept fully alert on a stand-by basis waiting for some other nation to break an agreement. This is **not merely difficult or inconvenient**. We have explored this alternative thoroughly, **and found it impossible of execution**.20

Although that quotation is decades old, it makes a point pertinent today: **keeping highly skilled, knowledgeable people at hand will be virtually impossible absent testing**. At present, the United States is two years or more away from being able to conduct a nuclear test. This lack of readiness will inevitably worsen as skilled experts retire and die, equipment ages or becomes obsolete, and financial support erodes.

#### No solvency --- Unistar says the government must demonstrate a long-term commitment to the nuclear renaissance --- it says, QUOTE, “This means expanding the NRC university program, funding and issuing loan guarantees, and other concrete actions.”

Drell is not about nuclear experts- it says experts in surveillance, dismantlement, manufacturing, design, assessment, system integration, including replacement parts for limited life components into an operating system, and basic science.

#### New proliferators will build small arsenals which are uniquely stable.

Seng 98 (Jordan, PhD Candidate in Pol. Sci. – U. Chicago, Dissertation, “STRATEGY FOR PANDORA'S CHILDREN: STABLE NUCLEAR PROLIFERATION AMONG MINOR STATES,” p. 203-206)

However, this "state of affairs" is not as dangerous as it might seem. The nuclear arsenals of limited nuclear proliferators will be small and, consequently, the command and control organizations that manage chose arsenals will be small as well. The small arsenals of limited nuclear proliferators will mitigate against many of the dangers of the highly delegative, 'non-centralized' launch procedures Third World states are likely to use. This will happen in two main ways. First, only a small number of people need be involved in Third World command and control. The superpowers had tens of thousands of nuclear warheads and thousands of nuclear weapons personnel in a variety of deployments organized around numerous nuclear delivery platforms. A state that has, say, fifty nuclear weapons needs at most fifty launch operators and only a handful of group commanders. This has both quantitative and qualitative repercussions. Quantitatively, the very small number of people 'in the loop' greatly diminishes the statistical probability that accidents or human error will result in inappropriate nuclear launches. All else being equal, the chances of finding some guard asleep at some post increases with the number of guards and posts one has to cover. Qualitatively, small numbers makes it possible to centrally train operators, to screen and choose them with exceeding care, 7 and to keep each of them in direct contact with central authorities in times of crises. With very small control communities, there is no need for intermediary commanders. Important information and instructions can get out quickly and directly. Quality control of launch operators and operations is easier. In some part, at least, Third World states can compensate for their lack of sophisticated use-control technology with a more controlled selection of, and more extensive communication with, human operators. Secondly, and relatedly, Third World proliferators will not need to rely on cumbersome standard operating procedures to manage and launch their nuclear weapons. This is because the number of weapons will be so small, and also because the arsenals will be very simple in composition. Third World stares simply will not have that many weapons to keep track of. Third World states will not have the great variety of delivery platforms that the superpowers had (various ballistic missiles, cruise missiles, long range bombers, fighter bombers, missile submarines, nuclear armed ships, nuclear mortars, etc., etc.), or the great number and variety of basing options, and they will not employ the complicated strategies of international basing that the superpowers used. The small and simple arsenals of Third World proliferators will not require highly complex systems to coordinate nuclear activities. This creates two specific organizational advantages. One, small organizations, even if they do rely to some extent of standard operating procedures, can be flexible in times of crisis. As we have discussed, the essential problem of standard operating procedures in nuclear launch processes is that the full range if possible strategic developments cannot be predicted and specified before the fact, and thus responses to them cannot be standardized fully. An unexpected event can lead to 'mismatched' and inappropriate organizational reactions. In complex and extensive command and control organizations, standard operating procedures coordinate great numbers of people at numerous levels of command structure in a great multiplicity of places. If an unexpected event triggers operating procedures leading to what would be an inappropriate nuclear launch, it would be very difficult for central commanders to “get the word out' to everyone involved. The coordination needed to stop launch activity would be at least as complicated as the coordination needed to initiate it, and, depending on the speed of launch processes, there may be less time to accomplish it. However, the small numbers of people involved in nuclear launches and the simplicity of arsenals will make it far easier for Third World leaders to 'get the word out' and reverse launch procedures if necessary. Again, so few will be the numbers of weapons that all launch operators could be contacted directly by central leaders. The programmed triggers of standard operating procedures can be passed over in favor of unscripted, flexible responses based on a limited number of human-to-human communications and confirmations. Two, the smallness and simplicity of Third World command and control organizations will make it easier for leaders to keep track of everything that is going on at any given moment. One of the great dangers of complex organizational procedures is that once one organizational event is triggered—once an alarm is sounded and a programmed response is made—other branches of the organization are likely to be affected as well. This is what Charles Perrow refers to as interactive complexity, 8 and it has been a mainstay in organizational critiques of nuclear command and control s ystems.9 The more complex the organization is, the more likely these secondary effects are, and the less likely they are to be foreseen, noticed, and well-managed. So, for instance, an American commander that gives the order to scramble nuclear bombers over the U.S. as a defensive measure may find that he has unwittingly given the order to scramble bombers in Europe as well. A recall order to the American bombers may overlook the European theater, and nuclear misuse could result. However, when numbers of nuclear weapons can be measured in the dozens rather than the hundreds or thousands, and when deployment of those weapons does not involve multiple theaters and forward based delivery vehicles of numerous types, tight coupling is unlikely to cause unforeseen and unnoticeable organizational events. Other things being equal, it is just a lot easier to know all of what is going on. In short, while Third World states may nor have the electronic use-control devices that help ensure that peripheral commanders do nor 'get out of control,' they have other advantages that make the challenge of centralized control easier than it was for the superpowers. The small numbers of personnel and organizational simplicity of launch bureaucracies means that even if a few more people have their fingers on the button than in the case of the superpowers, there will be less of a chance that weapons will be launched without a definite, informed and unambiguous decision to press that button.

#### Nuclear weapons reduce the risk and impact of nuclear war

Asal and Beardsley 7 (Victor, Assistant Prof. Pol. Sci. – SUNY Albany, and Kyle, Assistant Prof. Pol. Sci. – Emory U., Journal of Peace Research, “Proliferation and International Crisis Behavior\*”, 44:2, Sage)

Other, more optimistic, scholars see benefits to nuclear proliferation or, perhaps not actively advocating the development of more nuclear weapons and nuclear-weapon states, see that the presence of nuclear weapons has at least been stabilizing in the past. For example, some scholars are confident of the promise of the ‘nuclear peace’.4 While those who oppose proliferation present a number of arguments, those who contend that nuclear weapons would reduce interstate wars are fairly consistent in focusing on one key argument: nuclear weapons make the risk of war unacceptable for states. As Waltz argues, the higher the stakes and the closer a country moves toward winning them, the more surely that country invites retaliation and risks its own destruction. States are not likely to run major risks for minor gains. War between nuclear states may escalate as the loser uses larger and larger warheads. Fearing that, states will want to draw back. Not escalation but deescalation becomes likely. War remains possible, but victory in war is too dangerous to fight for. (Sagan & Waltz, 2003: 6–7) ‘Nuclear war simply makes the risks of war much higher and shrinks the chance that a country will go to war’ (Snyder & Diesing, 1977: 450). Using similar logic, Bueno de Mesquita & Riker (1982) demonstrate formally that a world with almost universal membership in the nuclear club will be much less likely to experience nuclear war than a world with only a few members.

Drell says significant budget cuts have raised serious concerns - the aff doesn’t reverse those budget cuts

#### Prolif will be slow even in the new era.

Tepperman 9 (Jonathon, former Deputy Managing Ed. Foreig Affairs and Assistant Managing Ed. Newsweek, Newsweek, “Why Obama should Learn to Love the Bomb,” 44:154, 9-7, L/N)

The risk of an arms race--with, say, other Persian Gulf states rushing to build a bomb after Iran got one--is a bit harder to dispel. Once again, however, history is instructive. "In 64 years, the most nuclear-weapons states we've ever had is 12," says Waltz. "Now with North Korea we're at nine. That's not proliferation; **that's spread at glacial pace**." Nuclear weapons are so controversial and expensive that only countries that deem them absolutely critical to their survival go through the extreme trouble of acquiring them. That's why South Africa, Ukraine, Belarus, and Kazakhstan voluntarily gave theirs up in the early '90s, and why other countries like Brazil and Argentina dropped nascent programs. This doesn't guarantee that one or more of Iran's neighbors--Egypt or Saudi Arabia, say--might not still go for the bomb if Iran manages to build one. But the risks of a rapid spread are low, especially given Secretary of State Hillary Clinton's recent suggestion that the United States would extend a nuclear umbrella over the region, as Washington has over South Korea and Japan, if Iran does complete a bomb. If one or two Gulf states nonetheless decided to pursue their own weapon, that still might not be so disastrous, given the way that bombs tend to mellow behavior.

#### No chain reactions. Prolif domino effects never materialize.

Alagappa 8 (Muthiah, Distinguished Senior Fellow – East-West Center, in “The Long Shadow: Nuclear Weapons and Security in 21st Century Asia,” Ed. Muthiah Alagappa, p. 521-522)

It will be useful at this juncture to address more directly the set of instability arguments advanced by certain policy makers and scholars: the domino effect of new nuclear weapon states, the probability of preventive action against new nuclear weapon states, and the compulsion of these states to use their small arsenals early for fear of losing them in a preventive or preemptive strike by a stronger nuclear adversary. On the domino effect, India's and Pakistan's nuclear weapon programs have not fueled new programs in South Asia or beyond. Iran's quest for nuclear weapons is not a reaction to the Indian or Pakistani programs. It is grounded in that country's security concerns about the United States and Tehran's regional aspirations. The North Korean test has evoked mixed reactions in Northeast Asia. Tokyo is certainly concerned; its reaction, though, has not been to initiate its own nuclear weapon program but to reaffirm and strengthen the American extended deterrence commitment to Japan. Even if the U.S. Japan security treaty were to weaken, it is not certain that Japan would embark on a nuclear weapon program. Likewise, South Korea has sought reaffirmation of the American extended deterrence commitment, but has firmly held to its nonnuclear posture. Without dramatic change in its political, economic, and security circumstances, South Korea is highly unlikely to embark on a covert (or overt) nuclear weapon program as it did in the 1970s. South Korea could still become a nuclear weapon state by inheriting the nuclear weapons of North Korea should the Kim Jong Il regime collapse. Whether it retains or gives up that capability will hinge on the security circumstances of a unified Korea. The North Korean nuclear test has not spurred Taiwan or Mongolia to develop nuclear weapon capability. The point is that each country's decision to embark on and sustain nuclear weapon programs is contingent on its particular security and other circumstances. **Though appealing, the domino theory is not predictive;** often it is employed to justify policy on the basis of alarmist predictions. The loss of South Vietnam, for example, did not lead to the predicted domino effect in Southeast Asia. In fact the so-called dominos became drivers of a vibrant Southeast Asia and brought about a fundamental transformation in that subregion (Lord 1993, 1996). **In the nuclear arena, the nuclear programs of China, India, and Pakistan were part of a security chain reaction, not mechanically falling dominos**. However, as observed earlier the Indian, Pakistani, and North Korean nuclear tests have thus far not had the domino effect predicted by alarmist analysts and policy makers. **Great caution should be exercised in accepting at face value the sensational predictions of individuals who have a vested interest in accentuating the dangers of nuclear proliferation**. Such analysts are now focused on the dangers of a nuclear Iran. A nuclear Iran may or may not have destabilizing effects. Such claims must be assessed on the basis of an objective reading of the drivers of national and regional security in Iran and the Middle East.

Their Wood evidence says that conflict over Georgia could involve TNWs- conflict over Georgia already happened, no nuclear war

#### Civilian program decimates nuclear labs

Malcolm **Spence**, **2008**. PhD, program manager at the Directorate of Strategic Weapons UK Ministry of Defense. “Opportunities and Risks for Future Stockpile Decisions: The Technical Challenge,” CSIS A COLLECTION OF PAPERS FROM THE 2008 PONI CONFERENCE SERIES, http://csis.org/images/stories/poni/090421\_collection\_of\_conference\_papers\_2008.pdf.

Staffing our nuclear deterrent programs will increasingly become more important for a number of reasons. Firstly, the numbers of staff who actually were involved at the time of underground tests is rapidly diminishing. Their knowledge is irreplaceable, and therefore must be preserved. It has been quite often the case where the personal knowledge gained through practical experiences of production processes is of critical importance. Therefore, it is not just a case of archiving produced documentation. The hands-on, practical, knowledge must also be saved for future reference. US Secretary of Defence Robert Gates highlighted the problem in a speech delivered in October 2008. “Half of our nuclear lab scientists are over 50 years old and many of those under 50 have limited or no involvement in the design and development of a nuclear weapon.”8 Secondly, the challenge exists of recruiting the best and brightest into the nuclear deterrent in the face of a resurgent civil nuclear power generation program. Many opportunities are likely to arise in the near future, which may also be attractive to those currently employed in the deterrent program. Sufficiently interesting and rewarding work must be available to retain our existing skills base, whilst at the same time allowing the training of the next generation of weapon designers and engineers.

#### Give a Russia war impact zero probability – politics, military superiority, economic concerns, and nuclear security all check war

Thomas Graham, senior advisor on Russia in the US National Security Council staff 2002-2007, September 2007, "Russia in Global Affairs” July - September 2007, The Dialectics of Strength and Weakness

An astute historian of Russia, Martin Malia, wrote several years ago that “Russia has at different times been demonized or divinized by Western opinion less because of her real role in Europe than because of the fears and frustrations, or hopes and aspirations, generated within European society by its own domestic problems.” Such is the case today. To be sure, mounting Western concerns about Russia are a consequence of Russian policies that appear to undermine Western interests, but they are also a reflection of declining confidence in our own abilities and the efficacy of our own policies. Ironically, this growing fear and distrust of Russia come at a time when Russia is arguably less threatening to the West, and the United States in particular, than it has been at any time since the end of the Second World War. Russia does not champion a totalitarian ideology intent on our destruction, its military poses no threat to sweep across Europe, its economic growth depends on constructive commercial relations with Europe, and its strategic arsenal – while still capable of annihilating the United States – is under more reliable control than it has been in the past fifteen years and the threat of a strategic strike **approaches zero probability**. Political gridlock in key Western countries, however, precludes the creativity, risk-taking, and subtlety needed to advance our interests on issues over which we are at odds with Russia while laying the basis for more constructive long-term relations with Russia..

Russia has had TNWs since the cold war and no impact

#### Conventional weakness makes Russia unwilling to give up tnws

Saradzhyan 8/10/2009 (Simon, research fellow at Harvard Kennedy School's Belfer Center, “Tactical Nukes: A Strategic Asset or Future Liability?” International Relations and Security Network)

Tactical benefits

One reason why Russia has bundled TNW control with so many issues is that the country’s military-political leadership continues to see a number of utilities in maintaining a formidable tactical nuclear weapons arsenal. Russia’s strategic documents require nuclear weapons to serve as a deterrent against other nuclear weapons states, to respond to large-scale aggression using conventional weapons in situations critical to national security and to deescalate aggression. Roles of tactical nuclear weapons per se include equalization in the face of the weakness of Russia’s conventional forces vis-à-vis the US and NATO. “Tactical nuclear weapons […] are a factor of deterrence against the enormous amount of weapons, which are currently deployed in Europe,” chief of General Staff Nikolai Makarov said in December 2008. Russian defense policymakers also would not rule out that TNWs could be used to target US global missile defense. Medvedev vowed in November 2008 to deploy nuclear-capable Iskander surface-to-surface missiles in the Kalinigrad exclave if the US went ahead with plans to build missile defense facilities in East Europe. When asked if Russian authorities are considering whether to deploy nuclear weapons in Kaliningrad, chairman of the State Duma’s defense committee, Vitkor Zavarzin, said “such proposals are being made.” There are also a number of roles, which have not been officially assigned to TNWs, but are considered as options by Russian military strategists. They say that TNWs could be used as a counter-balance to China as well as a deterrent against southern neighbors to demonstrate resolve and localize armed conflicts, change the balance of forces on specific theaters and help maintain combat stability. TNWs also play lead role in creating ambiguity around Russia’s actual nuclear potential in what also, arguably, helps to deter potential foes.

Ideology and nationalism block reciprocation

**Mizin, 08** - director of studies at the independent Moscow-based Insti­tute of Strategic Assessments, is currently a Leading Research Fellow with the Center of International Security at the Russian Academy of Sciences’ Institute of World Economy and International Relations (Victor, Russia’s“Nuclear Renaissance,” Journal of International Security Affairs, Spring 2008, http://www.ciaonet.org/journals/jisa/v14i0/0000848.pdf)

These days, Kremlinologists are once again immersed in the persistent post-Cold War question of “who lost Russia.”1 What­ever one might think about the future course of Russia, now emerging from its much-touted presidential elections, it is obvi­ous that the Kremlin is bent on restoring the country’s image as a great power on a par with the United States and Europe. In this calculus, nuclear weapons matter a great deal. The conventional wisdom in Moscow is that Russia, “rising from its knees” in the eyes of the over­whelming majority of its citizens, must be a strong, independent great power with a foreign policy of its own. Not surprisingly, the country‘s leadership is overtly promoting the modernization of its strategic weapons potential—a capa­bility which is increasingly perceived in Moscow (and elsewhere) as the major facilitator of an independent role in global affairs. This is being done primarily for domestic or PR considerations. But Washington’s foreign and military poli­cies also play a significant part in the Kremlin’s stratagems. Fear and loathing in Moscow Russian experts and politicians today harbor a great deal of suspicion regarding Washington’s intentions.2 They claim that since September 11, 2001, the Bush administration has pursued an aggressive policy toward the “post-Soviet states”—one aimed at encircling Russia with military bases, deploying missiles on its borders, toppling allies in Central Asia, and inciting inter­nal turmoil in the Commonwealth of Independent States (and Russia itself) through “orange revolutions” fomented by U.S.-backed “pro-democ­racy” groups. This perceived policy, according to Russian officials, is a reflection of American power that has gone unbridled for too long. As Rus­sian President Vladimir Putin put it in his landmark 2007 address in Munich, “The unipolar world, in which there is one master, is… pernicious not only for all those within this system, but also for the sovereign itself because it destroys itself from within.” It is also a state of affairs that “stimulates an arms race” in response.3 Russian commentators have been quick to take up this call, blast­ing the “unilateral and illegitimate military actions” of the United States, its “uncontained hyper-use of force,” and its “disdain for the basic princi­ples of international law.” Moscow’s spin doctors tend to ignore the fact that the West, in turn, is repulsed by the rollback of democracy that has taken place in Russia. It is clear, moreover, that the anti-Western campaign in Russia is only in its early stages, and will be raging for several more years to come. Its lon­gevity is a reflection of the fact that anti-Western orientation has become the main ideological line of the cur­rent Russian regime. Moscow’s recent moves away from Western values and the deterioration of its cooperation with Europe and the United States should be seen in this context. This domestic urge has influ­enced Moscow’s attitudes toward weapons procurement and nuclear issues. It may be tempting to disre­gard Russia’s recent moves toward “strategic modernization” as mere insignificant bluster. After all, the United States still can assuredly dis­suade a nuclear attack from Russia, and is largely immune to any conceiv­able Russian strategic threat. Yet, a closer look suggests that Russia’s recent moves are part of a more pro­found shift in the country’s military/strategic priorities. In recent times, Russia has suspended its obligations under the Treaty on Conventional Armed Forces in Europe (CFE) and threat­ened to walk out of the Intermediate Nuclear Forces (INF) Treaty. Perhaps the most telling sign of Russia’s new, more confrontational strategic pos­ture, however, has been the resump­tion in August of last year of “combat patrol” by Russian bombers in the vicinity of NATO airspace. Naval vessels from Russia’s Black Sea and Northern Fleets have also resumed their patrol missions in international waters. And the tempo of Russian military exercises has risen, with some of the largest taking place within the framework of the Russian- and Chinese-dominated Shanghai Cooperation Organization. These serve as overt reminders that Russia seeks a return to global status. Just as importantly, they appear to be wildly popular with a Russian public craving a great-power role for their country.4 In this vein, Russia’s efforts to boost the power and reach of its nuclear forces have been less con­spicuous. But they are of even greater significance than the more public displays of Russian rising might. Indeed, Russian President Vladimir Putin has endorsed an extensive strategic rearmament plan, worth $200 billion over the next seven years, and entailing massive, unprec­edented procurement of advanced weaponry (including a new genera­tion of advanced ballistic missiles).5This expansion is already under way; official defense procurement by the Russian state jumped from approxi­mately $2 billion in 2000 to $7.5bil­lion in 2005and $9.5billion in 2006. Nuclear Russia, resurgent Nuclear forces are the pride of the inferiority-complex-stricken Rus­sian military. So the revitalization of Russia’s nuclear triad is enormously significant from both a practical and an ideological perspective. Indeed, Russia’s focus on such capabilities is consuming a significant part of the country’s defense budget, while the conventional arsenal of the Russian army remains decrepit and declin­ing. Russia’s armed forces received just 31 T-90 tanks in 2003; by way of comparison, during the same period 310 such tanks were exported to India alone.6

In contrast, tactical nuclear weapons have received considerably more attention from the Kremlin. So have Russian efforts to defeat U.S. missile defenses, the latter through the development of a maneuverable hypersonic missile with an unpre­dictable flight trajectory (a multiple warhead version of Russia’s advanced “Topol” intercontinental ballistic mis­sile is also allegedly being developed). These efforts, fueled by skyrocketing revenues from the global sale of oil and natural gas, stand in stark con­trast to the situation that prevailed at the end of the 1990s, when Russia’s Strategic Nuclear Forces were among the principal casualties of the coun­try’s imploding economy.

5. the military will override and reject any US overture

**Felgenhauer, 09** - independent, Moscow-based defense analyst. (Pavel, “Russia Will Retain as Many Nuclear Weapons as Possible,” Eurasia Daily Monitor, 4/9,http://www.jamestown.org/programs/edm/single/?tx\_ttnews[tt\_news]=34834&cHash=0da501877f

On April 5 President Barack Obama in his speech in Prague, outlined his vision of a nuclear-free world: "This goal will not be reached quickly -perhaps not in my lifetime. It will take patience and persistence. But now we, too, must ignore the voices who tell us that the world cannot change." Obama argued that if nuclear nations eliminated their arsenals, others would not move to acquire such weapons. He implied that the process of nuclear reduction began in London after a summit with President Dmitry Medvedev when it was agreed to prepare "by the end of this year a legally binding and sufficiently bold" new arms reduction treaty. This treaty, according to Obama "will set the stage for further cuts, and we will seek to include all nuclear weapons states in this endeavor." He added, "As long as these weapons exist, we will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defense to our allies" (AP, April 5). In the Cold War Russian Communist leaders often used the theme of the elimination of nuclear weapons as a propaganda weapon to prod Western adversaries. Nuclear disarmament per se was never truly considered by the Russian military, but even if the West publicly took up the nuclear disarmament offer at face value, it was considered a safe option: during the Cold War Russia had a clear conventional troop superiority in Europe and an elimination of the nuclear deterrent would have shifted the balance in its favor. Now the situation is radically different: Russia's conventional forces are weak and outdated, while Western militaries are in the midst of a military-technical revolution, acquiring new capabilities of precision warfare that the Russians can only dream about. Russia's nuclear deterrent is seen as practically the only item left that still keeps the country in the league of military superpowers. Safeguarding a credible nuclear deterrent is the main strategic goal of Russian military chiefs, diplomats and political leaders. Obama's nuclear-free world vision was publicly ignored by the officialdom in Moscow (www.newsru.com, April 7). The notion of significant nuclear disarmament is unacceptable to the Russian military and coming from an American president it is regarded as a cynical ploy to gain total military superiority over the country. Obama pledged in Prague, "To achieve a global ban on nuclear testing, my administration will immediately and aggressively pursue U.S. ratification of the Comprehensive Test Ban Treaty [CTBT]" (Reuters, April 5). Russia ratified the 1996 CTBT, while the U.S. remains only a signatory. Obama's intention to finally ratify the CTBT is not good news to some in Moscow. Russia has been conducting for many years "subcritical nuclear tests" at the Novaya Zemlya testing site, which models a nuclear explosion. The Russian military has argued that the U.S. is conducting similar tests in Nevada (Nezavisimoye Voyennoye Obozreniye, September 19, 2007). Similarly, the Russian military and nuclear-industrial lobbies have anticipated a possible resumption of genuine nuclear testing at Novaya Zemlya citing the U.S. failure to ratify CTBT as a pretext.

## 2NC CP

### Solvency

#### a. NOx traps heat at different wavelengths, reductions cause a disproportionate drop in GHG effects.

Science Newsline, 4/2/2012. “Fertilizer Use Responsible for Increase in Nitrous Oxide in Atmosphere,” <http://www.sciencenewsline.com/articles/2012040219260050.html>.

Limiting nitrous oxide emissions could be part of a first step toward reducing all greenhouse gases and lessening global warming, Boering said, especially since immediately reducing global carbon dioxide emissions is proving difficult from a political standpoint. In particular, **reducing nitrous oxide emissions can initially offset more than its fair share of greenhouse gas emissions overall**, since N2O traps heat at a different wavelength than CO2 and clogs a "window" that allows Earth to cool off independent of CO2 levels.¶ "On a pound for pound basis, it is really worthwhile to figure how to limit our emissions of N2O and methane," she said. "Limiting N2O emissions can buy us a little more time in figuring out how to reduce CO2 emissions."

#### b. Inevitable increases in ag production mean NO2 will swamp CO2 in the coming century.

Dave S. Reay et al, 5/13/2012. School of GeoSciences, University of Edinburgh. “Global agriculture and nitrous oxide emissions,” Nature, <http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#/affil-auth>.

Projected N2O emissions associated with agriculture are sensitive to drivers such as human population, per capita caloric intake, and consumption of livestock products. Alongside continuing growth in global population27, per capita food consumption is projected to increase in the next few decades[28](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref28), with demand for meat and dairy products being especially strong28, 29, 30 (Fig. 2). These projections represent changes in global average per capita intake, much of the expected increase being driven by greater per capita cereal, meat and dairy consumption in developing-world nations[29](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref29). As a result of the necessary expansion in crop and livestock production to meet this demand, a substantial increase in N2O emissions from agricultural soils is projected through to 2030[10](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref10), [31](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref31).¶ Overall, N2O emissions associated with agriculture (including human sewage) are projected to rise from around 6.4 Tg N2O-N yr−1 in 2010 to 7.6 Tg N2O-N yr−1 by 2030[10](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref10) ([Fig. 1](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#f1)), with much of this growth resulting from increased nitrogen-fertilizer use in non-OECD Asia, Latin America and Africa. Although these projections provide a useful indicator of future emissions, uncertainties around agricultural demand, interactions with climate change, and the extent of mitigation efforts remain significant.¶ Agricultural demand and bioenergy. As discussed previously, future changes in human population and diet are a central determinant of global food demand, and so of agricultural N2O emissions. In addition to the challenge of developing robust scenarios for food-related emissions, projections must also take account of potential increases in demand for bioenergy.¶ Several recent studies have shown that an outcome of imposing mitigation regimes that value only carbon from energy and industrial sources is that they can create incentives to increase bioenergy production and use[32](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref32), [33](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref33). Global production of wheat, coarse grains and vegetable oils for biofuels use, for example, is projected to rise from around 160 million tonnes in 2010 to over 200 million tonnes by 2020[29](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref29). Expanded bioenergy programmes can, in turn, increase terrestrial carbon emissions globally by increasing the conversion of forests and unmanaged ecosystems to agricultural use — a perverse result of curbing fossil-fuel-related emissions[34](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref34). Increased production of first-generation energy crops (for liquid transport fuels — bioethanol and biodiesel) may also increase N2O emissions, as large areas of these crops are fertilized to maximize production. However, many second-generation energy crops do not require large nitrogen-fertilizer additions, and their impact on N2O emissions is likely to be much lower[35](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref35). A central question therefore, is the degree to which global biofuel crop production will transition to second-generation energy crops, and the extent to which any expansion in production will be confined to existing managed land.¶ A recent analysis of global biofuels programmes that employ advanced cellulosic (second generation) technologies estimates that, over the twenty-first century, N2O emissions will be larger than the carbon losses associated with land-use change and land clearing[36](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref36). Cumulative projected N2O emissions in the analysis by Melillo et al.[36](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref36) range between 510 and 620 Tg N2O-N for the period 2000–2100, depending on how much of the new biofuels production is confined to already managed land, and so minimizes new forest clearing. Whereas cumulative N2O losses continually grow over the twenty-first century, net carbon flux influenced by biofuels production exhibits one of two distinct patterns: a substantial flux to the atmosphere (a land source) if the increase in biofuels production involves extensive forest clearing to establish biofuels crops (deforestation case); or a small flux to the land from the atmosphere (a land sink) as carbon slowly accumulates in the soil fertilized in the biofuels areas (intensification case). A global greenhouse-gas emissions policy that both protects forests and encourages best practices for nitrogen-fertilizer use[37](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref37) may therefore dramatically reduce emissions associated with biofuels production.¶ Feedbacks and interactions. Further increases in anthropogenic Nr inputs to both managed and natural ecosystems are predicted[38](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref38). Agriculture accounts for about 75–85% of projected global NH3 emissions throughout 2000–2050 and it is likely that regions with soils and ecosystems where Nr loads are already high are more prone to Nr deposition-induced N2O emissions[39](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref39), [40](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref40). Indeed, significant enhancements (50–60%) in the proportion of new Nr input emitted as N2O have been reported for riparian forest soils exposed to a decade of NO3-rich runoff[41](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref41). Insufficient field data exist to confidently include a positive feedback response in regional or global-scale projections of indirect N2O emissions from agriculture, but it is possible that an expansion in the area of nitrogen-saturated natural ecosystems globally will serve to increase N2O emissions per unit of Nr deposition in the future. As the microbial processes of nitrification and denitrification are responsible for the bulk of agricultural N2O emissions[42](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref42), [43](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref43), [44](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref44), a greater understanding of the microbiological basis of N2O fluxes may also help to improve such feedback projections[45](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref45).¶ Likewise, the impacts of future climate change on soil nitrogen cycling and net N2O emissions from agriculture are potentially significant[46](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref46), yet remain difficult to quantify at a global scale. A recent examination of modelled N2O emissions from Australian pasture-based dairy systems under future climate change scenarios indicated an increase in emissions of up to 40% (ref. [47](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref47)). Here, warmer soil temperatures coupled with wet, but unsaturated, soils during cooler months resulted in an increased opportunity for N2O production. Enhanced N2O emissions from upland agricultural soils under increased atmospheric CO2 concentrations have also been reported[48](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref48). Conversely, modelling of N2O emissions from a humid pasture in Ireland under future climate change indicated that a significant increase in above-ground biomass and associated nitrogen demand would serve to avoid significant increases in N2O emissions[49](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref49). Although direct studies of agricultural N2O fluxes under simulated future climates do suggest increased emissions in response to warming[50](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref50) or increased CO2[48](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref48), examination of the combined effects of warming, summer drought and increased CO2 indicate that temperature change may be of most importance in temperate, extensively managed grasslands[51](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref51). Overall, it is likely that changes in food demand, land management and nitrogen-use efficiency will be much more important determinants of global N2O emissions than climate change in the twenty-first century. However, significant indirect effects of climate change on agricultural N2O fluxes, such as reduced crop productivity[52](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref52), altered nitrogen leaching rates[53](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref53), and enhanced ammonia volatilization[54](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref54), [55](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref55) require further investigation and quantification.¶ Agriculture accounted for approximately 60% (~6 Tg N2O-N) of total global anthropogenic emissions of N2O in 2005, largely through emissions from agricultural soils after application of nitrogen fertilizer, meaning that the agricultural sector offers the greatest potential for N2O mitigation[31](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref31).¶ Nitrogen-use efficiency. On average, of every 100 units of nitrogen used in global agriculture, only 17 are consumed by humans as crop, dairy or meat products[56](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref56). Global nitrogen-use efficiency of crops, as measured by recovery efficiency in the first year (that is, fertilized crop nitrogen uptake — unfertilized crop N uptake/N applied), is generally considered to be less than 50% under most on-farm conditions[57](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref57), [58](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref58), [59](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref59), [60](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref60).¶ In the agricultural mitigation (Working Group III) chapter of the IPCC's fourth assessment report[31](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref31), the global mitigation potential for N2O reduction in agriculture was quantified using outputs from the DAYCENT model[61](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref61). Projections in demand for food were considered to require an overall increase in fertilizer nitrogen requirements, and large improvements in nitrogen-use efficiency by 2030 (for agronomic rather than climate change mitigation reasons) were assumed in the baseline, leading to a limited potential for mitigation[31](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref31), [62](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref62). However, given significant over-fertilization in some regions such as China and India[63](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref63), [64](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref64), the mitigation potential may be larger than reported by the IPCC in 2007[65](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref65). Potential mitigation options for N2O reduction rely on improving nitrogen-use efficiency, which could be increased by up to 50%[66](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref66), [67](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref67) by practices such as changing the source of N, using fertilizers stabilized with urease or nitrification inhibitors or slow- or controlled-release fertilizers, reducing rates of nitrogen application in over-fertilized regions, and optimizing nitrogen fertilizer placement and timing[65](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref65), [68](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref68), [69](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref69), [70](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref70). In some under-fertilized regions (such as Africa[71](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref71), [72](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref72)) more fertilizer nitrogen may be needed to increase yields. Although the N2O emissions would be expected to increase, the N2O emissions per unit of agricultural product may be significantly decreased.¶ Given the increased demand for fertilizer nitrogen to feed >9 billion people by 2050 (for example, from ~100 Tg to 135 Tg N by 2030[67](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref67)) and the potentially very large expansion in biofuel production discussed earlier, N2O emissions from agriculture are likely to rise in absolute terms. The risk is that **large increases in anthropogenic N2O emissions from the agricultural sector will partly offset efforts to reduce CO2 emissions from the energy supply sector and others — undermining global efforts to avoid 2 °C of post-industrial warming**. A key mitigation challenge, therefore, is to reduce N2O emissions per unit of fertilizer nitrogen applied, and per unit of agricultural product[73](http://www.nature.com/nclimate/journal/v2/n6/full/nclimate1458.html#ref73).

#### Second, methane—biochar increases soil efficiency, which decreases emissions.

John Gaunt and Johannes Lehmann, 2008. College of Agriculture and Life Sciences, Cornell University. “Energy Balance and Emissions Associated with Biochar Sequestration and Pyrolysis Bioenergy Production,” Environ. Sci. Technol. 2008, 42, 4152–4158, http://pubs.acs.org/doi/abs/10.1021/es071361i.

Preliminary research (12) suggests that nitrous oxide (N2O) and **methane** (CH4) **emissions from soil may be significantly reduced by biochar application**. Rondon et al. (12) found that CH4 emissions were completely suppressed and N2O emissions were reduced by 50% when biochar was applied to soil. Yanai et al. (13) also found suppression of N2O when biochar was added to soil. The mechanisms by which N2O and CH4 emissions are reduced are not clear. However, the reduction in N2O emissions observed by these authors is consistent with the more widespread observation that fertilizer is used more efficiently by crops in situations where biochar is applied to soil.

#### Methane outweighs CO2—consensus of experts agree

Noam Mohr, August 2005. Research Scientist @ PETA with a physic degrees from University of Pennsylvania. “A New Global Warming Strategy: How Environmentalists are Overlooking Vegetarianism as the Most Effective Tool Against Climate Change in Our Lifetimes,” An EarthSave International Report.

This is a serious miscalculation. Data published by Dr. James Hansen and others5 show that CO2 emissions are not the main cause of observed atmospheric warming. Though this may sound like the work of global warming skeptics, it isn’t: Hansen is Director of NASA’s Goddard Institute for Space Studies who has been called “a grandfather of the global warming theory.”6 He is a longtime supporter of action against global warming, cited by Al Gore7 and often quoted by environmental organizations, who has argued against skeptics for subverting the scientific process.8 His results are generally accepted by global warming experts, including bigwigs like Dr. James McCarthy, co-chair of the International Panel on Climate Change’s Working Group II.9 The focus solely on CO2 is fueled in part by misconceptions. It’s true that human activity produces vastly more CO2 than all other greenhouse gases put together. However, this does not mean it is responsible for most of the earth’s warming. Many other greenhouse gases trap heat far more powerfully than CO2, some of them tens of thousands of times more powerfully.10 When taking into account various gases’ global warming potential—defined as the amount of actual warming a gas will produce over the next one hundred years—it turns out that gases other than CO2 make up most of the global warming problem.11 **Even this overstates the effect of CO2, because the primary sources of these emissions**—cars and **power plants—also produce aerosols**. Aerosols actually have a cooling effect on global temperatures, and the magnitude of this cooling approximately cancels out the warming effect of CO2.12 The surprising result is that sources of CO2 emissions are having roughly zero effect on global temperatures in the near-term! 13 This result is not widely known in the environmental community, due to a fear that polluting industries will use it to excuse their greenhouse gas emissions. For example, the Union of Concerned Scientists had the data reviewed by other climate experts, who affirmed Hansen’s conclusions.14 However, the organization also cited climate contrarians’ misuse of the data to argue against curbs in CO2.15 This contrarian spin cannot be justified. While CO2 may have little influence in the near-term, reductions remains critical for containing climate change in the long run. Aerosols are short-lived, settling out of the air after a few months, while CO2 continues to heat the atmosphere for decades to centuries. Moreover, we cannot assume that aerosol emissions will keep pace with increases in CO2 emissions.16 If we fail start dealing with CO2 today, it will be too late down the road when the emissions catch up with us. Nevertheless, the fact remains that sources of non-CO2 greenhouse gases are responsible for virtually all the global warming we’re seeing, and all the global warming we are going to see for the next fifty years. If we wish to curb global warming over the coming half century, we must look at strategies to address non-CO2 emissions. The strategy with the most impact is vegetarianism. Methane and Vegetarianism **By far the most important non-CO2** g**reen**h**ouse** g**as is methane**, and the number one source of methane worldwide is animal agriculture.17 Methane is responsible for nearly as much global warming as all other non-CO2 greenhouse gases put together.18 Methane is 21 times more powerful a greenhouse gas than CO2.19 While atmospheric concentrations of CO2 have risen by about 31% since pre-industrial times, methane concentrations have more than doubled.20 Whereas human sources of CO2 amount to just 3% of natural emissions, human sources produce one and a half times as much methane as all natural sources.21 In fact, the effect of our methane emissions may be compounded as methane-induced warming in turn stimulates microbial decay of organic matter in wetlands—the primary natural source of methane.22 pg. 2

## 2NC Proliferation DA

### DA Overview

#### Independent nuclear terrorism scenario --- expansion makes it easier for terrorists to gain access to nuclear materials and knowledge --- risks nuclear conflict

Ayson, Professor of Strategic Studies at Victoria, 10—Robert Ayson, Professor of Strategic Studies and Director of the Centre for Strategic Studies: New Zealand at the Victoria University of Wellington, 2010 [“After a Terrorist Nuclear Attack: Envisaging Catalytic Effects,” *Studies in Conflict & Terrorism*, Volume 33, Issue 7, July, Available Online to Subscribing Institutions via InformaWorld]

But these two nuclear worlds—a non-state actor nuclear attack and a catastrophic interstate nuclear exchange—are not necessarily separable. It is just possible that some sort of terrorist attack, and especially an act of nuclear terrorism, could precipitate a chain of events leading to a massive exchange of nuclear weapons between two or more of the states that possess them. In this context, today’s and tomorrow’s terrorist groups might assume the place allotted during the early Cold War years to new state possessors of small nuclear arsenals who were seen as raising the risks of a catalytic nuclear war between the superpowers started by third parties. These risks were considered in the late 1950s and early 1960s as concerns grew about nuclear proliferation, the so-called n+1 problem.

It may require a considerable amount of imagination to depict an especially plausible situation where an act of nuclear terrorism could lead to such a massive inter-state nuclear war. For example, in the event of a terrorist nuclear attack on the United States, it might well be wondered just how Russia and/or China could plausibly be brought into the picture, not least because they seem unlikely to be fingered as the most obvious state sponsors or encouragers of terrorist groups. They would seem far too responsible to be involved in supporting that sort of terrorist behavior that could just as easily threaten them as well.

Some possibilities, however remote, do suggest themselves. For example, how might the United States react if it was thought or discovered that the fissile material used in the act of nuclear terrorism had come from Russian stocks,40 and if for some reason Moscow denied any responsibility for nuclear laxity? The correct attribution of that nuclear material to a particular country might not be a case of science fiction given the observation by Michael May et al. that while the debris resulting from a nuclear explosion would be “spread over a wide area in tiny fragments, its radioactivity makes it detectable, identifiable and collectable, and a wealth of information can be obtained from its analysis: the efficiency of the explosion, the materials used and, most important … some indication of where the nuclear material came from.”41

Alternatively, if the act of nuclear terrorism came as a complete surprise, and American officials refused to believe that a terrorist group was fully responsible (or responsible at all) suspicion would shift immediately to state possessors. Ruling out Western ally countries like the United Kingdom and France, and probably Israel and India as well, authorities in Washington would be left with a very short list consisting of North Korea, perhaps Iran if its program continues, and possibly Pakistan. But at what stage would Russia and China be definitely ruled out in this high stakes game of nuclear Cluedo?

In particular, if the act of nuclear terrorism occurred against a backdrop of existing tension in Washington’s relations with Russia and/or China, and at a time when threats had already been traded between these major powers, would officials and political leaders not be tempted to assume the worst? Of course, the chances of this occurring would only seem to increase if the United States was already involved in some sort of limited armed conflict with Russia and/or China, or if they were confronting each other from a distance in a proxy war, as unlikely as these developments may seem at the present time. The reverse might well apply too: should a nuclear terrorist attack occur in Russia or China during a period of heightened tension or even limited conflict with the United States, could Moscow and Beijing resist the pressures that might rise domestically to consider the United States as a possible perpetrator or encourager of the attack?

Washington’s early response to a terrorist nuclear attack on its own soil might also raise the possibility of an unwanted (and nuclear aided) confrontation with Russia and/or China. For example, in the noise and confusion during the immediate aftermath of the terrorist nuclear attack, the U.S. president might be expected to place the country’s armed forces, including its nuclear arsenal, on a higher stage of alert. In such a tense environment, when careful planning runs up against the friction of reality, it is just possible that Moscow and/or China might mistakenly read this as a sign of U.S. intentions to use force (and possibly nuclear force) against them. In that situation, the temptations to preempt such actions might grow, although it must be admitted that any preemption would probably still meet with a devastating response.

#### Deterrence can't solve

Below 8—Wing Commander for the Royal Air Force [Tim D. Q. Below (Master of Arts degree in Defence Studies from Kings College London), “Options for US Nuclear Disarmament: Exemplary Leadership or Extraordinary Lunacy?,” a thesis presented to the faculty of the School Of Advanced Air and Space Studies for completion of graduation requirements, Air University Maxwell Air Force Base, Alabama, June 2008]

The 2002 National Security Strategy is unequivocal in its assessment that, in the wake of 9/11, “there are few greater threats than a terrorist attack with WMD.” The National Strategy to Combat Weapons of Mass Destruction echoes this sentiment, saying “the gravest danger our Nation faces lies at the crossroads of radicalism and technology.” Indeed, Sulaiman Abu Ghaith, Osama bin Laden’s press spokesman speaking on behalf of al Qaeda, announced an aspiration “’to kill four million Americans, including one million children,’ in response to casualties supposedly inflicted on Muslims by the United States and Israel.” Despite such overt threats, Hans Kristensen considers the threat of nuclear terrorism as “very hypothetical,” and certainly not something that justifies an “operational nuclear weapon” for a response. Senior policy-makers appear to concur, acknowledging that terrorists are not deterrable because it is virtually impossible to target a retaliatory strike. George Schultz, William Perry, Henry Kissinger, and Sam Nunn reiterated in a highly-publicized Wall Street Journal article in 2007 that “non-state terrorist groups with nuclear weapons are conceptually outside the bounds of a deterrent strategy.” Ambassador Henrik Salander is even more pointed, observing that “against terrorists, nuclear weapons have no use whatsoever.”

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### Uniqueness

#### No widespread prolif

Hymans 12—Jacques E. C. Hymans is Associate Professor of IR at USC [April 16, 2012, “North Korea's Lessons for (Not) Building an Atomic Bomb,” *Foreign Affairs*, http://www.foreignaffairs.com/articles/137408/jacques-e-c-hymans/north-koreas-lessons-for-not-building-an-atomic-bomb?page=show]

Washington's miscalculation is not just a product of the difficulties of seeing inside the Hermit Kingdom. It is also a result of the broader tendency to overestimate the pace of global proliferation. For decades, Very Serious People have predicted that strategic weapons are about to spread to every corner of the earth. Such warnings have routinely proved wrong -- for instance, the intelligence assessments that led to the 2003 invasion of Iraq -- but they continue to be issued. In reality, despite the diffusion of the relevant technology and the knowledge for building nuclear weapons, the world has been experiencing a great proliferation slowdown. Nuclear weapons programs around the world are taking much longer to get off the ground -- and their failure rate is much higher -- than they did during the first 25 years of the nuclear age.

As I explain in my article "Botching the Bomb" in the upcoming issue of Foreign Affairs, the key reason for the great proliferation slowdown is the absence of strong cultures of scientific professionalism in most of the recent crop of would-be nuclear states, which in turn is a consequence of their poorly built political institutions. In such dysfunctional states, the quality of technical workmanship is low, there is little coordination across different technical teams, and technical mistakes lead not to productive learning but instead to finger-pointing and recrimination. These problems are debilitating, and they cannot be fixed simply by bringing in more imported parts through illicit supply networks. In short, as a struggling proliferator, North Korea has a lot of company.

### Link

#### Spread of commercial nuclear tech makes weapons prolif inevitable—3 distinct internal links.

Nassauer 10—Otfried Nassauer is founding Director of the Berlin Information-center for Transatlantic Security (BITS) since 1991. For twenty years he also worked as a free-lance investigative journalist in military and international security affairs. [September 2010, “Nuclear Weapons and Nuclear Energy – Siamese Twins or Double Zero Solution?” Heinrich-Böll-Stiftung, EU, Brussels, http://www.boell.org/downloads/HBS-Nassauer-Sokolski\_web.pdf]

Even in the best case scenario, it is to be assumed that the proliferation risks will increase should the number of countries using nuclear energy for electricity production also increase. With each nation joining the civilian nuclear club, there are additional places where nuclear materials need to be safeguarded, additional scientists and experts with specialised training and knowledge who require employment and can further develop the technology, as well as additional locations with installations vulnerable to terrorist attacks. The risk of proliferation will most probably continue to rise for a variety of reasons: —firstly: uranium is – like gas and oil – a finitely available raw material for energy provision. The world’s reserves of uranium will definitely come to an end, no matter whether they last for another 60, 80 or 100 years at a constant level of consumption. Institutions claiming that the reserves of uranium have a long lifespan also mostly assume a rapidly growing number of nuclear power plants in future and, therefore, an equally rapid growth in the consumption of uranium. If uranium is to become a long-term, sustainable energy source then this would require closed fuel cycles and associated technologies like reprocessing and plutonium separation in order for the raw material to be used multiple times. However, reprocessing technology is connected to significantly greater proliferation risks, in particular, when an increasing number of countries build and operate the appropriate facilities. —secondly: a spin-off of globalisation is the weakening of the monopoly held by states on the use of force. This phenomenon is often dealt with using the terms ‘failing states’ or ‘failed states’. In these states, the governments have lost control of certain parts of their territory in which they should be able to maintain security. They can no longer guarantee security there. When these failing states house nuclear facilities, irrelevant of whether they are civilian or military, then this creates a serious proliferation problem. The break-up of the Soviet Union has brought many aspects of this problem to the world’s attention that are characteristic of this sort of situation. Can we be sure that Pakistan will never become a failing state or even disintegrate? Is this also true for all of the African states who are currently increasingly considering the use of nuclear energy? —thirdly: there will be an increasing number of countries who can deliver nuclear technology because they will be operating civilian nuclear facilities. This increases the number of technology sources, the scope and quality of the technology transfer and a growing number of countries will gradually find themselves in a position where they can build individual components themselves and also export them. The economic incentives of this type of export business are from experience in many cases **quicker to emerge than the construction of an effective export control system and the realisation of improved security standards**. The de-industrialisation of the West and the industrialisation of the South will become, therefore, a severe test for today’s attempts to control, limit, or deny nuclear technology exports. Some of the potential future nuclear supplier states may have a different understanding of the legitimate civilian use of nuclear technology than the traditional nuclear powers and their close allies. We need only remember the accusation of ‘nuclear apartheid’, which has been used to describe the export policies of the Northern hemisphere. This would mean, however, that the systems for controlling nuclear export would also face considerable new challenges. Once new suppliers begin competing for market shares for the first time it is entirely possible that industries in Western nations will turn once again to an old and dangerous argument, which helped to fuel nuclear proliferation during earlier decades: “If we don’t sell it, then someone else will. Therefore, it’s better for us to sell it ourselves.”

#### No nuclear infrastructure and overwhelms inspections

Lyman 11—Edwin Lyman is Senior Global Security Scientist with the Union of Concerned Scientists (UCS). He specialises in nuclear proliferation, nuclear terrorism, and nuclear power safety. He has published many articles in journals and magazines and written many reports. Lyman was president of the Nuclear Control Institute. He has a Ph.D. in physics from Cornell University. [July 14, 2011, Testimony of Dr. Edwin Lyman Senior Scientist, Global Security Program Union of Concerned Scientists “An Examination of the Safety and Economics of Light Water Small Modular Reactors” Before the Energy and Water Development Subcommittee Committee on Appropriations, U.S. Senate, http://www.ucsusa.org/assets/documents/nuclear\_power/lyman-appropriations-subcom-7-14-11.pdf]

UCS is also concerned that reducing safety and security requirements for SMRs could facilitate their sale to utilities or other entities in the United States and abroad that do not have prior experience with nuclear power. Some SMR vendors argue that their technology is so safe that it can be deployed to remote areas, military bases, and countries in the developing world that have relatively low electric demand and no nuclear experience or emergency planning infrastructure. However, SMRs deployed in this manner could raise additional safety and security concerns compared to their deployment by established and experienced nuclear utilities. The distributed deployment of small reactors would also put great strains on existing licensing and inspection resources. Nuclear reactors are qualitatively different from other types of generating facilities, not least because they require a much more extensive safety and security inspection regime. Similarly, deployment of individual small reactors at widely distributed and remote sites around the world would strain the resources of the International Atomic Energy Agency (IAEA) and its ability to adequately safeguard reactors to guard against proliferation, since IAEA inspectors would need to visit many more locations per installed megawatt around the world. Maintaining robust oversight over vast networks of SMRs around the world would be difficult, if feasible at all. UCS believes that SMRs are only suitable for deployment where there is an established infrastructure to cope with emergencies, and if sufficient numbers of trained operator and security staff can be provided. It is unrealistic to assume the near-term availability of SMRs that are so safe they can be shipped around the world without the need to ensure the highest levels of competence and integrity of local regulatory authorities, plant operators, emergency planning organizations and security forces. Fukushima has demonstrated the importance of timely off-site response in the event of a severe accident, so the accessibility of reactors in remote locations also must be a prime consideration. Even within the U.S., small utilities with little or no experience in operating nuclear plants need to fully appreciate the unique challenges and responsibilities associated with nuclear power and should not expect that small modular reactors will provide any relief in this regard.

#### Exports don't give leverage

Richard Cleary, 8/13/2012. Research assistant for the American Enterprise Institute's Program on Advanced Strategic Studies. “Persuading Countries to Forgo Nuclear Fuel-Making:  What History Suggests,” In [Nuclear Nonproliferation: Moving Beyond Pretense](http://click.icptrack.com/icp/relay.php?r=18559754&msgid=324708&act=PLU6&c=729907&destination=http%3A%2F%2Fnpolicy.org%2Fthebook.php%3Fbid%3D25), http://npolicy.org/article.php?aid=1192&tid=30.

In recent years, there has been a resurgence of proposals designed to limit the spread of nuclear fuel-making facilities, with the understanding that ostensibly peaceful technology can allow for the production of the fissile material required for a nuclear weapon. With U.S. proposals ranging from the Global Nuclear Energy Partnership (GNEP) to a revamped, “Gold Standard” bilateral nuclear cooperation agreement, a wider array of tools has been put at the disposal of American policy makers. Prominent members of the international community have become agitated about the prospect of the proliferation of fuel-making technology as well, with numerous proposals of fuel assurances put forward by such disparate figures as Vladimir Putin and Mohamed ElBaradei. But renewed enthusiasm for nonproliferation begs questions about how novel the instruments proposed are, and, moreover, how effective they are likely to be, particularly for the country historically at the head of nonproliferation efforts, the United States. A review of this historical record suggests that optimism about the U.S. ability to dissuade countries from this path is misplaced.¶ This essay considers supply side proposals of fuel assurance, multilateral fuel-making, as well as specific interventions on both the supply and demand sides, consulting particular cases in Iran (1974-1978), West Germany-Brazil (1975-1977), South Korea (1974-1976) and Pakistan (1972-1980) to draw lessons about the effectiveness of U.S. practices under differing circumstances. The record these cases give is mixed, due to two principal causes. The first is the failure of the U.S. to consistently prioritize nonproliferation efforts given Washington’s global and competing interests, interests that tend to be embraced by different factions in the federal government apparatus but whose ultimate arbiter is the president (along with his close advisors). The second is the tendency of **decisions about nuclear fuel-making by the state in question to be influenced more by fundamental trends or factors than diplomatic maneuvering from Washington**; diplomacy is most effective when it has the political, economic and military backing to implicate these issues. **The most important factor in U.S. efforts has tended to be the bilateral relationship between Washington and the country at hand**. Decision-makers who consider their country’s relationship with the U.S. to be strategically vital—and believe that fuel-making would threaten this relationship—are most likely to forgo enrichment and reprocessing (ENR) technology. **This calculus can be informed by a range of dynamics**, some **beyond U.S. control, such as security concerns, issues of prestige, and commercial and industrial interests**. Domestic politics and public opinion, both in the United States and in the country considering fuel-making, can be influential.

## 2NC Case

### Link Turn

#### SMRs require significantly greater human capital investment- low stages now

Rosner, 11 – Energy Policy Institute at Chicago co-director

(Robert, and Stephen Goldberg, "Small Modular Reactors – Key to Future Nuclear Power Generation in the U.S.," November 2011, https://epic.sites.uchicago.edu/sites/epic.uchicago.edu/files/uploads/EPICSMRWhitePaperFinalcopy.pdf, accessed 9-15-12, mss)

SMR design, licensing, and detailed engineering activities are in an early stage. Licensing and design certification documents are expected to be ready for NRC filing in the 2013 time frame, and detailed engineering is about 10-20% complete. At the time of this analysis, limited cost data were publicly available, and current estimates have a significant amount of uncertainty. The study team estimates that GW-level reactors have roughly **two orders of magnitude greater** [person]~~man~~hours already expended in this early engineering design work as compared with design work carried out for SMRs to date. Finally, the tooling up at a factory dedicated to SMR manufacturing is still in the planning stages and will likely require significant investment for a dedicated plant to manufacture SMRs for an n’th -of-a-kind (NOAK) economy.

#### Private industry growth directly trades off with NNSA

Aloise, 12 -- GAO Nuclear Security, Safety, and Nonproliferation director

(Gene, former GAO Assistant Director for Report and Testimony Quality Control, "Modernizing the Nuclear Security Enterprise: Strategies and Challenges in Sustaining Critical Skills in Federal and Contractor Workforces," Government Accountability Office, GAO-12-468, April 2012, http://www.gao.gov/assets/600/590488.pdf, accessed 9-4-12, mss)

Shortages of qualified candidates. NNSA officials told us that qualified candidates are in short supply and that competition from science and technology-related **companies in the private sector poses additional challenges.** Candidates for most critical skills positions at national laboratories must meet certain criteria, including (1) an advanced degree (master`s or doctorate) in a scientific, technical, or engineering field; (2) the ability to obtain a high-level security clearance, which requires U.S. citizenship; and (3) an interest in and willingness to learn weapons design work. The requirement for U.S. citizenship in particular is becoming an increasingly difficult criterion to satisfy in the recruitment process. National laboratory officials told us that a large percentage of students graduating from top science, technology, and engineering programs are foreign nationals. M&O contractors can hire foreign nationals to work outside of weapons-related areas, but the citizenship requirement for working on programs supporting U.S. nuclear weapons is not negotiable. [Footnote 19]

#### Nuclear expansion overstretches human capital

NNSA, 8

("Nuclear Safeguards," 5-31-8, www.nnsa.energy.gov/aboutus/ourprograms/nonproliferation/nuclearradiologicalmaterialsecurity/nuclearsafeguards, accessed 9-4-12, mss)

With the increasing number, size, and complexity of nuclear facilities deployed worldwide, the widespread entry into force of International Atomic Energy Agency (IAEA) Additional Protocols , and the emergence of new proliferation threats from both state and non-state terrorist actors, the current demands on the IAEA safeguards directorate far exceeds its resources. At the same time, the current generation of safeguards technologies is becoming outdated and the safeguards “**human** **capital**” base is aging and shrinking. **As nuclear energy continues to expand**, opportunities for proliferation will multiply and **the gap between** IAEA **needs and resources will grow wider**.

## 1NR Biofuels

### AT: Plan Solves Oil D (SMRs)

**They don’t solve oil d b/c different budgets and different categories**

#### And, they don’t solve—the air force is 70 percent of fuel use

Peck 10 [Interview with Shannon Burke—head of the pentagon’s Energy Office. http://e360.yale.edu/feature/new\_mission\_for\_us\_military\_breaking\_its\_dependence\_on\_oil/2348/]

For example, if you look at the numbers, they can hide some really important truths. Our energy use in theater right now is probably 70 percent for Air Force. So you’d say right away, “Well, you’ve got to put all

your focus on the Air Force, because that’s your big consumer.” And that’s certainly true. But you have to remember why we’re there — we’re fighting a war on the ground. So the 30 percent being used by the ground force is about their capability in the actual firefight. They can’t be there without the Air Force; the Air Force is moving in all their equipment. But that 30 percent is critical to our military operations. So, if you just went on the numbers, and you set our metrics by that, you might miss where you’re going to affect the point of our spear.

#### Nuclear power won’t replace oil

Lovins, **20**08 (Democracy Now! “Amory Lovins: Expanding Nuclear Power Makes Climate Change Worse” http://i4.democracynow.org/2008/7/16/amory\_lovins\_expanding\_nuclear\_power\_makes)

AMORY LOVINS: Well, first of all, electricity and oil have essentially nothing to do with each other, and anybody who thinks the contrary is really ignorant about energy. Less than two percent of our electricity is made from oil. Less than two percent of our oil makes electricity. Those numbers are falling. And essentially, all the oil involved is actually the heavy, gooey bottom of the barrel you can’t even make mobility fuels out of anyway. What nuclear would do is displace coal, our most abundant domestic fuel. And this sounds good for climate, but actually, expanding nuclear makes climate change worse, for a very simple reason. Nuclear is incredibly expensive. The costs have just stood up on end lately. *Wall Street Journal* recently reported that they’re about two to four times the cost that the industry was talking about just a year ago. And the result of that is that if you buy more nuclear plants, you’re going to get about two to ten times less climate solution per dollar, and you’ll get it about twenty to forty times slower, than if you buy instead the cheaper, faster stuff that is walloping nuclear and coal and gas, all kinds of central plans, in the marketplace. And those competitors are efficient use of electricity and what’s called micropower, which is both renewables, except big hydro, and making electricity and heat together, in fact, recent buildings, which takes about half of the money, fuel and carbon of making them separately, as we normally do.

#### Nuclear power won’t solve dependence- it doesn’t trade off with oil or gas

Joskow December 2006 (Paul L., MIT, “The Future of Nuclear Power in the United States: Economic and Regulatory Challenges,” Joint center of the department of economics, laboratory for energy and the environment, and Sloan school of management, http://tisiphone.mit.edu/RePEc/mee/wpaper/2006-019.pdf)

Before concluding this section, there is one observation that I want to make about "national security" rationales for nuclear power that appear frequently in the media and are sometimes exploited by nuclear power proponents. First, almost no oil is used to generate electricity in the U.S. and this fact is not likely to change in the future**.** Second, in the EIA AEO 2006 scenarios discussed above, new nuclear plants primarily are substitutes for new coal plants. As a result, the investment innuclear capacity does not have a significant impact on imports of oil or liquefied natural gas (LNG), which is forecast to grow rapidly over this period. Accordingly, there does not appear to be an "energy security" case for investment in new nuclear plants. As I have already indicated, I believe that the primary policy rationale for providing special subsidies to "first mover" nuclear power plants is to maintain nuclear power as an option for generating electricity that would support a U.S. policy to reduce CO2 emissions that would otherwise be produced from coal burning power plants.

## 1NR Case

### AT: Science Diplomacy

**Science diplomacy fails**

**Dickson 9** [David, Direction Science & Development Network. June 2, 2009, “Science diplomacy: the case for caution”, [http://scidevnet.wordpress.com/category/new- frontiers-in-science-diplomacy-2009](http://scidevnet.wordpress.com/category/new-%20frontiers-in-science-diplomacy-2009), SM]

One of the frustrations of meetings at which scientists gather to discuss policy-related issues is the speed with which the requirements for evidence-based discussion they would expect in a professional context can go out of the window. Such has been the issue over the past two days in the meeting jointly organised in London by the American Association for the Advancement of Science (AAAS) and the Royal Society on the topic “New Frontiers in Science Diplomacy“. There has been much lively discussion on the value of international collaboration in achieving scientific goals, on the need for researchers to work together on the scientific aspects of global challenges such as climate change and food security, and on the importance of science capacity building in developing countries in order to make this possible. But there remained little evidence at the end of the meeting on how useful it was to lump all these activities together under the umbrella term of “science diplomacy”. More significantly, although numerous claims were made during the conference about the broader social and political value of scientific collaboration – for example, in establishing a framework for collaboration in other areas, and in particular reducing tensions between rival countries – little was produced to demonstrate whether this hypothesis is true. If it is not, then some of the arguments made on behalf of “science diplomacy”, and in particular its value as a mechanism for exercising “soft power” in foreign policy, do not stand up to close scrutiny. Indeed, a case can be made that where scientific projects have successfully involved substantial international collaboration, such success is often heavily dependent on a prior political commitment to cooperation, rather than a mechanism for securing cooperation where the political will is lacking. Three messages appeared to emerge from the two days of discussion. Firstly, where the political will to collaborate does exist, a joint scientific project can be a useful expression of that will. Furthermore, it can be an enlightening experience for all those directly involved. But it is seldom a magic wand that can secure broader cooperation where none existed before. Secondly, “science diplomacy” will only become recognised as a useful activity if it is closely defined to cover specific situations (such as the negotiation of major international scientific projects or collaborative research enterprises). As an umbrella term embracing the many ways in which science interacts with foreign policy, it loses much of its impact, and thus its value. Finally, when it comes to promoting the use of science in developing countries, a terminology based historically on maximising self-interest – the ultimate goal of the diplomat – and on practices through which the rich have almost invariably ended up exploiting the poor, is likely to be counterproductive. In other words, the discussion seemed to confirm that “science diplomacy” has a legitimate place in the formulation and implementation of policies for science (just as there is a time and place for exercising “soft power” in international relations). But the dangers of going beyond this – including the danger of distorting the integrity of science itself, and even alienating potential partners in collaborative projects, particularly in the developing world – were also clearly exposed.

## 1NR SO2

### 2NC Overview

#### Speed is critical—rapid warming overwhelms adaptation.

Joseph Milton, 11/11/2010. PhD Evolutionary Biology @ St Andrews, science journalism @ City U London, writer for the Financial Times, New Scientist, Nature News, Research Fortnight, and Scientific American. “Rapid warming boosted ancient rainforest,” Scientific American, http://www.scientificamerican.com/article.cfm?id=rapid-warming-boosted-ancient.

Most scientists have assumed that, as carbon dioxide levels increase and the Earth warms, plant species diversity in the rainforests will start to dwindle, with [plants](http://www.scientificamerican.com/topic.cfm?id=plants) unable to adapt to the heat. But a new study suggests that the opposite may be true. In the past, rising atmospheric carbon dioxide and higher temperatures actually drove the evolution of far greater numbers of new rainforest plant species than were wiped out. ¶ But don't trade in your electric car for a gas-guzzler just yet--**if** rainfall drops as **temperatures** rise, or if they **rise too rapidly, the outcome** for rainforest diversity **could be much less positive**.¶ For clues to how rainforest diversity will be affected by increasing atmospheric carbon dioxide and the corresponding rise in temperatures, Carlos Jaramillo, a palaeobiologist at the Smithsonian Tropical Research Institute in Panama, and his colleagues decided to look at what happened during similar conditions in the past.¶ One such episode in Earth's history occurred 56.3 million years ago and is called the Palaeocene-Eocene Thermal Maximum (PETM). Within 10,000-20,000 years, the world warmed by 3-5 degrees Celsius and atmospheric carbon dioxide doubled to around two and a half times the levels we see today. These unusually warm conditions lasted for around 200,000 years. ¶ Pollen clues¶ To find out how this ancient climate change affected rainforest plants, Jaramillo and his team analyzed fossilized pollen trapped in rock cores from rainforests in Colombia and Venezuela. They spent seven years locating appropriate sites and taking samples, then used a battery of dating techniques to ensure that they were examining cores formed before, during and after the thermal maximum--a relatively narrow time window in geological terms. The results were published November 12 in Science.¶ Although some plant species disappeared, many more new species arose. That included entire families, suggesting that the increased temperatures and carbon dioxide levels actually boosted [biodiversity](http://www.scientificamerican.com/topic.cfm?id=biodiversity). "What we found was exactly the opposite of what we were expecting," says Jaramillo. "The diversity of the tropical forest increased really fast over a very short amount of time."¶ The pollen fossil record shows that some important plant families, such as Myrtaceae, which includes eucalyptus, and Passifloraceae--the passion flowers--made their first appearance during the thermal maximum. The tropics have remained the most species-diverse area of the world ever since.¶ This might sound like good news for the rainforest in the face of contemporary climate change. However, Guy Harrington, a palaeobiologist at the University of Birmingham, UK, warns that any positive effects on plant diversity could be canceled out if temperatures rise too quickly for plants to adapt. "**It's the rate--how fast you're turning up the heater--that's the most important thing**," he says.

### 2NC Solves Warming

#### Alternative hypotheses can’t explain the entire pattern of data—sulfate cooling from coal is the only factor that could slow down anthropogenic forcings to the point where declining solar radiation or internal climate variability could have dominated.

Robert K. Kaufmann et al, 6/2/2011. Department of Geography and Environment, Center for Energy and Environmental Studies, Boston University. “Reconciling anthropogenic climate change with observed temperature 1998–2008,” Proceedings of the National Academy of Sciences, [www.pnas.org/content/early/2011/06/27/1102467108.abstract](http://www.pnas.org/content/early/2011/06/27/1102467108.abstract).

Data for global surface temperature indicate little warming between 1998 and 2008 (1). Furthermore, global surface temperature declines 0.2 °C between 2005 and 2008. Although temperature increases in 2009 and 2010, the lack of a clear in- crease in global surface temperature between 1998 and 2008 (1), combined with rising concentrations of atmospheric CO2 and other greenhouse gases, prompts some popular commentators (2, 3) to doubt the existing understanding of the relationship among radiative forcing, internal variability, and global surface temperature. This seeming disconnect may be one reason why the public is increasingly sceptical about anthropogenic climate change (4).¶ Recent analyses address this source of scepticism by focusing on internal variability or expanding the list of forcings. Model simulations are used to suggest that internal variability can generate extended periods of stable temperature similar to 1999–2008 (5). Alternatively, expanding the list of forcings to include recent changes in stratospheric water vapor (6) may account for the recent lack of warming. But neither approach evaluates whether the current understanding of the relationship among radiative forcing, internal variability, and global surface temperature can account for the timing and magnitude of the 1999–2008 hiatus in warming.¶ Here we use a previously published statistical model (7) to evaluate whether anthropogenic emissions of radiatively active gases, along with natural variables, can account for the 1999–2008 hiatus in warming. To do so, we compile information on anthropogenic and natural drivers of global surface temperature, use these data to estimate the statistical model through 1998, and use the model to simulate global surface temperature between 1999 and 2008. Results indicate that net anthropogenic forcing rises slower than previous decades because the cooling effects of sulfur emissions grow in tandem with the warming effects greenhouse gas concentrations. This slow-down, along with declining solar insolation and a change from El Nino to La Nina conditions, en- ables the model to simulate the lack of warming after 1998. These findings are not sensitive to a wide range of assumptions,¶ including the time series used to measure temperature, the omission of black carbon and stratospheric water vapor, and uncertainty about anthropogenic sulfur emissions and its effect on radiative forcing (SI Appendix: Sections 2.4–7).¶ Results¶ Increasing emissions and concentrations of carbon dioxide receive considerable attention, but our analyses identify an important change in another pathway for anthropogenic climate change —a rapid rise in anthropogenic sulfur emissions driven by large increases in coal consumption in Asia in general, and China in particular. Chinese coal consumption more than doubles in the 4 y from 2003 to 2007 (the previous doubling takes 22 y, 1980– 2002). In this four year period, Chinese coal consumption accounts for 77% of the 26% rise in global coal consumption (8). These increases are large relative to previous growth rates. For example, global coal consumption increases only 27% in the twenty two years between 1980 and 2002 (8). Because of the resultant increase in anthropogenic sulfur emissions, there is a 0.06 W␣m2 (absolute) increase in their cooling effect since 2002 (Fig. 1). This increase partly reverses a period of declining sulfur emissions that had a warming effect of 0.19 W␣m2 between 1990 and 2002.¶ The increase in sulfur emissions slows the increase in radiative forcing due to rising greenhouse gas concentrations (Fig. 1). Net anthropogenic forcing rises 0.13 W␣m2 between 2002 and 2007, which is smaller than the 0.24 W␣m2 rise between 1997 and 2002. The smaller net increase in anthropogenic forcing is accompanied by a 0.18 W␣m2 decline in solar insolation caused by the declining phase of the eleven year solar cycle, such that the sum of modeled forcings increases little after 1998 and declines after 2002 (Fig. 1). This cooling effect is amplified by a net increase in the Southern Oscillation Index (SOI) (9).¶ The effect of changes in anthropogenic and natural forcings on global surface temperature after 1998 is assessed with a statistical model that is estimated with a sample that ends in 1998. As indicated in Fig. 2, the model simulation for global surface temperature is consistent with observations. In short, net forcing does not rise between 1999 and 2008, nor does global surface temperature. The hypothesis that the post 1998 period is consistent with the existing understanding of anthropogenic climate change is evaluated with a test statistic that evaluates the null hypothesis that the long-run relationship between global surface temperature and radiative forcing is unchanged after 1998. We fail to reject this null in two of three sample periods analyzed (SI Appendix: Table S3 and Section 2.3). The 95% confidence intervals in Figs. 2 and 3 represent uncertainty in the statistical estimates of the regression model for observed paths of forcings, SOI, and volcanic sulfates. Uncertainty about the forcings calculated with observed values for greenhouse gas concentrations, solar insolation, and the SOI is small relative to the uncertainty about observations for anthropogenic sulfur emissions. Sensitivity analysis indicates that uncertainty about the measure of surface temperature, anthropogenic sulfur emissions, or its conversion to radiative forcing has a small effect on the model’s simulated forecast for global surface temperature (SI Appendix: Section 2.4 and Figs S3, S4). Similarly, the year in which the simulation starts (SI Appendix: Fig. S6) or the sample period used to estimate the model (SI Appendix: Fig. S5) has little effect. As expected, the ability of the model to simulate observed changes in global surface temperature after 1998 improves as less reliable observations from the early portion of the sample period are eliminated from the estimation sample (Fig. 2). This improved accuracy is especially clear for the sample period that starts in 1960, when direct measurements of greenhouse gas concentrations become available and temperature measures have better coverage and are more reliable. The improved accuracy associated with more reliable measures of radiative forcing and temperature is consistent with the hypothesis that anthropogenic activities, which alter the Earth’s heat balance, affect global surface temperature.¶ Drivers of global surface temperature after 1998 are identified by simulating the model with observed values for the independent variables of interest and estimated parameters, while the 1999– 2008 values for the other variables are held at their 1998 level. To identify the effects of human activity on temperature, we simulate the model (estimation sample 1960–1998) with post 1998 values of solar insolation, SOI, and volcanic sulfates held at their 1998 level while allowing greenhouse gas concentrations and sulfur emissions to evolve as observed. On net, human activity has a small positive effect on temperature after 1999 because of slight increases in anthropogenic forcing and on-going adjustments to postindustrial increases in anthropogenic forcings (Fig. 3). Note that observed temperature moves below the 95% confidence interval in 2000 and 2008 for the global surface temperature as driven by anthropogenic changes only (red line).¶ Conversely, holding greenhouse gas concentrations and sulfur emissions at their 1998 values and allowing solar insolation, SOI, and volcanic sulfates to evolve as observed generates a forecast that is consistent with the observed pattern of temperature change. Between 1998 and 2000, global surface temperature de- clines due to a change in circulation from an El Nino to a La Nina and a decline in insolation associated with the eleven year solar cycle. Another El Nino warms the planet in 2002. The planet cools thereafter as solar insolation declines and a strong La Nina occurs in 2008.¶ Discussion¶ Our explanation for the lack of warming can be evaluated against alternative hypotheses. A recent analysis argues that the concentration of water vapor in the stratosphere decreases by about 10% after 2000 and this slows the rate of temperature increase by about 25% relative to the increase that would have occurred due to CO2 and other greenhouse gases (6). If this hypothesis is correct, the omission of stratospheric water vapor (or black carbon) would bias the statistical estimates and/or the model forecast.¶ To evaluate this hypothesis, we test whether stratospheric water vapor (or black carbon) is related to either; (i) errors in the long-run relation between radiative forcing and surface temperature, (ii) errors in the error correction model that represents the dynamics by which surface temperature adjusts to long- and short-run determinants, or (iii) errors in the forecast that is generated by the full statistical model (SI Appendix: Section 2.7). For stratospheric water vapor, the analysis suggests a small negative correlation with the error from the long-run cointegrating relation, but the negative sign is inconsistent with the warming effect of stratospheric water vapor. We find no relation between stratospheric water vapor and error in the dynamics by which surface temperature adjusts to long- and short-run determinants, or the simulation errors generated by the full statistical model. For black carbon there is no relation with the residuals from the statistical estimates, but there is evidence for a negligible (r2 \_ 0.017) positive correlation between black carbon and the forecast error. Together, these results suggest that stratospheric water vapor (and black carbon) does not have a statistically significant effect on surface temperature relative to the forcings included in the statistical model. The results are moot regarding the effect of stratospheric water vapor (or black carbon) on global surface temperature in general.¶ Another explanation for the recent hiatus in warming focuses on the internal variability of the climate system. To quantify the effect of internal variability, simulations generated by climate models are analyzed to determine the probability of ten year periods with zero or negative trends in surface temperature (5). Analysis of a twentieth century simulation indicates that ten year periods with zero or negative temperature trends are likely (p > 0.05). This relatively high probability is partially attributed to natural variability.¶ While it is possible that internal variability is responsible for the 1999–2008 hiatus in warming, we suggest an alternative interpretation of the simulations described by ref. 5 that is consistent with our results. During the twentieth century, our measure of net anthropogenic forcing does not rise steadily. For example, there is no net increase in anthropogenic forcing between 1944 and 1976; this period is associated with stable or declining surface temperatures (Fig. 1). This balance probably is not affected by the omission of black carbon emissions because they increase little between 1940 and 1970 relative to increases during other decades of the 1850–2000 period for which data are available (10). Under these conditions, periods of zero or negative ten year temperature trends reported by ref. 5 may coincide with pro- longed periods when anthropogenic forcing is stable or declining, and are therefore not likely generated by internal variability. Our interpretation is bolstered by the analysis of scenario A2 from the IPCC Special Report on Emissions Scenarios in which net anthropogenic forcing increases steadily. For these simulations, results indicate that ten year periods when temperature has no trend, or a negative trend, are unlikely- less than 5% (5). This lack of stable periods implies that the higher probability of ten year periods with little or no temperature increase in the twentieth century simulations are associated with prolonged periods when forcings do not rise. Together these results are consistent with ours- that a slowing in net forcing due to both anthropogenic activities and natural variability is responsible for the 1999–2008 hiatus in warming.¶ The finding that declining solar insolation and El Niño/South Oscillation (ENSO) events dominate anthropogenic changes and therefore create the 1999–2008 pattern in surface temperature also is generated by another statistical model (11, 12). But this model represents net anthropogenic forcing with a deterministic time trend between 1953 and 2007. This representation is flawed both statistically, because time series that contain a stochastic trend cannot be approximated by a deterministic trend (13), and historically, because the time trend overstates gains in radiative forcing during the 1950’s and overstates gains during the last 10 y (Fig. 1). As such, it cannot capture the slow-down in net anthropogenic forcings that allows the effects of declining solar radiation and changes from El Nino or La Nina to dominate the 1999–2008 period.

### 2NC I/L Wall

#### AND—prefer our modeling—the Hadley Center model puts the rest to shame.

Olive Heffernan, February 2010. Editor of Nature Reports Climate Change. “Earth science: The climate machine,” Nature 463, 1014-1016.

This massive supercomputer at the UK Met Office in Exeter is home to what is **possibly the world's most sophisticated climate model**. Developed by researchers at the Hadley Centre, the Met Office's climate-change branch, the newly finished model will be put to its first big test over the coming months. It will run a series of climate simulations out to the year 2100 for the next report of the Intergovernmental Panel on Climate Change (IPCC), on the physical-science basis of climate change, which is due out in 2013.¶ Four years in the making, the model is known as HadGEM2-ES, short for the Hadley Centre Global Environmental Model, version two, with an added Earth-system component. It is one of a dozen Earth-system models under development worldwide that reach far beyond their distant forebears, which represented just the physical elements of the climate, such as air, sunlight and water. The new generation includes all that and much more: forests that can shrink or spread as conditions change; marine food webs that react as the oceans grow more acidic with carbon dioxide; aerosol particles in the atmosphere that interact with greenhouse gases, enhancing or sapping their warming power.¶ The Hadley Centre is at the forefront of efforts around the world to develop such complex climate models. "**It's really pushing the envelope**", says Andrew Weaver, a climate modeller at the University of Victoria in British Columbia, Canada.

#### Climate commitment means warming would be unmasked.

K. C. Armour 1 and G. H. Roe 2, 2010. 1Department of Physics, University of Washington, Seattle,; and 2Department of Earth and Space Sciences, University of Washington, Seattle. “Climate commitment in an uncertain world,” Geophysical Research Letters 38, L01707, 5 PP.

Climate commitment—the warming that would still occur given no further human influence—is a fundamental metric for both science and policy. It informs us of the min- imum climate change we face and, moreover, depends only on our knowledge of the natural climate system. Studies of the climate commitment due to CO2 find that global temperature would remain near current levels, or even decrease slightly, in the millennium following the cessation of emissions. However, this result overlooks the important role of the non-CO2 greenhouse gases and aerosols. This paper shows that **global energetics require an immediate and significant warming following the cessation of emissions as aerosols are quickly washed from the atmosphere**, and the large uncertainty in current aerosol radiative forcing implies a large uncertainty in the climate commitment. Fundamental constraints preclude Earth returning to pre-industrial temperatures for the indefinite future. These same constraints mean that observations are currently unable to eliminate the possibility that we are already beyond the point where the ultimate warming will exceed dangerous levels. Models produce a narrower range of climate commitment, but under- sample observed forcing constraints.

#### Short lifetime means SO2 reductions would immediately cause warming.

Zeke Hausfather, 6/24/2008. MA Environmental Management @ Yale, Chief Scientist and Executive Vice President of Energy at Efficiency 2.0. “Why Reducing Sulfate Aerosol Emissions Complicates Efforts to Moderate Climate Change,” Yale Climate Forum, http://www.yaleclimatemediaforum.org/2008/06/common-climate-misconceptions-why-reducing-sulfate-aerosol-emissions-complicates-efforts-to-moderate-climate-change/.

A reduction of anthropogenic SO2 of around 50 percent worldwide over the next century, as projected in the most recent IPCC report, would result in a significant warming effect on the global climate. Sulfates are extremely short-lived particles, and emission reductions **would have immediate effects on radiative forcing**. A 50 percent reduction in sulfate aerosol emissions would reduce by half their current radiative forcing of -0.83 W m-2. This change in forcings would increase global temperatures by roughly 0.36 degrees C (.64 F) relative to a scenario where aerosol emissions remain constant.¶ Figure three below shows the practical implications of a reduction in aerosols in the next century. If current greenhouse gas concentrations remain constant at current levels, scientists project about 1.34 degrees C (2.41 F) warming relative to pre-industrial temperatures by the end of the century (the world has already warmed 0.74 degrees C (1.33 F) in the past century, and 0.60 degrees C (1.08F) additional warming is in the pipeline as a result of Earth’s thermal inertia). A reduction of anthropogenic atmospheric sulfate aerosols by 50 percent means that 1.34 degrees C (2.41 F) warming suddenly becomes 1.70 degrees C (3.06 F).

#### More IPCC models show that aerosols are masking more than half of GHG warming—reduction in emissions would cause a doubling of warming, above 2-degrees, within decades.

V. Ramanathan\* and Y. Feng, 9/23/2008. Scripps Institution of Oceanography, University of California at San Diego. “On avoiding dangerous anthropogenic interference with the climate system: Formidable challenges ahead,” PNAS 105.38, 14245-14250, www.pnas.org/content/105/38/14245.full.pdf.

IPCC (12) recommends a climate sensitivity of 3°C (2–4.5°C) warming for a doubling of CO2. The radiative forcing (i.e., additional energy trapped) caused by CO2 doubling is 3.7 Wm􏲐2 (11). Thus it takes 􏲏1.2 Wm􏲐2 (0.8–1.9) of forcing to warm the planet by 1°C. The preindustrial to present (year 2005) GHGs forcing is 3 (2.6 to 3.5) Wm􏲐2 (Fig. 2). It then follows that the expected warming caused by the 3 Wm􏲐2 forcing is 2.4°C (1.4–4.3°C), i.e., if the only anthropogenic climate forcing on the planet is caused by the build-up of GHGs and even if we prevent further increases in the GHGs beyond their 2005 levels, the planetary warming (since the preindustrial era) would reach 2.4°C (1.4–4.3°C). The probability distribution of this committed warming, determined by the uncertainty of the current understanding in climate feed- back processes (7), is shown in Fig. 1. Why have we not seen this large warming? First, we have to consider the effect of aerosols, which start off as urban haze or rural smoke and ultimately be- come transcontinental and transoceanic plumes of ABCs (17) consisting of sulfate, nitrate, hundreds of organics, black carbon, soil dust, fly ash, and other aerosols (11). ABCs have masked GHG warming by enhancing the albedo (per- cent of incoming solar radiation reflected back to space) of the planet. A recent review of available literature (18) estimates the masking effect of ABCs to be 􏲏47% (􏲐1.4 Wm􏲐2) with a 90% confidence interval of 20–80%. The IPCC-AR4 (11) value for the masking is 40% (see Fig. 2). Effectively, the forcing ‘‘felt’’ by the climate system is only 53%, i.e., 1.3°C, which is identical to CEW􏲘G􏲑A, the committed warming adapted by earlier studies (13–15). About 8% of the committed warming (0.2°C) is compensated by increases in the surface albedo because of land-use changes; 􏲏20% (0.5°C) is delayed by the thermal inertia of the oceans (14, 15) and it is only the balance of 􏲏25%, i.e., 0.6°C, that should by now have manifested as observed warming (14). This algebraic exercise demonstrates that the observed surface warming of 0.76°C (since the latter half of 1800s) (12) is not inconsistent with the committed warming of 2.4°C.¶ The fundamental deduction (subject to the assumption of IPCC climate sensitivity) is that if we get rid of the ABCs today the Earth could warm another 1.6°C (which includes the delayed warming caused by ocean thermal inertia) unless we act now to reduce GHG concentrations. As shown by coupled ocean atmosphere models used in IPCC (14, 15), 50% of this warming can happen in few decades, and most of the balance will manifest during the course of this century. The situation with respect to sea-level rise is considerably more complex. Sea-level rise caused by thermal expansion (in the range of 10 to 30 cm per century; see refs. 13 and 14) is likely to continue for centuries (even if the warming asymptotes to values close to CEW􏲘G by 2100) because of the time required for mixing of the heating to deeper oceans. In addition, the range of CEW􏲘G (1.4—4.3°C) raises another major DA I-related issue. As suggested by the IPCC (12) the Greenland Ice Sheet can disappear completely if surface warming is maintained in excess of¶ 1.9—4.6°C for millennia and raise sea level by 7 m or more.

### 2NC Warming Speed U

#### Warming is slowing because of sulfur aerosols.

[Louise Gray](http://www.telegraph.co.uk/journalists/louise-gray/), 11/26/2010. Environment Correspondent for the Telegraph. “Global warming has slowed because of pollution,” The Telegraph, http://www.telegraph.co.uk/earth/environment/climatechange/8159991/Global-warming-has-slowed-because-of-pollution.html.

The latest figures from more than 20 scientific institutions around the world show that global temperatures are higher than ever. ¶ However the gradual rise in temperatures over the last 30 years is slowing slightly. Global warming since the 1970s has been 0.16C (0.3F) but the rise in the last decade was just 0.05C (0.09F), according to the Met Office. ¶ Sceptics claim this as evidence man made global warming is a myth. ¶ But in a new report the Met Office said the reduced rate of warming can be easily explained by a number of factors. And indeed the true rate of warming caused by man made greenhouse gases could be greater than ever. ¶ One of the major factors is pollution over Asia, where the huge growth in coal-fired power stations mean aerosols like sulphur are being pumped into the air. This reflects sunlight, cooling the land surface temperature. ¶ Dr Vicky Pope, Head of Climate Change Advice, said pollution may be causing a cooling effect. ¶ “A possible increase in aerosol emissions from Asia in the last decade may have contributed to substantially to the recent slowdown,” she said. “Aerosols cool the climate by reflecting the sunlight.”

#### NOAA studies show sulfur aerosol accounts for a slowdown in warming.

[David Biello](http://www.scientificamerican.com/author.cfm?id=1013), 7/22/2011. Environment and energy editor for Scientific American. “Stratospheric Pollution Helps Slow Global Warming,” Scientific American, http://www.scientificamerican.com/article.cfm?id=stratospheric-pollution-helps-slow-global-warming.

Despite significant pyrotechnics and [air travel disruption](http://www.scientificamerican.com/article.cfm?id=iceland-volcano-airspace) last year, the Icelandic volcano Eyjafjallajokull simply didn't put that many aerosols into the stratosphere. In contrast, the eruption of Mount Pinatubo in 1991, put 10 cubic kilometers of ash, gas and other materials into the sky, and cooled the planet for a year. Now, research suggests that for the past decade, such stratospheric aerosols—injected into the atmosphere by either recent volcanic eruptions or human activities such as coal burning—are slowing down [global warming](http://www.scientificamerican.com/topic.cfm?id=global-warming-and-climate-change). "Aerosols acted to keep warming from being as big as it would have been," says atmospheric scientist John Daniel of the National Oceanic and Atmospheric Administration's (NOAA) Earth System Research Laboratory, who helped lead the [research published online in Science](http://www.sciencemag.org/content/early/2011/07/20/science.1206027.abstract) on July 21. "It's still warming, it's just not warming as much as it would have been." Essentially, sulfur dioxide gets emitted near the surface, either by a coal-fired power plant's smokestack or a volcano. If that SO2 makes it to the stratosphere—the middle layer of the atmosphere 10 kilometers up—it forms droplets of diluted sulfuric acid, known as [aerosols](http://en.wikipedia.org/wiki/Aerosol). These aerosols reflect sunlight away from the planet, shading the surface and cooling temperatures. And some can persist for a few years, prolonging that cooling. By analyzing satellite data and other measures, Daniel and his colleagues found that such aerosols have been on the rise in Earth's atmosphere in the past decade, nearly doubling in concentration. That concentration has reflected roughly 0.1 watts per meter squared of sunlight away from the planet, enough to offset roughly one-third of the 0.28 watts per meter squared of extra heat trapped by [rising atmospheric concentrations of greenhouse gases](http://www.scientificamerican.com/blog/post.cfm?id=a-24-degree-c-rise-by-2020-probably-2011-01-20) such as carbon dioxide. The researchers calculate that the aerosols prevented 0.07 degrees Celsius of warming in average temperatures since 2000. The question is: why the increase in such aerosols? There have been plenty of smaller volcanic eruptions in recent years, such as the continuously erupting Soufriere Hills on Montserrat and Tavurvur on Papua New Guinea, which may have exploded enough SO2 into the atmosphere. And there has been plenty of [coal burning in countries such as China](http://www.scientificamerican.com/article.cfm?id=price-of-coal-in-china-climate-change), which now burns some 3 billion metric tons of the fuel rock per year, largely without the pollution controls that would scrub out the SO2, as is sometimes done in the U.S. In fact, a computer model study published July 5 in Proceedings of the National Academy of Sciences suggested that such [SO2 pollution in China has cancelled out the warming](http://www.pnas.org/content/108/29/11790.abstract?sid=75d97da2-a6f1-41df-9069-483e3acc5d3b) effects of rising greenhouse gas concentrations globally since 1998. Determining whether humans or volcanoes explain more of the increase in stratospheric aerosols is the focus of ongoing research, says PhD candidate Ryan Neely of the University of Colorado, who contributed to the NOAA research. Combined with a decrease in atmospheric [water](http://www.scientificamerican.com/topic.cfm?id=water) vapor and a weaker sun due to the most recent solar cycle, the aerosol finding may explain why climate change has not been accelerating as fast as it did in the 1990s. The effect also illustrates one proposal for so-called [geoengineering](http://www.scientificamerican.com/article.cfm?id=geoengineering-and-climate-change)—the deliberate, large-scale manipulation of the planetary environment—that would use various means to create such sulfuric acid aerosols in the stratosphere to reflect sunlight and thereby hopefully forestall catastrophic climate change. But that points up another potential problem: **if aerosol levels**, whether natural or human-made, **decline in the future, climate change could accelerate**—and China is adding scrubbing technology to its coal-fired power [plants](http://www.scientificamerican.com/topic.cfm?id=plants) to reduce SO2 emissions and thereby minimize acid rain. In effect, fixing acid rain could end up exacerbating global warming. China "could cause some decreases [in stratospheric aerosols] if that is the source," Neely says, adding that growing SO2 emissions from India could also increase cooling if humans are the dominant cause of injecting aerosols into the atmosphere. On the other hand, "if some volcanoes that are large enough go off and if they are the dominant cause [of increasing aerosols], then we will probably see some increases" in cooling.

### 2NC AT: SO2 Declining

#### There’s just no chance Chinese pollution controls will be effective—corruption blocks regulations, incentives aren’t credible, current efforts have failed miserably to reduce pollution.

Lee Lane, September 2012. Visting Fellow @ the Hudson Institute, also a senior consultant at Charles River Associates. “The China Model and U.S. Energy Policy,” Hudson Briefing Paper, www.hudson.org/files/publications/TheChinaModelandUSEnergyPolicy--LeeLane0912.pdf.

The PRC’s inability to shift the focus away from heavy industry affects its environment as well as its economy. In fact, one main driver of the Chinese economy’s high energy and greenhouse gas intensity is not energy policy per se (though distorted prices there do add to the problem), but rather the government’s use of the financial services sector to funnel investment to heavy industry SOEs.52¶ High rates of investment have, to be sure, led to modernization of plant and equipment. As a result, industry’s energy efficiency has risen. The nature of heavy industries, though, limits the effect. Heavy industry is inherently energy intense. Therefore, the political system’s failure to shift capital away from infrastructure and heavy industry is a major source of the PRC’s environmental problems.¶ The stress on infrastructure may cause yet another unwanted side effect. Some of the investment in infrastructure is also being made in a pattern that encourages urban sprawl; such investments may reinforce the long-term trend toward an auto-centered transportation system.53 If so, they may entail future costs in the form of yet greater oil import dependency and greenhouse gas emissions.¶ The regulatory impasse ¶ Some of the harm caused by the failure to restructure the economy could be avoided if the PRC were able to enforce tough emission controls. But the heavy economic damage cited above testifies to the fact that environmental quality control is very weak. Universal rules limiting emissions exist, but the informal exemptions to the rules seem to be nearly as broad as the rules themselves.¶ In the electric power sector, a major source of air pollution and global warming gases, the conflicting incentives have led to substantial capital investments in power plant efficiency and pollution control equipment. **These investments**, however, **have reaped disappointingly small payoffs in environmental quality**. In effect, many power plants do not operate their pollution control equipment; as coal prices have risen, they have also substituted dirtier local coals for costlier, more distant supplies. The result is that **even newer, more modern power plants are often polluting at levels far above legal standards**.54¶ 13Some observers propose that the PRC should try to solve this problem by adopting pollution taxes. And the PRC is reportedly weighing a carbon tax on large enterprises. It has also adopted a regional carbon cap-and-trade system.¶ These proposals will have little, if any, effect on pollution.55 The proposed carbon tax, for instance, features a very low tax rate, reputedly about $1.60 per metric tonne of CO2. This tax rate would imply a cost increase of roughly $.014 per gallon of gasoline, if it actually applies to gasoline, which is unclear. The cap-and-trade system is also largely sham; it is designed not to actually lower total emissions, but to shift industry from east to west.¶ To lower emissions, a carbon tax must apply at least to firms that generate most of the emissions. It must, therefore, cover the energy sector as well as the large, energy-intense heavy industries like chemicals, metals, cement, and mining. These are the sectors that count with regard to CO2.56¶ They are also sectors in which SOEs reign, and in which entry barriers blunt competitive pressures. Oligopolistic markets and informal networks invite collusion. Budget constraints are soft, finances are opaque, and the firms themselves are often slow to innovate.¶ In other words, one could scarcely imagine a worse milieu for hopes that a pollution tax would actually lower emissions. In sum, market-based environmental policies would be good policy tools only if the PRC had privatized the SOEs and withdrawn the entry barriers that protect them. Without such reforms, carbon taxes or cap-and-trade schemes can have little or no impact on emissions.¶ Command-and-control measures might seem like a workable second-best approach, but they too are plagued with implementation problems. One root of the problem is that the SOEs’ political clout shields them from enforcement.¶ **Entrenched quasistate groups that control the most polluting heavy industries have colluded with leading families tied to the energy industry to forestall environmental regulation and ensure China continues to build polluting power plants**. When government reformers tried to create an “energy czar” so that China could manage both its energy needs and its environmental imperatives, such groups undermined the effort.57¶ A second root problem is that local officials have very weak incentives to impose costly measures on the firms that generate the growth on which their career prospects depend. To cope with that problem, Beijing sought briefly to promulgate new incentives. These were¶ designed to reward officials for environmental improvement. Measurement, though, proved to be impossible; the system lacked credibility, and it rapidly collapsed.58 Also, the judiciary, which is subject to political pressure, poses a barrier to enforcement.59

### 2NC AT: CO2 Reduction O/W

#### Timescale is key—reduction in emissions causes warming before long-term forcing effects materialize.

Katsumasa Tanaka and Thomas Raddatz, October 2011. Institute for Atmospheric and Climate Science, ETH Zurich, CICERO (Center for International Climate and Environmental Research—Oslo), and IIASA (International Institute for Applied Systems Analysis); and MPI-M (Max Planck Institute for Meteorology), Germany. “Correlation between climate sensitivity and aerosol forcing and its implication for the “climate trap”,” Climatic Change 109.3-4:815-25.

Another interesting feature of the two opposing forcing mechanisms is the marked difference in their timescale (IPCC 2007, p.203). Most of the GHGs stay in the atmosphere for many years, whereas aerosols are removed from the troposphere within days. Therefore, a rapid reduction in all emissions, i.e. a large-scale phase-out of fossil fuel combustion, would almost instantly eliminate the AF, leaving the remnant long-lived GHG forcing. In the following decades **this could counter-intuitively increase the total forcing in comparison to a scenario with steadily increasing emissions** (Wigley 1991; Hare and Meinshausen 2006), in particular, if the aerosol cooling effect is strong. An AOGCM study shows that an instant removal of all anthropogenic sulfate aerosols from the atmosphere could even increase the global temperature by about 0.8°C in the years thereafter (Brasseur and Roeckner 2005; IPCC 2007, p.567).

#### Long lifetime for CO2 means the positive impact of emissions reductions won’t be felt for decades—the short-term warming spike outweighs.

Jessica Strefler, Gunnar Luderer, and Elmar Kriegler, June 2012. Potsdam Institute of Climate Impact Research, Germany. “The role of aerosol emission and control for achieving ambitious climate protection targets,” iew2012.odandbrown.co.uk/files/2012/06/Strefler.pdf.

More than 100 countries have adopted the goal to limit temperature change to two degrees above the preindustrial level. To achieve this goal, the energy system has to undergo a transformation leading to substantial reductions of CO2 emissions. In 2005, around 84%of the CO2 emissions in the energy system arose from fossil fuel combustion. In these processes, SO2 is emitted simultaneously. Sulfur dioxide emissions form sulfate aerosols which are very likely to have a significant impact on the climate. The particles reflect the sunlight into space which has a direct cooling effect. The indirect effect refers to the alternation of cloud properties. The particles act as condensation nuclei, which decrease the drop size of the clouds. This changes their reflective properties and increases their lifetime. The two effects lead to a negative forcing which compensates some part of the Kyoto gas forcing. CO2 and SO2 are emitted simultaneously, but SO2 has a much shorter lifetime (days) in the atmosphere than CO2 with a lifetime of around 100 years. **This implies that a simultaneous reduction of CO2 and SO2 can result in an initial increase in radiative forcing, as the reduction of aerosols is translated much faster into a forcing signal than the reduction of CO2**. Therefore the negative aerosol forcing is often referred to as a masking effect.

### 2NC AT: Acid Rain—Impact Turns

#### Acid rain impacts are exaggerated—EPA research actually concluded that it was not that big of a threat.

William Anderson and Jacquelynne McLellan, July 2006. Economics for Managers and Decision Making Analysis in the M.B.A. program at Frostburg State University. “Newspaper Ideological Bias or “Statist Quo”? The Acid (Rain) Test,” The American Journal of Economics and Sociology 65.3.

Robert Angus Smith, an English chemist, discovered that rainfall in London and other industrial cities had become very acidic by 1852, and linked what he called “acid rain” to the burning of raw coal to power the factories and electric generators of industrial England (LaBastille 1981). However, the rainfall, which had a pH factor con- siderably lower than the 5.5 pH of “normal” rain, was not seen to be an environmental crisis until the 1970s, when scientists in the United States, Canada, and Scandinavia found that acidic surface waters of northern lakes could no longer support aquatic life. Paulos (1995) writes that popular press coverage often precedes detailed scientific analysis, and acid rain was no exception. The National Academy of Sciences predicted a 100-fold increase in acid lakes by 1990 if SO2 emissions were not severely curtailed (National Research Council 1981). However, only a small number of scientific studies had investigated acid rain and its effects, so in 1980 President Jimmy Carter commissioned the National Acid Precipitation Assess- ment Program (NAPAP) to examine the damage being caused by acid rain and to recommend solutions. President Ronald Reagan expanded the NAPAP program in 1982 from a $10 million to $100 million annual budget, and within a year, evidence emerged that contradicted the “mineral titration” theory then prevalent. The mineral titration theory assumed that acidic soils could not buffer acid rain, which then ran directly into lakes and streams and acidified them. But Krug and Frink (1983) disputed the connec- tion between lake acidity and acid precipitation, claiming that the composition of soil in the watersheds of lakes and streams had a greater impact upon surface water acidification than did rainfall.¶ Krug later wrote (1990, 1991) that core samples taken from acidic Adirondack lakes showed that those waters had been acidic even before the Industrial Revolution. Furthermore, other NAPAP studies found that the region with the highest concentration of acidic lakes was not upstate New York but rather Florida, where acid rain did not fall (NAPAP 1988). This finding was especially important because the news that many of Florida’s lakes were acidic originally had been reported as an example of the peril of acid rain. Furthermore, researchers found numerous lakes in the mountains of Australia and New Zealand to be acidic despite the fact that rainfall in that region had a normal pH (Anderson 1992).¶ NAPAP scientists (1989) also failed to turn up evidence that acid rain was destroying U.S. forests, including sugar maples. Researchers did document acid precipitation damage to approximately one-tenth of 1 percent of the high-altitude eastern red spruce forests, but found no other evidence of harm to trees and crops from acid rain (NAPAP 1989). Much of this news was included in the 1987 Interim Report that NAPAP presented to Congress. While one might suppose that mem- bers of Congress would have been pleased to find that an acid rain environmental disaster was not in the making, that is not what happened. Instead, most in Congress gave the researchers a hostile reception. Representative James Scheuer (D-NY), then chairman of the House Subcommittee on Natural Resources, Agriculture Research, and the Environment, attacked both the report and NAPAP director J. Laurence Kulp, who resigned his position a week later. Environmental groups described the Interim Report as “political propaganda” from the Reagan administration. NAPAP scientists were not unanimous about the findings, even though Roberts wrote: “The quality of NAPAP’s research effort is generally considered to be quite good, perhaps first rate, and there is little quarrel with the individual facts.” The disagreement among scientists, she adds, involved “the way the facts are presented—which tends to minimize the extent of the problem.” (Roberts 1987: 1404).¶ Newspaper Ideological Bias 479 Although scientists generally respected the NAPAP study, congressional leaders sided with environmentalists. When President George H. W. Bush pursued stringent new rules for SO2 reduction (50 percent), he and William Reilly, Bush’s appointed head of the Envi- ronmental Protection Agency, never publicly acknowledged any of the NAPAP findings. In the fall of 1990, Congress passed the new rules, which required a 10-ton reduction from daily point sources in SO2 emissions, and a 2-ton reduction in N2O from 1980 levels, along with an 8.9-ton cap on SO2 by the year 2000. The EPA permitted the NAPAP report to be released only after the bill became law. The earliest discussions of acid rain occurred within a worldview that accepted at face value that rainfall more acidic than “normal” automatically was dangerous. That modern industrial society has produced environmental degradation is well accepted and, like many paradigms, is rooted in observable facts.¶ IV¶ Acid Rain Coverage by Six Newspapers¶ THE EMPIRICAL EVIDENCE covers acid rain articles from six daily U.S. newspapers: Atlanta Constitution Chicago Tribune Los Angeles Times Boston Globe New York Times Washington Post These papers were chosen because of the markets they serve, and because acid rain allegedly did not affect their cities in the same way, thus potentially influencing the nature of their coverage of that issue. For example, the New York Times represents readership in New York City, but it also is read nationwide. It is also the most influential news- paper in the Northeast, where the country’s most acidic rainfall existed. The Washington Post, while read in other cities, influences the direction of government policy in the nation’s capital. The problem of acid rain, however, was not seen to be as great in Wash- ington, D.C., as it was in New York and New England.¶ The Tribune and the Constitution both serve markets where acid rain was not as significant as in the Northeast. However, their circulation markets were also served by electric utilities that generate most of their electricity by coal, and residents of Chicago and Atlanta found themselves potentially facing higher electric bills under pending acid rain legislation. The Boston Globe is the most influential news- paper in New England, where residents especially perceived danger from acid rain. Electric utilities in New England also use higher-cost fuels than coal, the fuel of choice for utilities in the Midwest and Southeast. While expensive, these fuels do not emit as great an amount of pollutants blamed for acid rain as do coal-burning power plants.¶ The Los Angeles Times is the major newspaper in the western United States, and no acidic rainfall occurred in Los Angeles. However, the Times historically has long favored strict pollution measures, as air pollution in Los Angeles has always been an important topic.¶ V¶ How the Press Covered Acid Rain¶ JOURNALISTS MOSTLY DISREGARDED the NAPAP study, choosing to stay with the original paradigm of acid rain as an immediate peril. All six papers carried the story of the September 1987 announcement, but discounted the information. The Boston Globe carried an “objective” story that said lake acidification in the United States “is not a new phenomenon,” but still implicated acid rain. The New York Times centered its story upon the controversial nature of the report, interviewing opponents of the summary. The Chicago Tribune interpreted the report as saying that acid rain did not pose a “broad threat to the environment,” affecting “only small areas.” The Washington Post, not surprisingly, dwelt upon the report’s political aspects instead of the science. The Los Angeles Times emphasized the controversy and environmentalist criticisms. Only the Atlanta Constitution noted that the report had its supporters, reprinting a favorable editorial from the Wall Street Journal. Newspapers in the United States were selective in quoting “experts.” The treatment given to Gene Likens as opposed to Edward Krug is a telling point. Likens was an ecology professor at Cornell University, and Krug was employed by the Illinois State Water Survey Division. According to Abdullah (1989), in 1985 Likens was ranked seventh in mean citations in the scientific acid rain literature, while Krug ranked third.¶ Yet, the mainstream press liberally quoted Likens, while Krug was nearly invisible, according to a LexisNexis search of acid rain articles from 1980 to 1993. The search reveals that Likens was cited 39 times in the press, most coming from papers like the New York Times, Boston Globe, Washington Post, and the Associated Press and United Press International.¶ Krug, however, was cited only nine times and then usually on edi- torial pages of conservative newspapers such as the Washington Times, Daily Oklahoman, and St. Louis Post-Dispatch. His only cita- tion in a major newspaper was in the Washington Post, and that was only because an EPA administrator attacked his views. The wire serv- ices cited him once, a UPI dispatch in 1983 in which other scientists attacked his article in Science.¶ In December 1990, CBS’s 60 Minutes questioned why the govern- ment ignored NAPAP, interviewing Krug and others. Howard Kurtz of the Washington Post then asked why environmental reporters had ignored the other side. He wrote that although the NAPAP report con- tained good news, it “was virtually ignored by the Washington Post and given scant attention by most major news organizations last year, even while Congress debated and approved new acid rain controls that will cost as much as $4 billion a year.” Wrote Kurtz: “Some reporters say privately that it is difficult to write stories that debunk the conventional wisdom of environmental activists, whom the press treats more deferentially than industry spokesmen and other lobbyists” (Kurtz 1991: A3). For example, the New York Times during the measurement period never quoted a scientist who was skeptical of the apocalyptic acid rain claims. Skeptics quoted by the Times usually were electric or coal industry representatives, or elected officials representing districts in which coal-burning power plants were located.

#### Acid rain is good on balance for fish, crops and forests.

Edward C. Krug, 1992. PhD in Soil Science from Rutgers and assistant soil scientist with the Connecticut Agricultural Experiment Station. “The Corrosion of Science," Liberty 5.4, National Center for Policy Analysis, http://www.ncpa.org/ea/eamj92/eamj92d.html.

In 1980, the Environmental Protection Agency asserted that the average lake in the northeastern United States had been acidified a hundredfold in the last 40 years by acid rain. And the National Academy of Sciences claimed that acid rain would double the damage again by 1990. But the 10-year National Acid Precipitation Assessment Program (NAPAP), conducted under the auspices of the EPA, has completely discredited these claims and shown them to be baseless. The $500 million study found that: \* The average lake in the Adirondacks was no more acidic now than it was before the Industrial Revolution. \* There had been no measurable change in the acidity of lakes over the preceding 10 years. \* Only 35,000 of the 200 million acres of U.S. lakes are too acidic to support sports fisheries - and most of this acidity is natural. The EPA's own research showed that acid rain may be good for fish. The principal effect of acid rain is to increase regional levels of sulfate in water. This in turn increases concentrations of calcium and magnesium in surface waters, causing more ionic concentration and making it easier for fish to survive. Acid rain may also be good for crops. Despite the fact that EPA officials and environmental groups have continued to target acid rain as a threat to the environment, scientists have found: \* The nitrogen and sulphur that make rain acidic are essential in large quantities to making crops grow. \* The world's first national acid rain program - in Sweden - determined that the principal effect of acid rain was improvement of crop yield and crop protein content. What about forests? The good news may outweigh the bad. \* Acid rain may be damaging less than 0.1 percent of U.S. forests by exposing red spruce at high altitudes to cold damage and making it grow too long into the winter. \* On the other hand, acid rain fertilizes 300 million acres of eastern forest in the United States.

#### Acid rain controls natural emissions of methane—this will return methane to pre-industrial levels by 2030.

The Guardian, 8/2/2004. “Acid rain not all bad,” http://www.guardian.co.uk/science/2004/aug/03/sciencenews.research.

Acid rain can benefit the environment by blocking one of the most powerful greenhouse gases, scientists said yesterday. ¶ Research led by Vincent Gauci, from the Open University's department of earth sciences, shows that the sulphur in acid rain dramatically reduces the natural production of methane, responsible for an estimated 22% of the greenhouse effect that is causing global warming. ¶ Acid rain, produced by industrial emissions of sulphur dioxide, destroys forests and kills fish and other aquatic animals. ¶ Over the past 20 years European industry has become much cleaner, and the EU is committed to further emission reductions by 2010. ¶ But the study, published in the journal Proceedings of the National Academy of Sciences, suggests it might be unwise to halt acid rain completely. ¶ Dr Gauci's research showed that other bacteria which thrive on sulphur compete with the methane-makers. Their numbers are so boosted by acid rain that they can significantly reduce methane generation from wetlands. Dr Gauci's team carried out experimental research on wetlands in Morayshire, Scotland, to test the effect of sulphur depositions on methane emissions. The data were then combined with a computer model from the American space agency, Nasa, to provide a global picture. ¶ It showed that the effect of acid rain from 1960 to 2030 **could reduce methane emissions to pre-industrial levels**. ¶ "The effect more than compensates for the increase in methane emission that would be expected as wetlands become warmer," said Dr Gauci. "In effect, **acid rain is acting like a lid on the largest methane source.** "

#### Methane is the key to solving warming—outweighs CO2.

Noam Mohr, August 2005. Research Scientist @ PETA with a physic degrees from University of Pennsylvania. “A New Global Warming Strategy: How Environmentalists are Overlooking Vegetarianism as the Most Effective Tool Against Climate Change in Our Lifetimes,” An EarthSave International Report.

This is a serious miscalculation. Data published by Dr. James Hansen and others5 show that CO2 emissions are not the main cause of observed atmospheric warming. Though this may sound like the work of global warming skeptics, it isn’t: Hansen is Director of NASA’s Goddard Institute for Space Studies who has been called “a grandfather of the global warming theory.”6 He is a longtime supporter of action against global warming, cited by Al Gore7 and often quoted by environmental organizations, who has argued against skeptics for subverting the scientific process.8 His results are generally accepted by global warming experts, including bigwigs like Dr. James McCarthy, co-chair of the International Panel on Climate Change’s Working Group II.9 The focus solely on CO2 is fueled in part by misconceptions. It’s true that human activity produces vastly more CO2 than all other greenhouse gases put together. However, this does not mean it is responsible for most of the earth’s warming. Many other greenhouse gases trap heat far more powerfully than CO2, some of them tens of thousands of times more powerfully.10 When taking into account various gases’ global warming potential—defined as the amount of actual warming a gas will produce over the next one hundred years—it turns out that gases other than CO2 make up most of the global warming problem.11 **Even this overstates the effect of CO2, because the primary sources of these emissions**—cars and **power plants—also produce aerosols**. Aerosols actually have a cooling effect on global temperatures, and the magnitude of this cooling approximately cancels out the warming effect of CO2.12 The surprising result is that sources of CO2 emissions are having roughly zero effect on global temperatures in the near-term! 13 This result is not widely known in the environmental community, due to a fear that polluting industries will use it to excuse their greenhouse gas emissions. For example, the Union of Concerned Scientists had the data reviewed by other climate experts, who affirmed Hansen’s conclusions.14 However, the organization also cited climate contrarians’ misuse of the data to argue against curbs in CO2.15 This contrarian spin cannot be justified. While CO2 may have little influence in the near-term, reductions remains critical for containing climate change in the long run. Aerosols are short-lived, settling out of the air after a few months, while CO2 continues to heat the atmosphere for decades to centuries. Moreover, we cannot assume that aerosol emissions will keep pace with increases in CO2 emissions.16 If we fail start dealing with CO2 today, it will be too late down the road when the emissions catch up with us. Nevertheless, the fact remains that sources of non-CO2 greenhouse gases are responsible for virtually all the global warming we’re seeing, and all the global warming we are going to see for the next fifty years. If we wish to curb global warming over the coming half century, we must look at strategies to address non-CO2 emissions. The strategy with the most impact is vegetarianism. Methane and Vegetarianism **By far the most important non-CO2 greenhouse gas is methane**, and the number one source of methane worldwide is animal agriculture.17 Methane is responsible for nearly as much global warming as all other non-CO2 greenhouse gases put together.18 Methane is 21 times more powerful a greenhouse gas than CO2.19 While atmospheric concentrations of CO2 have risen by about 31% since pre-industrial times, methane concentrations have more than doubled.20 Whereas human sources of CO2 amount to just 3% of natural emissions, human sources produce one and a half times as much methane as all natural sources.21 In fact, the effect of our methane emissions may be compounded as methane-induced warming in turn stimulates microbial decay of organic matter in wetlands—the primary natural source of methane.22 pg. 2

### 2NC AT: Ocean Acidification

#### No risk of catastrophic acidification.

Christopher Monckton, 2010. Chief Policy Advisor—Science and Public Policy Institute, former Special Advisor to UK Prime Minister Thatcher. “ANSWERS TO A FISHERMAN’S TESTIMONY ABOUT OCEAN ACIDIFICATION”, 4-28, <http://scienceandpublicpolicy.org/images/stories/papers/originals/answers_to_fishermans_testimony.pdf>.

Ocean acidification is real. It has been documented by researchers all over the world and there is no doubt that the pH of the ocean is dropping, becoming more acidic. There is no evidence whatsoever that the oceans have become “more acidic”. The oceans are in fact pronouncedly alkaline, and will remain so however much CO2 we add to the atmosphere. The pH or acid-base index is neutral at a value of 7; acid below 7; alkaline (also known as “base”) above The oceans are currently at a pH of 7.9-8.No serious scientist suggests that the oceans will become acid: at worst, they will come a little closer to neutrality. To put this in context, ordinary rainwater is acid, with a pH of 5.There is not the slightest danger that the oceans will become acid at all, yet alone as acid as harmless rainwater. The reason is that the oceans run over rocks, which react chemically with seawater to keep it firmly alkaline. Nor is it at all clear that “the pH of the ocean is dropping”. At most, the pH may have fallen by 0.1 acid-base units over the past century, but we do not know for sure because no comprehensive, worldwide measurements have ever been taken by a single research project, and there were certainly far too few measurements a century ago to provide a reliable baseline from which any such conclusion can be drawn. What is certain is that even a shift of as little as 0.1 acid-base units cannot have been caused by the change in CO2 concentration, because in the past 250 years we have added only 0.19% to the partial pressure of CO2 already pre-existing in the oceans. This is too little to make any measurable difference to the acid-base balance of the oceans.

#### Meta-analysis confirms acidification has only minor effects. And experiments OVERESTIMATE the effects by ignoring adaptation and community effects.

Iris Hendriks et al, 2010. C.M. Duarte, and M. Alvarez, Department of Global Change Research—Mediterranean Institute of Advanced Studies, “Vulnerability of marine biodiversity to ocean acidification: A meta-analysis,” Estuarine, Coastal and Shelf Science 86(2), January.

The meta-analysis of our database, **which includes 372 published experimental evaluations with control values** assembled from literature (Supplementary information Table S1), confirmed that acidification effects differed considerably across taxonomic groups and functions, but that **the magnitude of the changes were, overall, modest for acidification levels within ranges expected during this century**. Acidification does not occur in isolation, but in concert with other challenges such as warming, eutrophication, and increased UV radiation. There are, however, few studies examining the interactive effect of acidification and other direct or indirect results of global change, which may aggravate the effect of ocean acidification on marine organisms. This analysis suggests that marine biota do not respond uniformly to ocean acidification. Some experiments report significant impacts for vulnerable taxa at pCO2 values expected within the 21st century, **but there was no consistent evidence that suggests biological rates,** apart from calcification for one functional group, the bivalves**, might be significantly suppressed** across the range of pCO2 anticipated for the 21st century. Some organisms, particularly autotrophs, even showed enhanced growth under elevated pCO The data do suggest that calcification rate, the most sensitive process responding directly to ocean acidification (Gattuso et al., 1998 J.P. Gattuso, M. Frankignoulle, I. Bourrge, S. Romaine and R.W. Buddemeier, Effect of calcium carbonate saturation of seawater on coral calcification, Global and Planetary Change 18 (1998), pp. 37–4Article | PDF (107 K) | View Record in Scopus | Cited By in Scopus (153)[Gattuso et al., 1998], [Gazeau et al., 2007], [Leclercq et al., 2000] and [Riebesell et al., 2000]), will decline by, on average, 25% at elevated pCO2 values of 731–759 ppmv. These values will be reached within the 21st century (IPCC, 2007). However, the 25% decline in biological calcification rates at elevated pCO2 values of approximately 750 ppmv is likely to be an upper limit, considering that all experiments involve the abrupt exposure of organisms to elevated pCO2 values, while the gradual increase in pCO2 that is occurring in nature may allow **adaptive and selective processes to operate** (Widdicombe et al., 2008). These gradual changes take place on the scale of decades, permitting adaptation of organisms even including genetic selection. Short-term experimental results are likely to overestimate the impacts of acidification rates on marine organisms. The ambition and sophistication of experimental approaches need be expanded, to assess complex communities, rather than single species, and to assess responses to enhanced CO2 over long terms. Such long-term experiments to observe community responses to long-term exposure to enhanced CO2 have been successfully conducted for terrestrial systems. Experiments comparable to those conducted on land (e.g. Hättenschwiler et al., 2003), should be planned and conducted. The only such experiment so far available is the Biosphere 2 experiment, where responses of coral-reef communities included in the “ocean” biome of the Biosphere 2 facility were assessed (Atkinson et al., 1999). Also important, most experiments assessed organisms in isolation, rather than whole communities, whereas **the responses within the community may buffer the impacts.** For instance, seagrass photosynthetic rates may increase by 50% with increased CO2, which may deplete the CO2 pool, maintaining an elevated pH that may protect associated calcifying organisms from the impacts of ocean acidification.

#### Turn—lower pH from SO2 actually stimulates plankton growth—checks global warming.

Science Daily, 2/17/2005. “Pollution Can Convert Airborne Iron Into Soluble Form Required For Phytoplankton Growth,” http://www.sciencedaily.com/releases/2005/02/050213130304.htm.

A surprising link may exist between ocean fertility and air pollution over land, according to Georgia Institute of Technology research reported in the Feb. 16 issue of the Journal of Geophysical Research — Atmospheres. The work provides new insight into the role that ocean fertility plays in the complex cycle involving carbon dioxide and other greenhouse gases in global warming. When dust storms pass over industrialized areas, they can pick up sulfur dioxide, an acidic trace gas emitted from industrial facilities and power plants. As the dust storms move out over the ocean, the sulfur dioxide they carry lowers the pH (a measure of acidity and alkalinity) level of dust and transforms iron into a soluble form, said Nicholas Meskhidze, a postdoctoral fellow in Professor Athanasios Nenes' group at Georgia Tech's School of Earth and Atmospheric Sciences and lead author of the paper "Dust and Pollution: A Recipe for Enhanced Ocean Fertilization." This conversion is important because dissolved iron is a necessary micronutrient for phytoplankton — tiny aquatic plants that serve as food for fish and other marine organisms, and also reduce carbon dioxide levels in Earth's atmosphere via photosynthesis. Phytoplankton carry out almost half of Earth's photosynthesis even though they represent less than 1 percent of the planet's biomass. In research funded by the National Science Foundation, Meskhidze began studying dust storms three years ago under the guidance of William Chameides, Regents' Professor and Smithgall Chair at Georgia Tech's School of Earth and Atmospheric Sciences and co-author of the paper. "I knew that large storms from the Gobi deserts in northern China and Mongolia could carry iron from the soil to remote regions of the northern Pacific Ocean, facilitating photosynthesis and carbon-dioxide uptake," Meskhidze said. "But I was puzzled because the iron in desert dust is primarily hematite, a mineral that is insoluble in high-pH solutions such as seawater. So it's not readily available to the plankton." Using data obtained in a flight over the study area, Meskhidze analyzed the chemistry of a dust storm that originated in the Gobi desert and passed over Shanghai before moving onto the northern Pacific Ocean. His discovery: When a high-concentration of sulfur dioxide mixed with the desert dust, it acidified the dust to a pH below 2 — the level needed for mineral iron to convert into a dissolved form that would be available to phytoplankton. Expanding on this discovery, Meskhidze studied how variations in air pollution and mineral dust affect iron mobilization. Obtaining in-flight data from two different Gobi-desert storms — one occurring on March 12, 2001, and the other on April 6, 2001 -- Meskhidze analyzed the pollution content and then modeled the storms' trajectory and chemical transformation over the North Pacific Ocean. Using satellite measurements, he determined whether there had been increased growth of phytoplankton in the ocean area where the storms passed. The results were surprising, he said. Although the April storm was a large one, with three sources of dust colliding and traveling as far as the continental United States, there was no increased phytoplankton activity. Yet the March storm, albeit smaller, significantly boosted the production of phytoplankton. The differing results can be attributed to the concentration of sulfur dioxide existing in dust storms, Meskhidze said. Large storms are highly alkaline because they contain a higher proportion of calcium carbonate. Thus, the amount of sulfur dioxide picked up from pollution is not enough to bring down the pH below 2. "Although large storms can export vast amounts of mineral dust to the open ocean, the amount of sulfur dioxide required to acidify these large plumes and generate bioavailable iron is about five to 10 times higher than the average springtime concentrations of this pollutant found in industrialized areas of China," Meskhidze explained. "Yet the percentage of soluble iron in small dust storms can be many orders of magnitude higher than large dust storms." So even though small storms are limited in the amount of dust they transport to the ocean and may not cause large plankton blooms, small storms still produce enough soluble iron to consistently feed phytoplankton and fertilize the ocean. This may be especially important for high-nitrate, low-chlorophyll waters, where phytoplankton production is limited because of a lack of iron. Natural sources of sulfur dioxide, such as volcanic emissions and ocean production, may also cause iron mobilization and stimulate phytoplankton growth. Yet emissions from human-made sources normally represent a larger portion of the trace gas. Also, human-made emission sites may be closer to the storm's course and have a stronger influence on it than natural sulfur dioxide, Meskhidze said. This research deepens scientists' understanding of the carbon cycle and climate change, he added. "It appears that **the recipe of adding pollution to mineral dust from East Asia may actually enhance ocean productivity and, in so doing, draw down atmospheric carbon dioxide and reduce global warming**," Chameides said.

### AT: UV Impact

#### No increases in UV from ozone depletion. And any consequence is miniscule.

Singer and Crandall 91 [S. Fred, Prof Env Sci—UVA and former Dir. US Weather Satellite Program, and Candace, Editorial Dir.—Science and Environmental Policy Project, San Diego Union-Tribune, “Is the ozone doomsday scenerio based on hype?”, 7-7, L/N]

If the amount of ozone is reduced, more UV reaches the earth's surface.) Quite the contrary: Ground measurements of UV radiation taken at eight U.S. locations since 1974, and published in the journal Science in 1988 by Joseph Scotto and colleagues, show a slight decrease at most locations. 2. All skin-cancer estimates are based on the observation that these cancers occur more frequently as one moves south toward the equator, presumably because of increases in UV radiation due to the higher angle of the sun. It's actually a bit more complex than that. In warmer climates people also spend more time out-of-door and expose more of their skin to the sun. These factors -- rather than UV intensity -- may account for a large part of the observed increased increase in skin-cancer rates. 3. Behavioral factors aside, the increased risk of skin cancer from a 5 percent depeletion of stratospheric ozone, causing (theoretically) a 10 percent increase in UV intensity, is equivalent to moving 60 miles to the south, say from Los Angeles to San Diego. These facts are rarely revealed to the public, and certainly not by the EPA. The ozone hype suggests that the issue of CFC control is now based on politics rather than science.

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### Politics

#### Obama pushing compromise and working together – key to getting House GOP on board for his agenda – Immigration’s only chance

AFP 3 – 7 – 13 Obama tries new tack -- talking to Republicans, http://www.google.com/hostednews/afp/article/ALeqM5js8Vq2BpvFfWBXu5jLLYKRSN\_sMA?docId=CNG.da8c946c1afca2a51f978806a1ab4ca4.311

President Barack Obama has hit on a novel antidote to Washington's endless cycle of political crises: breaking bread with Republicans

Since his re-election triumph in November, Obama has used his political capital to harangue his foes, holding rallies across the country at which he accused rival Republicans of obstructing legislation and serving the rich.

His strategy worked up to a point -- securing new higher tax rates for the wealthy as he pocketed a political win in December over the fiscal cliff showdown.

But with the glow of his re-election waning, Obama came up short in the sequester clash last week as Republicans refused to bend on raising taxes -- and $85 billion in economy-sapping austerity was set in motion.

Two years of incessant budget melodrama between Obama and his foes on Capitol Hill have poisoned the political well but done little to tackle the debt load endangering America's future prosperity.

Now, Obama and conservative Republicans in the House of Representatives are left staring across a seemingly unbridgeable ideological divide.

Since Obama's ambitious second term agenda must clear a divided Congress, the onus is on the president to plot a way through Washington's dysfunction.

So Obama, who disdains the superficiality of backslapping politics, has embarked on a charm offensive -- and on Wednesday night he bought dinner for a dozen Republican senators out of his own pocket.

At an expensive hotel, Obama supped with senators John McCain, Lindsey Graham and others, vocal foes who have also expressed frustration at being stuck in the political purgatory of a Washington where nothing gets done.

Next week, the president will make a rare foray into enemy territory on Capitol Hill to address Republicans from both the Senate and the House.

For now, Obama appears to have dropped the "outside" game of campaigning to move public opinion against Republicans, instead probing whether there is any space for a deal on key issues.

Steven Smith, a former congressional staffer who is now a professor of political science at Washington University, St Louis, said the president had little choice but to try to change the political climate in Washington.

"If you can't deal with the House Republicans in the current political environment -- see if you can change the political environment," he said.

"What (Obama) is hoping is that Republicans in the Senate can start serving almost as opinion leaders for a new way of tackling these fiscal challenges."

Obama is courting Republican senators who may be willing to deal on issues like the national debt, the deficit and growing costs threatening entitlement programs like health care for the elderly.

"The President is interested in finding the members of the 'caucus of common sense,'" said White House spokesman Jay Carney.

A person familiar with Obama's thinking said the White House believes there may be a window for action since -- after the sequester and fiscal cliff dramas -- Washington is finally not on the cusp of an immediate crisis.

Obama aides also think some Senate Republicans may be ready to compromise -- a feeling bolstered by Graham's recent comment that he would swap $600 billion in new revenues in return for entitlement reform.

It is not the first time that Obama has tried dialogue with Republicans -- he tried unsuccessfully to conclude a grand bargain with House Speaker John Boehner aimed at $4 trillion in deficit reduction during his first term.

Obama says that offer is still on the table, but so frayed are his relations with Boehner that it seems doubtful the two of them share the necessary trust to strike a bargain.

Should he fare better with Senate Republicans, Obama hopes his new dance partners can build pressure on their brethren in the House to compromise, which might also ease the way for other top initiatives, like immigration reform.

Republicans, who have long accused Obama of hectoring them, welcome his change of tone.

"Where this goes, I don't know," said Graham, who recently met Obama along with McCain at the White House.

"I do believe (in) what the president has been doing lately, getting off the campaign trail (and) back into the normal way of doing business up here, of talking to each other."

Moderate Republican Senator Susan Collins agreed.

"The important thing is, for the first time in a very long time, the president appears to be doing some outreach to both Republicans and Democrats, and that's long overdue," she said.

Wednesday's dinner might have been a good start, but such is the philosophical gulf between Obama and Republicans that any deal still seems a long shot.

And with mid-term congressional elections in 2014, the window for bipartisan comity is short.

#### Capital is key – Obama is spending it now

CBS NEWS 3 – 4 – 13 <http://www.cbsnews.com/8301-250_162-57572441/white-house-obama-not-focused-on-2014-right-now/>

Carney today said that Mr. Obama does believe his agenda -- which includes a plan to reduce gun violence, immigration reform and measures like raising the minimum wage -- would be easier to enact with Democrats in control of both chambers. "But it is also the president's belief, and it is established in fact in recent history, that you can achieve important policy objectives with divided government," he said.

Carney insisted the president is expending "great political capital and energy" on working quickly to pass immigration reform. Republicans have shown interest, he noted, in both immigration reform and some gun control measures.

#### Coal lobby fights natural gas

Krauss 9—NYT Energy Staff [Clifford Krauss, Natural Gas Hits a Roadblock in New Energy Bill, http://www.nytimes.com/2009/09/07/business/07gas.html]

The natural gas industry has enjoyed something of a winning streak in recent years. It found gigantic new reserves, low prices are encouraging utilities to substitute gas for coal, and cities are switching to buses fueled by natural gas.

But its luck has run out in Washington, where the industry is having trouble making its case to Congress as it writes an energy bill to tackle global warming.

For all its pronouncements that gas could be used to replace aging, inefficient coal-fired power plants — and reduce greenhouse gas emissions in the process — lawmakers from coal-producing states appear committed to keeping coal as the nation’s primary producer of power.

Those influential lawmakers, from both parties, say that new technologies under development to capture and bury emissions of coal are a better bet than gas for long-term solutions to climate change.

The difference of opinion is about more than what is best for the environment, of course. Industry profits are riding on the outcome of the discussion — a rich mix of politics, environment, science and business.

A climate-change bill that passed the House in June, intended to cap greenhouse gas emissions, delivered benefits to renewable fuels like wind and solar and strengthened building codes to conserve energy.

But the cost of emitting carbon dioxide emissions under the terms of the bill remained at levels that would continue to provide a price advantage for coal in many regions of the country.

The Senate is planning to begin writing its own bill later this month.

“The Senate is more open to natural gas as a transition fuel than the House was,” said Senator Charles E. Schumer, Democrat of New York, “but the senators from the coal states who are crucial votes are going to want first consideration for coal.”

The gas industry’s leaders say they will descend on Capitol Hill in coming weeks to press their case about the advantage of gas, including that it emits about half the greenhouse gases as coal.

The industry has formed a new lobbying group, and it is planning a national campaign that includes television advertising. Executives want fewer allowances for coal. They also want legislation that gives incentives for companies to convert truck fleets from diesel to natural gas.

“Never in my life have I been confronted with something so obviously easy and good to do and have such Congressional apathy,” said Aubrey McClendon, chief executive of Chesapeake Energy and a leading voice in the industry. He added that he was still hopeful the Senate can improve the House bill.

But the coal industry will also be active. Vic Svec, a senior vice president at Peabody Energy, a large coal company, said coal was still a better fuel because its price is more stable than gas.

#### Coal lobby is powerful—will fight energy fights to keep it strong—insures a fight in congress

Choma 12—money-in-politics reporter for the Center for Responsive Politics [Russ Choma, Two Years After Mine Disaster, Coal Lobby Is Still Growing, https://www.commondreams.org/view/2012/04/06-0]

Two years ago today, the Upper Big Branch mine exploded, killing 29 miners and injuring two others. In the months after the tragedy, it became clear that the mine's owner, Massey Energy, had flouted safety requirements and tried to game the system. Led by CEO Don Blankenship, the company unapologetically pursued politicians at both the state and federal levels, dumping cash into campaigns and lobbying hard for less oversight.

Investigations into the disaster found that the company had successfully skirted orders to improve the safety of the mine, despite fines and warnings from regulators. In 2010, Blankenship resigned, and a few months later the company was sold to Alpha Natural Resources.

But the departure of the pugnacious coal executive, eager to use his money to influence power, hasn't lessened the industry's investment in Washington. In fact, OpenSecrets.org data shows that the amount of money spent by the coal industry on politicians and lobbying has only grown since the disaster.

In 2011, the industry spent at least $18.1 million lobbying on the federal level - millions more than the $14.9 million in 2009. That figure includes all types of companies with interests in coal, but the mining companies spend far and away the most money on lobbying -- companies like Peabody Energy, which spent $4.9 million last year, and CONSOL Energy, which spent $3.2 million. Massey's corporate successor, Alpha Natural Resources spent just over $1 million. Safety issues and mine oversight was an issue of concern listed on lobbying disclosure forms for all three companies.

To put that in perspective, the United Mine Workers, the largest miner's union, spent just $404,419 lobbying last year.

The industry's figures overall are slightly down compared to 2010, but are significantly higher than before the accident. Although there is evidence that mine safety has improved since the explosion, Congress has failed to pass any legislation addressing it. The correlation between lobbying expenditures and legislation, or lack thereof, is never clear -- but it's clear where campaign contributions go and who's pushing or resisting new legislation.

As a recent hearing on efforts by the Mine Health and Safety Administration (the agency responsible for overseeing mine safety) showed, Democrats are the ones pushing for new laws. And the industry has given far more money to Republicans -- about $3 million to Republicans and just $385,486 to Democrats.

The OpenSecrets.org analysis of contributions by the industry also shows that overall giving to candidates is on the rise. In the 2010 campaign cycle, individuals and PACs affiliated with the industry gave far more than ever before -- $8.1 million. That is more than double than the previous high-water mark in the 2002 cycle, when when individuals and PACs affiliated with the industry gave $3.7 million. And so far this cycle, with much of this year including the general election still to come, the industry has given $4.8 million, putting it on pace to possibly surpass last cycle.

Mine safety and the aftermath of Upper Big Branch is hardly the only major issue confronting the mining industry and causing them to spend money in Washington, to be fair: climate change and the role of coal-fired power plants in the nation's energy future are huge fights in Washington. Just yesterday, the American Coalition for Clean Coal Electricity launched a major new ad campaign to push coal-fired plants back to prominence in the discussion over domestic power sources.

#### Shortage of skilled workers in cyber fields undermines defense against attacks.

Reuters, 6/13/2012. “Experts warn of shortage of U.S. cyber pros,” http://www.reuters.com/article/2012/06/13/us-media-tech-summit-symantec-idUSBRE85B1E220120613.

Leading cyber experts warned of a shortage of talented computer security experts in the United States, making it difficult to protect corporate and government networks at a time when attacks are on the rise.

Symantec Corp Chief Executive Enrique Salem told the Reuters Media and Technology Summit in New York that his company was working with the U.S. military, other government agencies and universities to help develop new programs to train security professionals.

"We don't have enough security professionals and that's a big issue. What I would tell you is it's going to be a bigger issue from a national security perspective than people realize," he said on Tuesday.

Jeff Moss, a prominent hacking expert who sits on the U.S. Department of Homeland Security Advisory Council, said that it was difficult to persuade talented people with technical skills to enter the field because it can be a thankless task.

"If you really look at security, it's like trying to prove a negative. If you do security well, nobody comes and says 'good job.' You only get called when things go wrong."

The warnings come at a time when the security industry is under fire for failing to detect increasingly sophisticated pieces of malicious [software](http://www.reuters.com/sectors/industries/overview?industryCode=174&lc=int_mb_1001) designed for financial fraud and espionage and failing to prevent the theft of valuable data.

Moss, who goes by the hacker name "Dark Tangent," said that he sees no end to the labor shortage.

"None of the projections look positive," said Moss, who serves as chief security officer for ICANN, a group that helps run some of the Internet's infrastructure. "The numbers I've seen look like shortages in the 20,000s to 40,000s for years to come."

Reuters last month reported that the National Security Agency was setting up a new cyber-ops program at select universities to expand U.S. cyber expertise needed for secret intelligence operations against computer networks of adversaries. The cyber-ops curriculum is geared to providing the basic education for jobs in intelligence, military and law enforcement.

The comments echo those of other technology industry executives who complain U.S. universities do not produce enough math and science graduates.

#### Great power nuke warrrrrr

Jason Fritz, July 2009. Researcher for International Commission on Nuclear Nonproliferation and Disarmament, former Army officer and consultant, and has a master of international relations at Bond University. “Hacking Nuclear Command and Control,” <http://www.icnnd.org/latest/research/Jason_Fritz_Hacking_NC2.pdf>.

This paper will analyse the threat of cyber terrorism in regard to nuclear weapons. Specifically, this research will use open source knowledge to identify the structure of nuclear command and control centres, how those structures might be compromised through computer network operations, and how doing so would fit within established cyber terrorists’ capabilities, strategies, and tactics. If access to command and control centres is obtained, terrorists could fake or actually cause one nuclear-armed state to attack another, thus provoking a nuclear response from another nuclear power. This may be an easier alternative for terrorist groups than building or acquiring a nuclear weapon or dirty bomb themselves. This would also act as a force equaliser, and provide terrorists with the asymmetric benefits of high speed, removal of geographical distance, and a relatively low cost. Continuing difficulties in developing computer tracking technologies which could trace the identity of intruders, and difficulties in establishing an internationally agreed upon legal framework to guide responses to computer network operations, point towards an inherent weakness in using computer networks to manage nuclear weaponry. This is particularly relevant to reducing the hair trigger posture of existing nuclear arsenals. All computers which are connected to the internet are susceptible to infiltration and remote control. Computers which operate on a closed network may also be compromised by various hacker methods, such as privilege escalation, roaming notebooks, wireless access points, embedded exploits in software and hardware, and maintenance entry points. For example, e-mail spoofing targeted at individuals who have access to a closed network, could lead to the installation of a virus on an open network. This virus could then be carelessly transported on removable data storage between the open and closed network. Information found on the internet may also reveal how to access these closed networks directly. Efforts by militaries to place increasing reliance on computer networks, including experimental technology such as autonomous systems, and their desire to have multiple launch options, such as nuclear triad capability, enables multiple entry points for terrorists. For example, if a terrestrial command centre is impenetrable, perhaps isolating one nuclear armed submarine would prove an easier task. There is evidence to suggest multiple attempts have been made by hackers to compromise the extremely low radio frequency once used by the US Navy to send nuclear launch approval to submerged submarines. Additionally, the alleged Soviet system known as Perimetr was designed to automatically launch nuclear weapons if it was unable to establish communications with Soviet leadership. This was intended as a retaliatory response in the event that nuclear weapons had decapitated Soviet leadership; however it did not account for the possibility of cyber terrorists blocking communications through computer network operations in an attempt to engage the system. Should a warhead be launched, damage could be further enhanced through additional computer network operations. By using proxies, multi-layered attacks could be engineered. Terrorists could remotely commandeer computers in China and use them to launch a US nuclear attack against Russia. Thus Russia would believe it was under attack from the US and the US would believe China was responsible. Further, emergency response communications could be disrupted, transportation could be shut down, and disinformation, such as misdirection, could be planted, thereby hindering the disaster relief effort and maximizing destruction. Disruptions in communication and the use of disinformation could also be used to provoke uninformed responses. For example, a nuclear strike between India and Pakistan could be coordinated with Distributed Denial of Service attacks against key networks, so they would have further difficulty in identifying what happened and be forced to respond quickly. Terrorists could also knock out communications between these states so they cannot discuss the situation. Alternatively, amidst the confusion of a traditional large-scale terrorist attack, claims of responsibility and declarations of war could be falsified in an attempt to instigate a hasty military response. These false claims could be posted directly on Presidential, military, and government websites. E-mails could also be sent to the media and foreign governments using the IP addresses and e-mail accounts of government officials. A sophisticated and all encompassing combination of traditional terrorism and cyber terrorism could be enough to launch nuclear weapons on its own, without the need for compromising command and control centres directly.

### Exports

#### Plan causes exports

Ebinger et al 12 (Charles, Senior Fellow and Director of the Energy Security Initiative – Brookings, Kevin Massy, Assistant Director of the Energy Security Initiative – Brookings, and Govinda Avasarala, Senior Research Assistant in the Energy Security Initiative – Brookings, “Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas,” Brookings Institution, Policy Brief 12-01, http://www.brookings.edu/~/media/research/files/reports/2012/5/02%20lng%20exports%20ebinger/0502\_lng\_exports\_ebinger.pdf)

For an increase in U.S. exports of LNG to be considered feasible, there has to be an adequate and sustainable domestic resource base to support it. Natural gas currently accounts for approximately 25 percent of the U.S. primary energy mix.3 While it currently provides only a minority of U.S. gas supply, shale gas production is increasing at a rapid rate: from 2000 to 2006, shale gas production increased by an average annual rate of 17 percent; from 2006 to 2010, production increased by an annual average rate of 48 percent (see Figure 2).4 According to the Energy Information Adminis- tration (EIA), shale gas production in the United States reached 4.87 trillion cubic feet (tcf) in 2010, or 23 percent of U.S. dry gas production. By 2035, it is estimated that shale gas production will account for 46 percent of total domestic natural gas production. Given the centrality of shale gas to the future of the U.S. gas sector, much of the discussion over potential exports **hinges on the prospects for its sustained availability and development**. For exports to be feasible, gas from shale and other unconventional sources needs to both offset declines in conventional production and **compete with new and incumbent domestic end uses**. There have been a number of reports and studies that attempt to identify the total amount of technically recoverable shale gas resources—the volumes of gas retrievable using current technology irrespective of cost—available in the United States. These estimates vary from just under 700 trillion cubic feet (tcf) of shale gas to over 1,800 tcf (see table 1). To put these numbers in context, the United States consumed just over 24 tcf of gas in 2010, suggesting that the estimates for the shale gas resource alone would be enough to satisfy between 25 and 80 years of U.S. domestic demand. The estimates for recoverable shale gas resources also compare with an estimate for total U.S. gas resources (onshore and offshore, including Alaska) of 2,543 tcf. Based on the range of estimates below, shale gas could therefore account for between 29 percent and 52 percent of the total technically recoverable natural gas resource in the United States. In addition to the size of the economically recoverable resources, two other major factors will have an impact on the sustainability of shale gas production: the productivity of shale gas wells; and the demand for the equipment used for shale gas production. The productivity of shale gas wells has been a subject of much recent debate, with some industry observers suggesting that undeveloped wells may prove to be less productive than those developed to date. However, a prominent view among independent experts is that sustainability of shale gas production is not a cause for serious concern, owing to the continued rapid improvement in technologies and production processes.

#### US exports would go to China—prevents Russian deals

Hulbert 12 (Matthew, contributor to Forbes, Analyst at European Energy Review and consultant to a number of governments & institutional investors, most recently as Senior Research Fellow, Netherlands Institute for International Relations (Clingendael), previously Senior Research Fellow at ETH Zurich working on energy and political risk, 5/26 “Why American natural Gas will change the world” http://www.forbes.com/sites/matthewhulbert/2012/05/26/why-american-natural-gas-will-change-the-world/)

This 2020 ‘lead time’ is important for Europe, not just because it’s going to take some time for US LNG trains to gather speed, but because **the first wave of exports will predominantly go to Asia.** Japan has been in the headlines post-Fukushima boosting short term demand, but the real prize remains China. Gas demand has been going up 5% year on year, while LNG shot up 31% once China’s fifth import terminal went online. That’s closely followed by India where LNG remains a strategic priority given the impossibility of getting pipelines into Delhi via Pakistan or Afghanistan. Although India and China are actively developing domestic shale reserves, (Beijing has earmarked no less than 30bcm capacity), **America should have little problem taking Asian market share, particularly if it provides greater flexibility on take or pay contracts to hedge long term price risk.**

Indeed, the mere prospect of US LNG is Asia is already creating major problems for Middle East and Russian players trying to sell gas (LNG or pipeline) on an oil indexed basis. Australia is in no better shape; despite headline figures of 80mt/y of LNG by 2018 (i.e. the world leader), cost inflation is rife and coal bed plays are looking more costly to develop than originally thought. International players are still investing in Australia (ironically as a double hedge against US LNG flopping), but given that Australian LNG docks into Asian ports for around $17-$18MM/Btu, any softening of prices could leave current (and prospective) LNG projects in the red.

#### Natural gas deals are key to broader co-op

Dan 09 (Feng, Overseas Investment Environment Department, CNPC Research Institute of Economics and Technology, “Analysis on Natural Gas Geo-politics in Central Asia-Russia Region,” Submitted to the 21st World Energy Congress, http://www.worldenergy.org/documents/congresspapers/140.pdf)

With principles of “mutual benefits and win-win benefits”, China will promote cooperation with central Asian countries and Russia in natural gas sector to achieve multilateral common and balanced development. Major markets for Russia’s natural gas export are in Europe, however, in recent years, Europe promoted cooperation with other natural gas resource countries in the world to diversify its natural gas imports to ensure the energy safety. Accordingly, potential increases for Russia to export natural gas to Europe will be quite limited. By promoting cooperation with China in natural gas sector, Russia may optimize its country/region configurations for natural gas export. At the same time, maximum economic benefits can be achieved through generation of competitions. To secure higher benefits from energy, central Asian countries actively promoted a strategy for diversification of their natural gas export. To achieve these goals, these countries strengthened cooperation with Europe, Southeast Asian countries and Northeast Asian countries in energy sectors. Since China lies close to central Asian countries, pipeline construction is characterized by short distance and low costs. Accordingly, economic benefits are high for bilateral/multilateral cooperation in natural gas sector. In addition, in the Northeast Asia Region, China is the only way for exporting of natural gas from central Asian countries to other countries. China will be or already is the most important and practical choice for diversification of natural gas export in Russia and central Asian countries. The three parties are highly complementary in energy development strategies and in economic development. Multilateral cooperation in energy sectors are beneficiary for **economic development, energy safety and regional stability of all relevant parties.** In the future, China, Russia and central Asian countries should take full advantages of market and resource potentials to expand and deepen cooperation in gas sector continuously. On base of that, cooperation in other sectors can be promoted and expanded to achieve common and balanced development.

#### Solves Central Asian instability

Weitz 12 (Richard, the director of the Hudson Institute’s Center for Political-Military Analysis, “Superpower Symbiosis: The Russia-China Axis,” November/December, http://www.worldaffairsjournal.org/article/superpower-symbiosis-russia-china-axis)

Although sunny assessments about current Sino-Russian ties are correct, such alignments are vulnerable to **shifts in the underlying conditions that support them**. In the case of Russia and China, these shifting variables include China’s increasing military power, its growing economic penetration of Central Asia, and its impending leadership changes, along with Russia’s political disorders, dependence on a mono-economy of energy, and gloomy demographic prospects. These and other plausible changes could at some point undermine the foundations of their current entente. Interested third parties may or may not be able to shape these variables, but at least other governments need to understand the evolving dynamic of this important relationship and prepare for its future evolution.

Since the Soviet Union’s disintegration in the early 1990s, the two countries have for the most part acted on the basis of shared interests—particularly in maintaining stability in Central Asia, whose energy supplies are vital for both countries’ economic development. China consumes the resources directly, whereas Russian companies earn valuable revenue by reselling Central Asian hydrocarbons in third-party markets, especially in Europe. Both countries know that certain regional events such as further **political revolutions or civil wars** could adversely affect core security interests. Both governments especially fear ethnic separatism in their border territories supported by Islamic fundamentalist movements in Central Asia.

The shared regional security interests between Beijing and Moscow have meant that the newly independent states of Central Asia—Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan—have become a generally unifying element in Chinese-Russian relations. Their overlapping security interests in Central Asia are visible in the Shanghai Cooperation Organization (SCO). Since its founding in 2001, the SCO has essentially functioned as a Chinese-Russian condominium, providing Beijing and Moscow with a convenient multilateral framework to manage their interests in Central Asia.

#### Nuclear war

Ahrari 1 (M. Ehsan, Professor of National Security and Strategy of the Joint and Combined Warfighting School at the Armed Forces Staff College, August 2001, “Jihadi Groups, Nuclear Pakistan and the New Great Game,” http://www.strategicstudiesinstitute.army.mil/pdffiles/pub112.pdf)

South and Central Asia constitute a part of the world where a well-designed American strategy might well help avoid crises or catastrophe. The U.S. military would provide only one component of such a strategy, and a secondary one at that, but has an important role to play through engagement activities and regional confidence building. Insecurity has led the states of the region to seek weapons of mass destruction, missiles and conventional arms. It has also led them toward policies which undercut the security of their neighbors. If such activities continue, the result could be increased terrorism, humanitarian disasters, continued low-level conflict and potentially even major regional war or a thermonuclear exchange. A shift away from this pattern could allow the states of the region to become solid economic and political partners for the United States, thus representing a gain for all concerned.

### CP

#### Text: The United States federal judiciary should clarify that state agencies have discretionary authority to supplement federal remedies to the Telecommunications Act of 1996. The President should guarantee implementation of the Bush Ocean Action Plan.

#### Increases cooperative federalism --- and sends a signal

Weiser 1 [Philip, Associate Professor of Law, University of Colorado, "ARTICLE: FEDERAL COMMON LAW, COOPERATIVE FEDERALISM, AND THE ENFORCEMENT OF THE TELECOM ACT," 76 N.Y.U.L. Rev. 1692, Lexis]

Finally, the federal courts should make clear that state agencies enjoy discretionary authority to supplement federal remedies to the Telecom Act.391 State agencies should feel free to develop special contract law rules to serve the federal law's goals. Perhaps, for instance, some states might recognize a "special relationship" under contract law, imposing obligations on incumbent providers in recognition of their great market power.392 Conceivably, states might take such an approach as an alternative to a federally created remedy-as long as they make clear that they provided the minimum remedy required by federal law, so that federal courts can review the decision under a Michigan v. Long-type standard. 393 Put simply, federal courts should encourage states to experiment with such creative remedies, thereby fulfilling the promise of cooperative federalism.

Burton 5 (R.M. Johnnie, Director – Minerals Management Service, “Offshore Hydrocarbon Production,” 4-19, http://www.gpo.gov/fdsys/pkg/CHRG-109shrg22930/html/CHRG-109shrg22930.htm)

MMS has worked diligently for the past 20 years to create a framework for science-based decision in consultation. The U.S. Ocean Commission on Ocean Policy in its report stated, ``The scope and comprehensiveness of the OCS oil and gas program can be a model for the management of a wide variety of offshore activities.'' The OCS is estimated to hold about 60 percent and 41 percent of the Nation's remaining undiscovered oil and gas resources, respectively. However, there is great uncertainty regarding the potential in areas where the last geophysical surveys and drilling exploration occurred more than 25 years ago. We simply do not have specific reliable estimates without the information new geophysical and exploration methods would provide. Over the past few years, we have witnessed increased interests in alternative uses of the OCS, such as wind and wave energy, which was mentioned before. However, we are confronted with a lack of legislative authority to consider some of these proposals. The administration developed a legislative proposal to address these alternative use issues. Enactment of this proposal is called for in the President's Ocean Action Plan.

### EPA

#### Obama commitment to climate is boosting EPA authority

Strassel 1/24/13 [KIMBERLY A. STRASSEL, “The Real Obama Climate Deal,” Wall Street Journal, January 24, 2013, 8:20 p.m. ET, pg. http://tinyurl.com/ag7rmn2

President Obama set off a guessing game this week as to what he intended with his inaugural promise to double down on climate change. There's no need to guess. California Democrat Barbara Boxer, the Senate's climate guru, was happy to fill in the gory details. The president's climate shout-out sent the green community into flurries of ecstasy, with grand hopes of a new push for cap-and-trade in Congress, or of a redoubled U.S. commitment to a global carbon pact. It fell to Mrs. Boxer to tamp down those ambitions, even as she reassured her devotees that there is more than one way to skin the climate cat. "A lot of you press me . . . on: 'Where is the bill on climate change? Where is the bill?' There doesn't have to be a bill," Mrs. Boxer explained in a briefing the day after Mr. Obama's speech. "I'm telling you right now, EPA has the authority in the transportation sector, the electricity sector, and the industrial sector under the Clean Air Act" to do everything that legislation might otherwise do. In other words, with the election over, all pretense is gone. Democrats won't waste political capital on a doomed cap-and-trade bill. Yet they'll get their carbon program all the same, by deputizing the EPA to impose sweeping new rules and using their Senate majority to block any GOP effort to check the agency's power grab. The further upside? Brute regulation is not only certain and efficient, it allows vulnerable Democrats to foist any blame on a lame-duck administration. Mrs. Boxer has spent years on climate, and she wouldn't be surrendering her legislative ambitions without clear assurances the White House has her covered. Her words were a signal that the Obama EPA is about to re-energize the regulatory machine that it put on ice during the election. Republicans who hoped Lisa Jackson's resignation signaled a more humble EPA approach should instead prepare for an agency with a new and turbocharged mission.

#### EPA staffers are sensitive to presidential messaging

**Andreen 07**– Professor of Law @ University of Alabama (Roll Tide) [William L. Andreen, “Motivating Enforcement: Institutional Culture and the Clean Water Act,” 24 Pace Envtl. L. Rev. 67 (2007) pg: <http://digitalcommons.pace.edu/pelr/vol24/iss1/4>

In a recent article, Professor Joel Mintz perceptively observed that one generally unrecognized characteristic of EPA enforcement is "its high sensitivity to staff-level perceptions and concerns." 128

He quotes a former EPA regional official as saying: The people [at the EPA] who work on enforcement are very sensitive to signals about what they are doing. Because enforcement has always been.., controversial and contentious, it is... critical that the people working on it have entirely clear signals that enforcement is important, . . . and that the people who do the work will be supported. Those signals have to come from the top. 129

Ambiguous signals from the top can easily be read by the staff as a kind of coded message expressing reluctance about, perhaps even hostility towards, enforcement. Hence, as a senior EPA enforcement official recently recounted: The current [Bush] administration would typically say[:] "Oh, I want you to enforce, but can you please check in with us before you do any major new cases, e.g., concentrated animal feeding operations (CAFOs)." That was taken by the staff as a directive not to enforce .... [Former EPA Administrator Christine Todd] Whitman also sent her political staffers out to check on particular cases. That also chilled enforcement. 130

The consequence, of course, was a severe downturn in EPA enforcement from 2002 to 2003.131 While one would expect enforcement personnel to scrutinize the language and action of the agency's political appointees, it is a little surprising that it appears so easy at times for the agency's top brass to intentionally or even unintentionally slow down EPA enforcement. Pg. 86

#### Gas drilling contradicts the current message

**Begos 12** [Kevin Begos, “President Barack Obama faces historic natural gas drilling choice,” Associated Press, Posted:11/17/2012 10:52:34 PM MST

PITTSBURGH -- Energy companies, environmental groups, and even Hollywood stars are watching to see what decisions President Barack Obama makes about regulating or promoting natural gas drilling.

The stakes are huge. Business leaders don't want government regulations to slow the flow of hundreds of billions of dollars of clean, cheap domestic energy over the next few decades. Environmental groups see that same tide as a potential threat, not just to air and water, but to renewable energy. And on a strategic level, diplomats envision a future when natural gas helps make the U.S. less beholden to imports.

Some say the unexpected drilling boom presents historic options -- and risks -- for the Obama administration.

"It's a tough choice. The president is in a real bind," said Charles Ebinger, director of the energy security initiative at the Brookings Institution, a Washington, D.C., nonprofit. "I think the question is what does he want his legacy to be?"

Ebinger said that if Obama fully embraced the boom in gas drilling the nation could see "incredible" job gains that could lead to "a re-industrialization of America." Possibilities like that are tempting to any president, and perhaps even more so in the current economy.

"But really embracing this stuff is going to bring him squarely in conflict with some of his environmental supporters. It's not without some possible peril, particularly if he gets to be seen too cozy with the oil and gas folks," Ebinger said.

#### EPA’ climate adaptation strategies protect water supplies

**Goad 2/8/**13 [Ben Goad, “EPA moves forward with climate change protection plan, asks for comments,” The Hill, 02/08/13 10:55 AM ET, pg. http://tinyurl.com/aaz8ual

It is essential that EPA adapt to anticipate and plan for future changes in climate,” according to [the 55-page plan](http://epa.gov/climatechange/pdfs/EPA-climate-change-adaptation-plan-final-for-public-comment-2-7-13.pdf), which carries a 2012 date but was put forth now for public consideration. “It must integrate, or mainstream, considerations of climate change into its programs, policies, rules and operations to ensure they are effective under future climatic conditions.”  
Rising sea levels, loss of snowpack and drought linked to climate change will likely require the agency to take additional steps to protect watersheds, wetlands and water supplies, the report argues.   
Increasing temperatures and more frequent extreme weather events, meanwhile, will demand measures to protect public safety and adapt emergency response plans, it says.  
The report does not propose specific rules but rather sets a framework to support and prioritize future actions. By 2015, the report says, EPA will have integrated “climate change science trend and scenario information” into its rule-making processes.

The agency would also account for future global warming in its grant and loan programs and contract decisions by that year, according to the report.

Earthjustice, a nonprofit environmental advocacy group, lauded the plan.

“We are pleased the EPA is getting its house in order to respond to climate change impacts on its personnel, facilities and programs, said Sarah Saylor, senior legislative representative for the group. "This type of planning can be used to inspire states, regions, localities and individuals to follow suit."

The plan stems from Obama’s 2009 executive order requiring federal agencies to issue annual Strategic Sustainability Performance Plans, which set targets for reducing waste and pollution. For the first time this year, those plans include the climate change adaptation plans, which can be viewed [here](http://sustainability.performance.gov/).

#### The impact is water wars

**Hodges 12** [Dave Hodges, “The Coming Water Wars,” [The Common Sense Show.com](http://www.thecommonsenseshow.com), December 11, 2012, pg. http://www.thecommonsenseshow.com/2012/12/11/the-coming-water-wars/

Very soon, America will be forced into water wars in order to secure the precious asset of water for our people. This will force our people into more wars of occupation in a search for water. Meanwhile, every nation that America conquers, is one less country that the bankers have to worry about taking over. At the end of the day, if America wants water, someday, Americans will have to go to war to obtain water.

As any aware person knows, Agenda 21 is being used as a front for the purpose of increasing the bottom of line of select global corporations. Bolivia is being exploited to this end and is serving as the canary in the mine with regard to what lies ahead for the United States and the coming water wars.

The United States sits upon a fiscal cliff. Economic devastation is in the cards for the US. Many wonder what will happen when the country defaults and cannot pay its bills. The answer is simple, our country will enter receivership. Once receivership is thrust upon our country, the bankers will begin to take control of our assets. Among the prize assets coveted by the globalist bankers will be our water supply.  Soon, very soon, our water supplies will become the most expensive in the world. Obtaining water for many Americans will soon be a life and death struggle.

#### Nuclear escalation

**Hellman 12** – Professor Emeritus of Electrical Engineering @ Stanford University [Dr. [Martin Hellman](http://www-ee.stanford.edu/%7Ehellman/), [War Games and Nuclear Risk](http://nuclearrisk.wordpress.com/2012/11/25/war-games-and-nuclear-risk/),” Defusing the Nuclear Threat, [November 25, 2012](http://nuclearrisk.wordpress.com/2012/11/25/war-games-and-nuclear-risk/), pg. http://nuclearrisk.wordpress.com/2012/11/25/war-games-and-nuclear-risk/

A 2008 RAND [Project Air Force report](http://www.rand.org/content/dam/rand/pubs/monographs/2008/RAND_MG614.pdf) states:

In 2004, Director of Air Force Strategic Planning Major General Ronald J. Bath sponsored a war game in which uncontrolled escalation occurred, surprising players and controllers alike … this experience was just one in a series of escalatory events occurring in major war games over the past several years.

A [2012 report](http://www.ifri.org/downloads/pp40morgan.pdf) by the lead author of the above report, RAND’s Dr. Forrest E. Morgan, added a few more details:

By 2004, strategic planners at Headquarters U.S. Air Force had become concerned that they did not adequately understand escalation risks in the contemporary security environment. … An increasing number of war games … had ended in uncontrolled escalation, games in which the scenarios called for only limited U.S. military intervention against notional adversaries that were clearly outmatched by U.S. forces. … At first game analysts assumed the outcomes were spurious, the result of overly aggressive “red teams” … But the increasing frequency with which the games turned escalatory and the wide range of participants and scenarios suggested that something else was at work, something that Air Force planners did not understand.

While classification prevented more details from being disseminated, Yale Professor Paul Bracken’s excellent, [just-released book](http://www.amazon.com/The-Second-Nuclear-Age-Strategy/dp/080509430X/ref=tmm_hrd_title_0?ie=UTF8&qid=1353829045&sr=8-1), The Second Nuclear Age, reveals significant details of a June 1983 war game, codenamed Proud Prophet (pp. 81-89).\* This war game differed from earlier exercises in that Secretary of Defense Caspar Weinberger and JCS Chairman. General John W. Vessey Jr. played themselves and our actual war-fighting plans were used. According to Bracken:

The result was a catastrophe that made all the wars of the past five hundred years pale in comparison. A half billion human beings were killed in the initial exchanges and at least that many more would have died from radiation and starvation. NATO was gone. So was a good part of Europe, the United States, and the Soviet Union. Major parts of the northern hemisphere would be uninhabitable for decades. (page 88) …

This game went nuclear big time, not because Secretary Weinberger and the chairman of the Joint Chiefs were crazy but because they faithfully implemented the prevailing U.S. strategy. (page 88) …  after Proud Prophet, there was no more over-the-top nuclear rhetoric coming out of the United States. Launch on warning, horizontal escalation, early use of nuclear weapons, tit-for-tat nuclear exchanges – these were banished, conceptually and rhetorically. The Reagan administration switched gears. The chairman of the Joint Chiefs spent the next several years cleaning up U.S. war plans. Nuclear threats were gone. (page 89)

But is the nuclear threat gone today? The 2004 war games, described above, seem to indicate that threat is alive and well, as do recent implied US nuclear threats against both Russia and China – see my blog posts of [November 10](http://nuclearrisk.wordpress.com/2012/11/10/us-creates-nuclear-trip-wire-in-poland/), [September 28](http://nuclearrisk.wordpress.com/2012/09/28/another-early-warning-sign/), and [September 26](http://nuclearrisk.wordpress.com/2012/09/26/poking-the-russian-bear-and-baiting-the-chinese-dragon/) for details. And, as Prof. Bracken’s book ably demonstrates, nuclear proliferation and terrorism have added dangerous new dimensions.

### \*Solvency 1nc

#### Decades until production

#### Murawski 12 [John, "Opening Atlantic Ocean to offshore drilling likely," 10-2, http://www.newsobserver.com/2012/10/02/2384560/opening-atlantic-ocean-to-offshore.html#storylink=cpy]

But even if the Atlantic Ocean is opened to energy companies, oil and gas production would likely not get underway for at least a decade. The energy exploration cycle is heavily regulated and requires seismic testing, environmental assessments, oceanographic mapping, military reviews and other regulatory hurdles before any oil and gas can start flowing. “There’s no way to speed this up,” said Athan Manuel, director of the Sierra Club’s lands protection program. The latest federal estimates from the U.S. Bureau of Ocean Energy Management for the entire Atlantic coast is between 11 trillion cubic feet and 54 trillion cubic feet of natural gas – well below the 84.2 trillion cubic feet found in the Marcellus Shale that spans New York and Pennsylvania. The amount of oil is likely between 1.3 billion barrels and 5.58 billion barrels, less than a year’s supply. With the market price of gas hovering near all-time lows, the Energy Information Administration, a division within the U.S. Department of Energy, has estimated that no oil or gas will be produced in the Atlantic or outer continental shelf before 2035. Drilling offshore could begin 3 miles beyond the coast, the point at which federal waters begin, extending as far as 200 miles in the ocean. Each mile away from land increases the cost of pipelines, land-to-rig travel and drilling in ever-deeper waters. $66M to $400M a year Beyond the engineering and technical challenges, offshore drilling would mobilize state governments to press Congress to change federal law to allow states to collect royalties on the lease fees, as is done for Gulf Coast states. North Carolina could collect $66 million to $400 million a year for the life of the reserves, according to a 145-page report issued September 2011 by a scientific advisory panel created by Gov. Perdue. The revenue amount, at the top end, could approach 2 percent of the state’s $20.2 billion annual budget. “You could scatter that money around all over state government,” said Weatherspoon of the N.C. Petroleum Council. He said the money could bolster programs such as environmental regulation, mental health services, community colleges and others that have been hard-hit by budget cuts. Weatherspoon said that offshore exploration would pit neighboring states against each other to host shore bases that would supply and support the offshore rigs. Such bases could involve hundreds of jobs in metallurgy, food preparation, transportation and related work. A 2009 report from the Southeast Energy Alliance, an industry trade group, estimated that offshore drilling could create 6,700 new jobs in North Carolina. Bill Holman, director of the State Policy Program at Duke University’s Nicholas Institute for Environmental Policy Solutions, said chances are slim that North Carolina could compete with larger ports in South Carolina and Virginia. Holman based his assessment on his tenure as a member of another offshore study panel, the Legislative Research Commission’s Advisory Subcommittee on Offshore Energy Exploration, which prepared a report in 2010. He said little research has been done on offshore resources, and noted that projected natural gas prices suggest that little will change in this regard in the near future. “We’re at the same state of knowledge on these issues as we were 20 years ago,” Holman said. “Until the price of natural gas goes way up, I’d be surprised if there would be very much interest, given the cost of developing those offshore resources versus the cost of developing the known resources.”

#### Drilling will destroy numerous biological hotspots

Gravitz 9—Oceans Advocate for Environment America [Michael Gravitz, Statement at the Department of Interior Hearing On Offshore Ocean Energy Development in Atlantic City, New Jersey, April 6, 2009, pg. http://tinyurl.com/cxkzanz]

3. When deciding whether to approve seismic testing or exploration and production off the east coast, your department needs to balance the safety of those special areas against the potential for damage from oil drilling. The only way to adequately assess the balance would be for your department (with the participation of NOAA and possibly the National Academy of Science) to do a comprehensive census of those special places and analyze possible impacts on them from drilling.

1. The Ocean: More Like A Diverse Forest Than A Desert

Many people look at the ocean and see it as a pretty, shiny surface. They may imagine a few fish swimming below the surface and a plain featureless bottom. This is not an accurate picture of the ocean in most places. Unless the bottom is sandy and continually disturbed by wind, wave or current the bottom of the ocean is filled with communities of diverse creatures. Depending on depth, penetration of light, type of bottom (i.e., muddy, sandy, pebbles, boulders) and other factors, the ocean’s floor is teaming with diverse communities of plants, invertebrates, shellfish, crustaceans and fish. Numerous kinds of fish live on the bottom. Other fish swim above the bottom in the water column at different levels. Thousands of types of phytoplankton, zooplankton and larvae at the base of most food chains ‘float’ around. Marine mammals, sea turtles and sea birds spend most of their time at or near the surface of the ocean.

All of these creatures are sensitive to the impacts of oil and pollution from oil and gas drilling; some are more sensitive than others. But none are immune to the short or long term effects of oil.

With this as background, it is important to recognize the special places in the ocean that are unique, especially sensitive to pollution or those that are especially productive. These include: submarine canyons cutting across the continental shelf; deep water coral gardens; plateaus where the floor of the ocean rises and becomes unusually productive because deeper nutrient rich waters come closer to the warmer temperatures and light of the surface; migratory pathways for marine mammals and sea turtles; and areas where fish aggregate to spawn or where larval stages of animals are concentrated. Finally, the margins of the ocean: beaches, bays and marshes are often unusually sensitive to oil pollution.

2. Special Places in the Atlantic Ocean Deserving of Protection

Based on the Environmental Sensitivity Index (ESI) and a crude measure of marine productivity that your own department uses, the New England, Mid Atlantic and South Atlantic planning areas are all very environmentally sensitive and highly productive. The South Atlantic planning area and Mid Atlantic have the first and third most environmentally sensitive coastlines, respectively, of all 22 MMS planning areas. New England comes in at #11. The South Atlantic and Mid Atlantic are ranked first and second respectively in terms of primary productivity among all the planning areas with North Atlantic being #12.

There are 14 submarine canyons between Massachusetts and Virginia that slice through the continental shelf (See attached list). Submarine canyons, some with a mouth as wide as eight to ten miles and 30-40 miles long, are important because they shelter unusual species, provide hard bottoms and sidewalls for creatures to attach to or burrow in, provide nursery areas for many commercially important fish and bring nutrients from the deep ocean up to more shallow waters. Sea life in these canyons is unusually diverse which is why drilling in or near submarine canyons with their risk from spills and chronic pollution from production would be a very bad idea.

There are a number of important underwater plateaus and reefs off the eastern seaboard which serve as fish baskets, places of unusual marine productivity where very high populations of fish reproduce and grow. Often these are called ‘banks’ or ‘reefs’ with names like Georges Bank, Stellwagen Bank, Gray’s Reef or Occulina Bank. Some of these areas of the ocean are shallow enough to allow sunlight to penetrate to the seafloor and nutrients from the deeper ocean feed a richer abundance of life. These banks and reefs sometimes offer the only hard substrate for creatures to attach in a wide area. . Drilling in biological hot spots like these and jeopardizing productive commercial and recreational fisheries would make no sense.

Like on land, certain areas of the ocean support migration corridors for fish, marine mammals, sea turtles and sea birds. For much of the Mid Atlantic there is a coastal corridor extending out 20 miles from shore in which endangered marine mammals like the northern right whale, various sea turtles and migratory fish travel. For example, the last 350 northern right whales on earth travel each year from the Georgia-Florida border where they give birth and nurse their calves to an area off Cape Cod where they spend the summer feeding. Loggerheads, leatherback and Kemp’s ridley turtles all use this corridor at various times of the year.

Another corridor, farther offshore at the edge of the continental shelf break and slope provides food for various endangered sea turtles and other kinds of whales and dolphins. Whales and dolphins are typically migratory and each is only seasonally present but taken together the area is important year round to these marine mammals.

There are four more hotspots of marine diversity and unusual productivity off the Mid Atlantic caused by ocean currents, type of bottom, [and] submarine canyons and other special characteristics. These include: the coastal waters off North Carolina near and south of Cape Hatteras, the mouth of the Chesapeake and Delaware Bays and off New York harbor. Coastal waters and sandy bottoms off New Jersey support a large and economically important clam and scallop industry.

#### Human survival is at risk

Nautiyal & Nidamanuri 10—Centre for Ecological Economics and Natural Resources @ Institute for Social and Economic Change & Department of Earth and Space Sciences @ Indian Institute of Space Science and Technology [SUNIL NAUTIYAL1 & RAMA RAO NIDAMANURI “Conserving Biodiversity in Protected Area of Biodiversity Hotspot in India: A Case Study,” International Journal of Ecology and Environmental Sciences 36 (2-3): 195-200, 2010

The hotspots are the world’s most biologically rich areas hence recognized as important ecosystems not important¶ only for the rich biodiversity but equally important for the human survival as these are the homes for more than¶ 20% of the world’s population. India got recognition of one of the mega-diversity countries of world as the country¶ is home of the two important biodiversity hotspots: the Himalaya in north and the Western Ghats in the southern¶ peninsula. Policy makers and decision takers have recognized the importance of biodiversity (flora and fauna) and¶ this has resulted to segregate (in the form of protected areas) the rich and diverse landscape for biodiversity¶ conservation. An approach which leads towards conservation of biological diversity is good efforts but such¶ approaches should deal with humans equally who are residing in biodiversity hotspots since time immemorial. In¶ this endeavor, a study was conducted in Nagarahole National Park of Nilgiri Biosphere Reserve, in Karnataka. Our¶ empirical studies reveal that banning all the human activities in this ecosystem including agriculture, animal¶ husbandry has produced the results opposite to the approach ‘multiple values’ of national park. To monitor the¶ impact, existing policies have been tested from an economic and ecological view-point. Unfortunately, the local¶ livelihoods (most of them belongs to indigenous tribes) in the area have received setbacks due to the¶ implementation of the policies, though unintentionally. However, the ecological perspective is also not showing¶ support for the approach and framework of the current policies in the hotspots. Satellite data showed that the¶ temporal pattern of ecosystem processes has been changing. An integrated approach for ecosystem conservation and¶ strengthening local institutions for sustainable ecosystem management in such areas is therefore supported by this¶ study.

#### Drilling risk hydrate release

Morningstar 11 [Cory Morningstar, “Destination—Hell. Are we there yet?,” Huntington News, Sunday, March 27, 2011—01:09, pg. http://www.huntingtonnews.net/2768

US Department of Energy meeting summary: "Alternatively, an undersea earthquake today, say off the Blake Ridge or the coast of Japan or California might loosen and cause some of the sediment to slide down the ridge or slump, exposing the hydrate layer to the warmer water. That in turn could cause a chain reaction of events, leading to the release of massive quantities of methane. Another possibility is drilling and other activities related to exploration and recovery of methane hydrates as an energy resource. The hydrates tend to occur in the pores of sediment and help to bind it together. Attempting to remove the hydrates may cause the sediment to collapse and release the hydrates. So, it may not take thousands of years to warm the ocean and the sediments enough to cause massive releases, only lots of drilling rigs. Returning to the 4 GtC release scenario, assume such a release occurs over a one-year period sometime in the next 50 years as result of slope failure. According to the Report of the Methane Hydrate Advisory Committee, “Catastrophic slope failure appears to be necessary to release a sufficiently large quantity of methane rapidly enough to be transported to the atmosphere without significant oxidation or dissolution.” In this event, methane will enter the atmosphere as methane gas. It will have a residence time of several decades and a global warming potential of 62 times that of carbon dioxide over a 20-year period. This would be the equivalent of 248 GtC as carbon dioxide or 31 times the annual man-made GHG emissions of today. Put another way, this would have the impact of nearly 30 years worth of GHG warming all at once. The result would almost certainly be a rapid rise in the average air temperature, perhaps as much as 3°F immediately. This might be tolerable if that’s as far as things go. But, just like 15,000 years ago, if the feedback mechanisms kick in, we can expect rapid melting of Greenland and Antarctic ice and an overall temperature increase of 30°F."

#### Extinction

Morningstar 11 [Cory Morningstar, “Destination—Hell. Are we there yet?,” Huntington News, Sunday, March 27, 2011—01:09, pg. http://www.huntingtonnews.net/2768]

This is [modeling madness](http://www.climatesoscanada.org/blog/2011/03/11/climate-change-to-continue-to-the-year-3000-even-in-best-case-%E2%80%98zero-emissions%E2%80%99-scenarios/). By doing this the scientists are exposing humanity to a huge risk of global climate catastrophe. This madness is effectively preventing any possibility of an emergency climate response. Modelling for future catastrophe, is effectively distracting us from the climate emergency we face, dead on, today. Further madness has made its presence known. As methane hydrate melting and venting accelerates—securing our path to extinction—scientists have now begun to do modelling on the hydrates. Recently, it appears that leading methane scientists, who have been instrumental in sounding the methane alarm (based on their observations that the warming Arctic is driving the thaw and methane venting due to anthropogenic climate change), are being pressured by other scientists to provide "absolute proof" that the thaw and venting have not been occurring for reasons other than human-made warming. If my daughter is pushed off the playground equipment, causing a broken arm—her arm needs a cast. Urgently. It makes no difference who pushed her. Given the unparalleled enormous risks, the precautionary principle should certainly take precedence. The risk formula can be applied for such a colossal catastrophic impact, even when there is too little data to calculate a reliable probability. The grim reality coupled with common sense tells us unequivocally that the Arctic temperature is only going one way—upward. Therefore, at some point it will hit the thaw point (if it has not done so already) and no modeling is necessary to understand this simple fact. "Catastrophic emissions cannot be ruled out." That is a main statement when pouring over scientific papers on methane. It reads like a disclaimer along with the cautious language of possible, could, and other select language that allows us to continue denying our reality. Today, the majority of published climate science is all framed to allow the fossil fuel industry to not only survive, but continue growing and globalizing. When reviewing scientific papers, one cannot find any references that address the absolute necessity of stopping fossil fuel combustion. The most important component of stabilizing our planet's climate simply is not addressed. It is both revealing and ominous that proponents of the exploitation, which includes scientists, are suggesting that we now have to extract the methane to make the hydrates safe. Extracting the methane is unavoidably dangerous as this would depressurize the local environment. The gas extracted from the methane hydrates will be burned to drive the fossil fuel world economy—emitting huge amounts of CO2 in the process. All of the IPCC scenarios currently used, accept that our world economies are dependent and locked into fossil fuels—thereby legitimizing the fossil fuel industry.

### \*Cooperative Federalism 1NC

#### Their advantage is backwards --- opening up the OCS is worse for cooperative federalism

Weaver, their author, 2 (Sierra B., Senior Staff Attorney with Expertise in Climate Change, Forests and Public Lands, and Marine Conservation – Defenders of Wildlife (Litigation Group in Washington, DC), “NOTE: Local Management of Natural Resources: Should Local Governments be Able to Keep Oil Out?,” The Harvard Environmental Law Review, 26 Harv. Envtl. L. Rev. 231, Lexis)

C. Cooperative Federalism in the Agencies and Courts The promise of cooperation embodied in OCSLA and the CZMA has not come to pass. Despite the new legislation and explicit changes to OCSLA during the late 1970s, federal and state governments have continued to work largely at cross-purposes. The federal government has remained interested primarily in energy security and has refused to abandon the large revenues it gains from OCS leasing by scaling back development. n42 The state governments, on the other hand, have looked to preserve their citizens' oceanfront property values, environmental health, and local economies based on fishing or tourism--interests that have historically conflicted with energy development. OCSLA and the CZMA have thus walked the two tiers of government through the procedural motions of cooperation, but OCS management decisions have ultimately remained with the federal government. As a result, state and local interests not represented by the federal government have been forced to turn to other means of protection. [\*239] Over the course of program implementation, federal agencies and courts have been called on to mediate between both the competing resources of the OCS and the competing levels of government. Almost universally, they have favored federal, and hence, extractive interests above all others. For example, during the early 1980s, the Reagan administration's Interior Department pursued a vigorous expansion of OCS exploration and development over the vehement objections of several coastal states, most notably California. Courts came into this debate as arbiters and interpreters of how the competing interests of energy and environment, national and local, were to be balanced. With the first decisions coinciding with the birth of "Chevron deference," n43 courts were, not surprisingly, supportive of federal interests as expressed through the agencies. Moreover, courts upheld the expansion of federal leasing by reading deferentially the statutory purpose of "expeditious and orderly development" of the OCS, thereby failing to give equal weight to the competing purposes recognized in the same subchapter of OCSLA. n44 Although OCSLA appears to provide states with a significant advisory role in the offshore leasing process, a series of early federal court decisions effectively dismantled state control in favor of deference to the Secretary of the Interior. Section 18, as described above, sets out principles with which all federal actions must be consistent, requiring full consideration of competing interests on the OCS. n45 It further purports to give governors of affected states input and substantive review of proposed leasing programs. n46 For each of the first three five-year leasing programs following the 1978 amendments to OCSLA, n47 the State of California used the Section 18 provisions to comment on the proposed programs but was unsatisfied with the federal response. Eventually, the State sued Interior for its refusal to give legal effect to the governor's comments. n48 This litigation set the stage for subsequent legal challenges to offshore energy development under OCSLA, making it clear that although the states might play a role in the leasing process, the Secretary would be given the utmost deference in the decision to accept or reject state recommendations. n49 The law now stands that so long as the Secretary responds to [\*240] comments from state officials, no evidence of actual consideration, attempt at incorporation, or proof of any other substantive effect is required. We are thus left with a toothless and nontransparent balancing test in which states, despite the intent of OCSLA, have no greater opportunity to affect policy than any other party in notice-and-comment rulemaking. Section 19's even greater promise of substantive state input was also stripped of force by the federal agencies and courts. Despite the provision's mandate that the Secretary "shall accept recommendations of the Governor" if he or she determines they provide a reasonable balance between the local and national interests, n50 and despite legislative history that identifies a "leading role" for governors of states affected by OCS decisions, n51 states have fared no better under Section 19 than they have under Section 18 of OCSLA. The first challenge to a leasing program under Section 19 came from California in 1981, when Secretary James Watt declined to follow Governor Jerry Brown's recommendation to delete thirty-one tracts from Lease Sale 53. n52 Instead of recognizing the statutory purpose and requirement that the Secretary accept reasonable recommendations from state governors, the district court blindly applied the last part of Section 19, which states that all secretarial decisions shall be final unless found to be arbitrary and capricious. n53 In reaching its decision, the district court stated that taking into consideration all of the foregoing factors, the Court must conclude that the Secretary has complied, although minimally, with the necessary procedural requirements under [Section 19]. Although the Secretary quite clearly violated the spirit of the Act, giving due deference to his judgment, it cannot be said that his determination to reject the recommendations submitted by Governor Brown was legally "arbitrary and capricious." n54

#### Medicaid ruling outweighs

#### Copeland 12 [Charlton, Associate Professor of Law at the University of Miami, "SYMPOSIUM: FDR and Obama: Are There Constitutional Law Lessons from the New Deal for the Obama Administration?: Beyond Separation in Federalism Enforcement: Medicaid Expansion, Coercion, and the Norm of Engagement," October, 15 U. Pa. J. Const. L. 91, Lexis]

National Federation of Independent Business v. Sebelius may be known, in both the popular and academic commentaries, as the case about the Affordable Care Act's Individual Mandate provision. History may record it as one of the most significant cases in the jurisprudence of cooperative federalism. In invalidating part of the Medicaid Expansion provision, the Roberts Court became the first to invalidate a federal spending statute as unconstitutionally coercive of state governments. This decision has the potential to impact federal-state cooperative arrangements such as No Child Left Behind, and others far beyond the health care context. This Article argues that lack of attention to the Medicaid challenge, and the judiciary's previous inability to articulate a framework for coercion, indicates the inappropriateness of our dominant conceptions of federalism enforcement for an age of cooperative governance. To the extent that claims of coercion require us to take into account the national-state interaction over time, they offer the opportunity to transcend current frameworks in federalism enforcement, which disregard the bureaucratic dimension of policy implementation, and operate under a separatist paradigm with respect to national and state authority. Unfortunately, the Supreme Court's decision in National Federation exemplifies the extent to which federalism enforcement continues to be dominated by each of these conceptions of federalism enforcement. As a result, federalism enforcement remains institutionally and temporally truncated, focusing solely on Congress and legislative enactment to the exclusion of administrative agencies and post-enactment policy implementation. In this framework, the unrealistic norm of separation reigns supreme.

#### Making policy through the courts is not a sustainable model for cooperative federalism

Weiser 1 [Philip, Associate Professor of Law, University of Colorado, "ARTICLE: FEDERAL COMMON LAW, COOPERATIVE FEDERALISM, AND THE ENFORCEMENT OF THE TELECOM ACT," 76 N.Y.U.L. Rev. 1692, Lexis]

Under the Erie/Chevron regime, federal courts superintending cooperative federalism regulatory programs still have a role to play in the development of modern common law. This role, however, is far more subtle and modest than the brave new world envisioned by cases like Clearfield and commentators like Judge Friendly. Following Erie's appreciation for cooperative federalism and Chevron's respect for agency lawmaking, the modern regime of federal common law embodied by Milwaukee II sees federal courts as advisors to and watchdogs over federal regulatory agencies, state agencies, and Congress, more than as direct lawmaking authorities. Admittedly, this role may appear less heady than that once envisioned by advocates of the "new federal common law." But if properly implemented, it will also prove to be far more sustainable and effective, because it will limit federal judicial action to the situations where judges are most competent to act.

#### No modeling – This card alone destroys their advantage

**Law & Versteeg 12** – Professor of Comparative Constitutional Law @ Washington University & Professor of Comparative Constitutional Law @ University of Virginia [David S. Law & Mila Versteeg, “The Declining Influence of the United States Constitution,”New York University Law Review, Vol. 87, 2012

The appeal of American constitutionalism as a model for other countries appears to be waning in more ways than one. Scholarly attention has thus far focused on global judicial practice: There is a growing sense, backed by more¶ than purely anecdotal observation, that foreign courts cite the constitutional jurisprudence of the U.S. Supreme Court less frequently than before.267 But the behavior of those who draft and revise actual constitutions exhibits a similar¶ pattern. Our empirical analysis shows that the content of the U.S. Constitution is¶ becoming increasingly atypical by global standards. Over the last three decades,other countries have become less likely to model the rights-related provisions of¶ their own constitutions upon those found in the Constitution. Meanwhile, global adoption of key structural features of the Constitution, such as federalism, presidentialism, and adecentralized model of judicial review, is at best stable¶ and at worst declining. In sum, rather than leading the way for global¶ constitutionalism, the U.S. Constitution appears instead to be losing its appeal as¶ a model for constitutional drafters elsewhere. The idea of adopting a constitution¶ may still trace its inspiration to the United States, but the manner in which constitutions are written increasingly does not.

If the U.S. Constitution is indeed losing popularity as a model for other countries, what—or who—is to blame? At this point, one canonly speculate as to the actual causes of this decline, but four possible hypotheses suggest themselves: (1) the advent of a superior or more attractive competitor; (2) a general decline in American hegemony; (3) judicial parochialism; (4) constitutional obsolescence;and (5) a creed of American exceptionalism.

With respect to the first hypothesis, there is little indication that the U.S.¶ Constitution has been displaced by any specific competitor. Instead, the notion that a particular constitution can serve as a dominant model for other countries may itself be obsolete. There is an increasingly clear and broad consensus on the types of rights that a constitution should include, to the point that one can articulate the content of a generic bill of rights with considerable precision.269 Yet it is difficult to pinpoint a specific constitution—or regional or international¶ human rights instrument—that is clearly the driving force behind this emerging paradigm. We find only limited evidence that global constitutionalism is following the lead of either newer national constitutions that are often cited as influential, such as those of Canada and South Africa, or leading international¶ and regional human rights instruments such as the Universal Declaration of Human Rights and the European Convention on Human Rights. Although Canada in particular does appear to exercise a quantifiable degree of constitutional influence or leadership, that influence is not uniform and global¶ but more likely reflects the emergence and evolution of a shared practice of constitutionalism among common law countries.270 Our findings suggest instead that the development of global constitutionalism is a polycentric and multipolar¶ process that is not dominated by any particular country.271 The result might be likened to a global language of constitutional rights, but one that has been collectively forged rather than modeled upon a specific constitution.

Another possibility is that America’s capacity for constitutional leadership is at least partly a function of American “soft power” more generally.272 It is reasonable to suspect that the overall influence and appeal of the United States and its institutions have a powerful spillover effect into the constitutional arena. The popularity of American culture, the prestige of American universities, and the efficacy of American diplomacy can all be expected to affect the appeal of American constitutionalism, and vice versa. All are elements of an overall American brand, and the strength of that brand helps to determine the strength of each of its elements. Thus, any erosion of the American brand may also diminish the appeal of the Constitution for reasons that have little or nothing to do with the Constitution itself. Likewise, a decline in American constitutional influence of the type documented in this Articleis potentially indicative of a broader decline in American soft power.

There are also factors specific to American constitutionalism that may be¶ reducing its appeal to foreign audiences. Critics suggest thatthe Supreme Court has undermined the global appeal of its own jurisprudence by failing to acknowledge the relevant intellectual contributions of foreign courts on questions of common concern,273 and by pursuing interpretive approaches that lack acceptance elsewhere.274 On this view, the Court may bear some responsibility for the declining influence of not only its own jurisprudence, but also the actual U.S. Constitution: one might argue that the Court’s approach to constitutional issues has undermined the appeal of American constitutionalism more generally, to the point that other countries have become unwilling to look either to American constitutional jurisprudence or to the U.S. Constitution itself for inspiration.275

It is equally plausible, however, that responsibility for the declining appeal of American constitutionalism lies with the idiosyncrasies of the Constitution itself rather than the proclivities of the Supreme Court. As the oldest formal constitution still in force, and one of the most rarely amended constitutions in the world,276 the U.S. Constitution contains relatively few of the¶rights that have become popular in recent decades,277 while some of the provisions that it does contain may appear increasingly problematic, unnecessary, or even undesirable with the benefit of two hundred years of¶ hindsight.278 It should therefore come as little surprise if the U.S. Constitution¶ strikes those in other countries–or, indeed, members of the U.S. Supreme Court279–as out of date and out of line with global practice.280 Moreover, even if the Court were committed to interpreting the Constitution in tune with global¶ fashion, it would still lack the power to update the actual text of the document.

Indeed, efforts by the Court to update the Constitution via interpretation may actually reduce the likelihood of formal amendment by rendering such amendment unnecessary as a practical matter.281 As a result, there is only so¶ much that the U.S. Supreme Court can do to make the U.S. Constitution an¶ attractive formal template for other countries. The obsolescence of theConstitution, in turn, may undermine the appeal of American constitutional jurisprudence: foreign courts have little reason to follow the Supreme Court’s lead on constitutional issues if the Supreme Court is saddled with the¶ interpretation of an unusual and obsolete constitution.282 No amount of ingenuity or solicitude for foreign law on the part of the Court can entirely divert attention from the fact that the Constitution itself is an increasingly atypical document.

One way to put a more positive spin upon the U.S. Constitution’s status as a global outlier is to emphasize its role in articulating and defining what is unique about American national identity. Many scholars have opined that formal constitutions serve an expressive function as statements of national identity.283 This view finds little support in our own empirical findings, which suggest instead that constitutions tend to contain relatively standardized packages of rights.284 Nevertheless, to the extent that constitutions do serve such a function, the distinctiveness of the U.S. Constitution may simply reflect the uniqueness of America’s national identity. In this vein, various scholars have argued that the U.S. Constitution lies at the very heart of an “American creed of exceptionalism,” which combines a belief that the United States occupies a unique position in the world with a commitment to the qualities that set the United States apart from other countries.285 From this perspective, the Supreme Court’s reluctance to make use of foreign and international law in constitutional cases amounts not to parochialism, but rather to respect for the exceptional character of the nation and its constitution.286

Unfortunately, it is clear that the reasons for the declining influence of American constitutionalism cannot be reduced to anything as simple or attractive as a longstanding American creed of exceptionalism. Historically, American exceptionalism has not prevented other countries from following the example set by American constitutionalism. The global turn away from the American model is a relatively recent development that postdates the Cold War. If the U.S. Constitution does in fact capture something profoundly unique about the United States, it has surely been doing so for longer than the last thirty years. A complete explanation of the declining influence of American constitutionalism in other countries must instead be sought in more recent history, such as the wave of constitution-making that followed the end of the Cold War.287 During this period, America’s newfound position as lone superpower might have been expected to create opportunities for the spread of American constitutionalism. But this did not come to pass.

Once global constitutionalism is understood as the product of a polycentric evolutionary process, it is not difficult to see why the U.S. Constitution is playing an increasingly peripheral role in that process. No evolutionary process favors a specimen that is frozen in time. At least some of the responsibility for the declining global appeal of American constitutionalism lies not with the Supreme Court, or with a broader penchant for exceptionalism, but rather with the static character of the Constitution itself. If the United States¶ were to revise the Bill of Rights today—with the benefit of over two centuries of experience, and in a manner that addresses contemporary challenges while remaining faithful to the nation’s best traditions—there is no guarantee that other countries would follow its lead. But the world would surely pay close attention.  Pg. 78-83

#### Pakistan Scenario

#### Pakistan won't implement correctly --- their author

Khan, their author, 11 (Amjad Mahmood, Senior Litigation Associate – Latham & Watkins LLP, Postgraduate Research Fellow – Harvard Law School, JD – Harvard Law School, “Misuse and Abuse of Legal Argument by Analogy in Transjudicial Communication: the Case of Zaheeruddin v. State,” Richmond Journal of Global Law & Business, 10(4), http://muslimwriters.org/wp-content/uploads/2012/06/khan\_10-4-2.pdf)

This article explores the risks and limits of transjudicial communication. In particular, I critique the scholarly contention that transjudicial communication can be built upon commonly accepted methods of legal reasoning. I argue that transnational courts do not uniformly understand or apply commonly accepted methods of legal reasoning, especially legal argument by analogy. As a result, transnational courts that utilize transjudicial communication can and do render specious, even destructive, judicial opinions. I analyze the case of Zaheeruddin v. State—a controversial decision by the Supreme Court of Pakistan that upheld the constitutionality of Pakistan’s antiblasphemy ordinances. The Supreme Court of Pakistan poorly analogized to numerous U.S. Supreme Court authorities to bolster and legitimize its deeply flawed decision. INTRODUCTION In his 2009 majority opinion in Graham v. Florida, U.S. Supreme Court Justice Anthony Kennedy cited to foreign law as persuasive authority to hold that life-without-parole sentences for juveniles convicted of non-homicide crimes were unconstitutional.2 In his 2003 majority opinion in Lawrence v. Texas, Justice Kennedy cited a decision by the European Court of Human Rights as persuasive authority to hold that a Texas statute criminalizing acts of sodomy was unconstitutional.3 The recent and rising trend of U.S. courts to rely on foreign law for constitutional adjudication, particularly for contentious issues, illustrates more generally the globalization of modern constitutionalism. Indeed, as legal problems become more common across more common law systems in the world, courts increasingly rely on the legal opinions of outside jurisdictions as a powerful source of persuasive authority. Professor Anne-Marie Slaughter describes such cross-court citation and deliberation on common legal problems as “transjudicial communication.”4 Her typology suggests the relative merits of this communication and even describes its increasing trend as an emergence of a new and promising “global community of courts.”5 Transjudicial communication, argues Slaughter, fosters cross-fertilization of legal ideas and becomes a “pillar of a compelling vision of global legal relations” where “national differences would be recognized, but would not obscure common legal problems nor block the adoption of foreign solutions.”6 For Slaughter, what helps develop this cross-fertilization of legal ideas is a common judicial identity and legal methodology, including among other tools, common methods of legal reasoning across legal systems.7 This article explores some of the risks and limits of transjudicial communication. I call into question Slaughter’s contention that common methods of legal reasoning necessarily advance cross-fertilization of ideas between courts of competing systems. I argue that transnational courts do not uniformly understand methods of legal reasoning. To this end, I focus my critique on one particular method of legal reasoning that Slaughter would deem to be “common” to transjudicial communication: legal argument by analogy. Proper legal argument by analogy is a less common, or a less consistently applied, judicial methodological tool to work with. To encourage transjudicial communication through legal argument by analogy is problematic not only because the mode of analogy itself is more rigorous than it appears, but also because legal argument by analogy carries special risks in the transjudicial setting.

#### no collapse

**Siddiqi 10** [Shahid R., Axis of Logic Columnist, former Paki Air Force and former Bureau Chief – Pakistan & Gulf Economist, “Critical Analysis Are Pakistan’s Strategic Nuclear Assets Threatened by Terrorists?” 2-22, http://axisoflogic.com/artman/publish/Article\_58619.shtml]

"This is all overblown rhetoric. Even if the country's leadership were to be incapacitated, Pakistan's protections are so strong that the arsenal could never slip from the hands of the country's National Command Authority”, General Kidwai told David Sangers of New York Times. Pakistan has successfully put its strategic weapons program under formalized institutional control and oversight. National Command Authority effectively controls, manages and monitors strategic organizations, prevents tangible and intangible transfers or leakage of sensitive technologies and material - measures in line with IAEA safeguards. An over 8000-men strong Security Division secures nuclear assets and materials and guards against malevolent activities. Supported by the strategic forces, it is fully capable of ensuring nuclear security of components even in transit. Prevention of theft of nuclear assets or fissile material Like other nuclear states, Pakistan also faces the security challenge of preventing Non-State Actors and terror groups from gaining access to nuclear assets. Its preventive measures are no less effective than those of others. Commenting on security of nuclear weapons, Congressional Research Service Report (RL-31589) on Nuclear Threat Reduction Measures for India and Pakistan; observes, “Fissile material components (pits) are thought to be kept separately from the rest of the warhead. Such a physical separation helps deter unauthorized use and complicates theft”. Pakistan is believed to have incorporated certain technical safety features into the weapon design which coupled with de-mated status of the weapons, wherein the warhead and the fissile core are stored in separate locations, discourages and denies seizure or theft of an intact nuclear device, guards against accidental or unauthorized launch and prevents diversion of fissile material in the form of weapon components. Pakistan’s nuclear controls also include the functional equivalent to the two-man rule and Permissive Action Links (PALs) that most nuclear states rely on to protect against loss of control, inadvertent weapons use, accidents, and other mishaps. Pakistan’s nuclear material or radioactive sources have remained safe from theft or pilferage nor has there been any attempt by terrorist elements to gain access to weapons or materials. Lamenting the Western attitude Peter Lavoy (National Intelligence for Analysis) states, “Since the 1998 tests, various pronouncements, publications in the Western press, and events in the region have eroded the credibility of Pakistan’s nuclear command and control, overshadowing the efforts that have been made since 1999 to harness a coherent command system to ensure management of its nuclear capabilities….” Guarav Kampani of Center for Nonproliferation Studies says, “Despite such speculative scenario building among policy and security analysts, there is little public evidence to suggest that the safety or the security of Pakistan’s nuclear installations or its nuclear command and control mechanism was ever in jeopardy from internal political instability or Islamists or terrorists forces inside Pakistan or nearby in Afghanistan, either during the American ‘War against Terrorism‘ in Afghanistan or during the 2001-2002 India-Pakistan military standoff. In their analysis of threats from Islamic fundamentalism, Scott Parrish and William C. Potter of the WMD Commission opined, “……. while many states may view Islamic fundamentalism as a significant threat, there appears to be much less agreement on the nature of that threat and its relationship to nuclear terrorism or proliferation”.

#### War won't escalate

WSJ 13 ["Don’t Expect Worsening of India, Pakistan Ties," 1-16, http://blogs.wsj.com/indiarealtime/2013/01/16/dont-expect-worsening-of-india-pakistan-ties/]

There’s no end for now to the hostile rhetoric between India and Pakistan. But that doesn’t necessarily presage anything more drastic. Pakistan claims another of its soldiers died Tuesday night in firing across the Line of Control in Kashmir, the divided Himalayan region claimed by both nations. Indian army chief, Gen. Bikram Singh, on Wednesday, said Pakistan had opened fire and India retaliated. “If any of their people have died, it would have been in retaliation to their firing,” Gen. Singh said. ”When they fire, we also fire.” It was the latest in tit-for-tat recriminations over deaths in Kashmir that began last week. Pakistan claimed one of its soldiers died on Jan. 6. Two days later, India said Pakistani forces killed two of its soldiers and mutilated the bodies. Tuesday night, Indian Prime Minister Manmohan Singh said the mutilations meant it could not be “business as usual” between the countries. That has worried some that peace talks, which have been in train for two years, could be about to break down. Mr. Singh’s comments built on a drumbeat of anger from India. Gen. Singh, Monday called the mutilations “unpardonable” and said India withheld the right to retaliate to Pakistan aggression when and where it chooses. Pakistan Foreign Minister Hina Rabbani Khar, who is in the U.S., Tuesday termed the Indian army chief’s comments as “very hostile.” There are some other worrying signs. India said Tuesday it was delaying the start of a visa-on-arrival program meant to make it easier for some Indians and Pakistanis to visit each other’s countries. The visa program, like talks on opening up bilateral trade, is supposed to pave the way toward broader peace talks that would encompass thornier issues, like how to solve the Kashmir problem. Also Tuesday, nine Pakistani hockey players who had come to participate in a tournament in India were sent home due to fears of protests and violence against them. Still, there’s little benefit for either side to escalate what is now still sporadic firing over the Line of Control, the de facto border in Kashmir. Pakistan is embroiled in its own political meltdown sparked by the Supreme Court’s decision Tuesday to order the arrest of Prime Minister Raja Pervez Ashraf on allegations of corruption. Tens of thousands of protesters Tuesday took to the streets in Islamabad, and remain there today, demanding immediate elections and a greater role for the army and Supreme Court in politics. Pakistan’s military continues to play an important political role, dominating defense and foreign policy. But it has so far shown little sign of mounting a full-blown coup despite persistent rumors of military intervention. Pakistan’s government must hold national elections by May, meaning the next few months are likely to be choppy ones in Pakistan politics. In such an environment, the military is unlikely to want to dial up tensions with India. On the Indian side, despite Mr. Singh’s unusually strident tone Tuesday, there also will be pause before taking matters to the next level. Mr. Singh has put immense personal political capital into trying to improve ties with Pakistan since he came to power in 2004. Last year, he hosted Pakistan President Asif Ali Zardari in New Delhi and promised a return visit. Such a trip is clearly off the table for now. But India still has put too much into peace talks to throw away the progress made so far on visas, trade and other issues. Even Gen. Singh, India’s army chief, Monday said he did not believe the latest flare-up would lead to a broader escalation in violence and an official end to a 2003 ceasefire agreement in Kashmir. The clashes so far, he noted, have been limited to specific areas of the Line of Control.

#### Federalism doesn't solve economic woes --- Sokolski lists unnecessary public spending, excessive military subsidies, consumer subsidies, investments in educational and agriculture, increase taxes and prevent economic disparities as critical to boost the economy

**Countries don’t model the US anymore- our system is outdated and torture policies turned them off**

**Horowitz ’12** [Jake, co-founder of PolicyMic, “Why is the U.S. Constitution Losing Influence Across the World?” <http://www.policymic.com/articles/3975/why-is-the-u-s-constitution-losing-influence-across-the-world>]

It may be the oldest written national constitution in force anywhere in the world, but **the U.S. Constitution is losing its influence across the globe**. That's according to a new study to be published in June in the New York University Law Review. The study by David S. Law of Wash U. in St. Louis and Mila Versteeg of the University of Virginia analyzed the provisions of 729 constitutions adopted by 188 countries from 1946 to 2006. In 1987, the New York Times reports that Time magazine calculated that "of the 170 countries that exist today, more than 160 have written charters modeled directly or indirectly on the U.S. version." Today, Law and Versteeg conclude that "constitutional similarity to the United States has clearly gone into free fall. Over the 1960s and 1970s, democratic constitutions as a whole became more similar to the U.S. Constitution, only to reverse course in the 1980s and 1990s.” "[**The] constitutions of the world’s democracies are, on average, less similar to the U.S. Constitution now than they were at the end of World War II,” they conclude. This trend mirrors the diminished influence of the Supreme Court, which has lost "the role it once had among courts in modern democracies**," said then president of the Supreme Court of Israel Aharon Barak in the Harvard Law Review in 2002. Why are the Constitution and the Supreme Court waning in influence? The New York Times suggests that this trend may be simply a product of the fact that the document is terse and old. Law noted the availability of newer, more modern constitutional models renders the U.S. Constitution obsolete. "Nobody wants to copy Windows 3.1," he said. Similarly, in a television interview during a visit to Egypt last week, Justice Ruth Bader Ginsburg apparently said, "I would not look to the United States Constitution if I were drafting a constitution in the year 2012." But, my sense is that the Constitution is slipping because **America has lost its power and prestige as a shining democracy due to over a decade of constitutional excess. In particular, the Bush administration's War on Terror policies which interpreted the Constitution to permit torture, deprive suspected terrorists of due process, sanction wire-tapping and domestic spying, and amass unprecedented power in the hands of the executive eroded the credibility of the document and undermined our democracy. After a decade of America's imprisoning and torturing Arab citizens under the guise of the Constitution, it is no wonder that it no longer holds any weight in newly emerging democracies like Egypt and Tunisia. Moreover, the decline in influence is also a reflection of the all-too-often forgotten fact that American liberal democracy is not for every country. The U.S. Constitution guarantees certain rights, like the separation of religion and state, which may not neatly fit into other countries' models of democracy**. Stanford democracy expert Larry **Diamond has written often about public opinion polling of the Arab world, which indicates that although the majority of Arabs want democracy, they also believe Islam should play a strong role in governing their society. The U.S. Constitution, then, provides little guidance for structuring newly emerging democracies with more devout populations**. Although the decline of the Constitution is likely to unnerve the bevy of IR theorists and pundits who routinely lament America's decline, this study is not necessarily cause for concern. Rather, that emerging democracies are adapting democracy to fit their context serves as a powerful reminder that liberal democracy cannot be imposed from the outside, something the U.S. learned well this past decade in Iraq. **It should also serve as a stark warning** to President Barack Obama, however, **that the longer Guantanamo remains open, and the more the administration chips away at our civil liberties by signing bills like the NDAA, the more U.S. influence, leadership, and credibility will wane across the globe**.

#### No impact---super unlikely

Schneidmiller 9(Chris, Experts Debate Threat of Nuclear, Biological Terrorism, 13 January 2009, http://www.globalsecuritynewswire.org/gsn/nw\_20090113\_7105.php)

There is an "almost vanishinglysmall" likelihood that terrorists would ever be able to acquire and detonate a nuclear weapon, one expert said here yesterday (see GSN, Dec. 2, 2008). In even the most likely scenario of nuclear terrorism, there are 20 barriers between extremists and a successful nuclear strike on a major city, said John Mueller, a political science professor at Ohio State University. The process itself is seemingly straightforward but exceedingly difficult -- buy or steal highly enriched uranium, manufacture a weapon, take the bomb to the target site and blow it up. Meanwhile, variables strewn across the path to an attack would increase the complexity of the effort, Mueller argued. Terrorists would have to bribe officials in a state nuclear program to acquire the material, while avoiding a sting by authorities or a scam by the sellers. The material itself could also turn out to be bad. "Once the purloined material is purloined, [police are] going to be chasing after you. They are also going to put on a high reward, extremely high reward, on getting the weapon back or getting the fissile material back," Mueller said during a panel discussion at a two-day Cato Institute conference on counterterrorism issues facing the incoming Obama administration. Smuggling the material out of a country would mean relying on criminals who "are very good at extortion" and might have to be killed to avoid a double-cross, Mueller said. The terrorists would then have to find scientists and engineers willing to give up their normal lives to manufacture a bomb, which would require an expensive and sophisticated machine shop. Finally, further technological expertise would be needed to sneak the weapon across national borders to its destination point and conduct a successful detonation, Mueller said. Every obstacle is "difficult but not impossible" to overcome, Mueller said, putting the chance of success at no less than one in three for each. The likelihood of successfully passing through each obstacle, in sequence, would be roughly one in 3 1/2 billion, he said, but for argument's sake dropped it to 3 1/2 million. "It's a total gamble. This is a very expensive and difficult thing to do," said Mueller, who addresses the issue at greater length in an upcoming book, *Atomic Obsession*. "So unlike buying a ticket to the lottery ... you're basically putting everything, including your life, at stake for a gamble that's maybe one in 3 1/2 million or 3 1/2 billion." Other scenarios are even less probable, Mueller said. A nuclear-armed state is "exceedingly unlikely" to hand a weapon to a terrorist group, he argued: "States just simply won't give it to somebody they can't control." Terrorists are also not likely to be able to steal a whole weapon, Mueller asserted, dismissing the idea of "loose nukes." Even Pakistan, which today is perhaps the nation of greatest concern regarding nuclear security, keeps its bombs in two segments that are stored at different locations, he said (see *GSN*, Jan. 12). Fear of an "extremely improbable event" such as nuclear terrorism produces support for a wide range of homeland security activities, Mueller said. He argued that there has been a major and costly overreaction to the terrorism threat -- noting that the Sept. 11 attacks helped to precipitate the invasion of Iraq, which has led to far more deaths than the original event. Panel moderator Benjamin Friedman, a research fellow at the Cato Institute, said academic and governmental discussions of acts of nuclear or biological terrorism have tended to focus on "worst-case assumptions about terrorists' ability to use these weapons to kill us." There is need for consideration for what is probable rather than simply what is possible, he said. Friedman took issue with the finding late last year of an experts' report that an act of WMD terrorism would "more likely than not" occur in the next half decade unless the international community takes greater action. "I would say that the report, if you read it, actually offers no analysis to justify that claim**,** which seems to have been made to change policy by generating alarm in headlines." One panel speaker offered a partial rebuttal to Mueller's presentation. Jim Walsh, principal research scientist for the Security Studies Program at the Massachusetts Institute of Technology, said he agreed that nations would almost certainly not give a nuclear weapon to a nonstate group, that most terrorist organizations have no interest in seeking out the bomb, and that it would be difficult to build a weapon or use one that has been stolen.

#### Terrorists don’t have the technical know-how or resources for nuclear weapons

Umana 11 – Felipe Umana is a contributor to Foreign Policy In Focus, from the Institute for Policy Studies. August 17, 2011, "Loose Nukes: Real Threat?" http://www.fpif.org/articles/loose\_nukes\_real\_threat

Actors seeking to acquire an atomic weapon – or the capability to produce one – generally do not have the essential training, knowledge, or materials. Nor do they generally have the necessary resources to achieve nuclear capabilities. In fact, for non-state actors, smuggling already-manufactured weapons or available materials is the only practical way to go nuclear. Terrorist organizations like Aum Shinrikyo (now known as Aleph) and al-Qaeda are typically **composed of men with little scientific training** and ersatz scientific knowledge, if any. Unless they steal blueprints, these actors can't construct a usable fissile weapon. Moreover, it's not easy to move such sensitive materials around. Anatoly Bulochnikov, director of the Center for Export Controls in Moscow, contrasted nuclear materials with mundane goods: “[These items are] not potatoes, not something you can keep anywhere.” Another hindrance is a lack of steady funds and resources. Non-state actors simply don't have the money to purchase bomb-grade nuclear material (in 1991, a kilogram of enriched uranium went for $700,000), the means to enrich uranium, or the storage facilities to contain the material.

#### No impact to trade or econ

Robert Jervis 11, Professor in the Department of Political Science and School of International and Public Affairs at Columbia University, December 2011, “Force in Our Times,” Survival, Vol. 25, No. 4, p. 403-425

Even if war is still seen as evil, the security community could be dissolved if severe conflicts of interest were to arise. Could the more peaceful world generate new interests that would bring the members of the community into sharp disputes? 45 A zero-sum sense of status would be one example, perhaps linked to a steep rise in nationalism. More likely would be a worsening of the current economic difficulties, which could itself produce greater nationalism, undermine democracy and bring back old-fashioned beggar-my-neighbor economic policies. While these dangers are real, it is hard to believe that the conflicts could be great enough to lead the members of the community to contemplate fighting each other. It is not so much that economic interdependence has proceeded to the point where it could not be reversed – states that were more internally interdependent than anything seen internationally have fought bloody civil wars. Rather it is that even if the more extreme versions of free trade and economic liberalism become discredited, it is hard to see how without building on a preexisting high level of political conflict leaders and mass opinion would come to believe that their countries could prosper by impoverishing or even attacking others. Is it possible that problems will not only become severe, but that people will entertain the thought that they have to be solved by war? While a pessimist could note that this argument does not appear as outlandish as it did before the financial crisis, an optimist could reply (correctly, in my view) that the very fact that we have seen such a sharp economic down-turn without anyone suggesting that force of arms is the solution shows that even if bad times bring about greater economic conflict, it will not make war thinkable.

**Burton says that the President’s Ocean Action Plan solves- that happened**

**Upton 10** (Ocean Commissions: Ocean Policy Review ¶ and Outlook ¶ Harold F. Upton ¶ Analyst in Natural Resources Policy ¶ Eugene H. Buck ¶ Specialist in Natural Resources Policy ¶ July 20, 2010 ¶ <http://www.fas.org/sgp/crs/misc/RL33603.pdf>)

In June 2003, the Pew Commission released its final report, America’s Living Oceans: Charting a

Course for Sea Change, outlining a national agenda for protecting and restoring the oceans. In

September 2004, the U.S. Commission published, An Ocean Blueprint for the 21st Century, its

final report with 212 recommendations on a coordinated and comprehensive national ocean

policy. On December 17, 2004, the Bush Administration submitted to Congress the U.S. Ocean

Action Plan, its formal response to the recommendations of the U.S. Commission on Ocean

Policy. The U.S. Commission on Ocean Policy and the Pew Oceans Commission established the

Joint Ocean Commission Initiative in early 2005 to collaborate on a number of key

recommendations of both reports. The Joint Ocean Commission has remained active in advancing

these recommendations to Congress and the Administration.

[a little slower]

The wave energy argument makes *no sense*—Their impact is about the need for naval wind energy…and it concludes the navy can do it already. Naval bases are federal jusrisdiction. Duh. Their casey evidence concludes as much—it says the navy built this tech in Hawaii and intends to keep doing it.

Their Kramer Evidence agrees—they read “Wave energy provides that certainty and reliability because nothing stops the supply chain of power from the roiling sea.” The NEXT SENTENCE which is un-underlined says “ So the US Navy just awarded Lockheed Martin and Ocean Power Technologies a $15 million 4 year contract (to provide wave power for terrorism prevention around the coasts)

Just so we’re clear, that means THEIR 1AC EVIDENCE CONCLUDES THAT THIS IS THE SQUO. Derp! Don’t reward their lies and propaganda.

Burton lists alt causes-

-However, we are confronted with a lack of legislative authority to consider some of these proposals.

-It says oil and gas

Cooperation is occurring now- tahts Salcido

No wave development

Salcido

Although there is a perceived urgency to get wave projects going to prove technological feasibility and increase the U.S. supply of noncarbon sources of energy, offshore planning is not sufficiently far along to simply incorporate the projects into the existing plan. Because difficult tradeoffs among uses and users have yet to be resolved, wave energy projects are absorbing the pressure and some observers have voiced concern that they could be squeezed out altogether.

Casey- doing it now

### \*Helium 1nc

Graying crisis takes out the aerospace advantage- it says there are no people to fly the planes and build them

#### Substitutes solve

#### Board on Physics and Astronomy 10 [Selling the Nation's Helium Reserve, The National Academies Press, http://www.nap.edu/openbook.php?record\_id=12844&page=R1]

For some applications, other gases can replace helium, but other applications rely critically on helium’s unique properties, and there are no alternatives. Applications in the first category, where substitutes for helium might exist, include the following: Lifting. For these uses, where low density is the only requirement, hydrogen is sometimes substituted if safety concerns can be met. Welding. Here, chemical inertness is the key property. For processes such as gas tungsten arc welding—a critical process applicable to reactive metals such as stainless steel, titanium, aluminum, and others in high-value, high-reliability applications—Europe mostly uses argon, while the United States uses helium. Semiconductor and fiber optics manufacturing. In these applications, high thermal conductivity is the important property. Often, hydrogen may be substituted.

#### Natural gas doesn't mean more helium

Kammerzell 11 [Jaime – Energy Writer, “Helium to Move from Byproduct to Primary Drilling Target“, 11/18, http://rigzone.com/news/article.asp?a\_id=112735]

"Virtually all of the commercially extractable helium in the U.S. is found in the mid-continent," Bo Sears said. The Hugoton field has been the primary source for global helium since U.S. helium production began. "Most natural gas in the U.S., and elsewhere for that matter, does not contain economic concentrations of helium," Bo Sears said. Incidences of high helium in natural gas are almost always associated with high percentages of nitrogen as well. "As helium concentrations rise, so too does the nitrogen component," Bo Sears said. "However, the opposite is not always true. If you have nitrogen in a gas stream, it does not necessarily imply a high helium concentration." For substantial helium gas to develop, three important geological events must be present, Bo Sears explained. "First, there must be adequate concentrations of helium-generating isotopes in the basement rock. Second, there must be adequate fractures and fissures so that helium can escape the tight granite lattices of crustal rock. And lastly, there must be a caprock tight enough to hold any helium in appreciable quantities." The helium atom is so small that an average caprock holding hydrocarbons likely would not hold helium. "If any one of these three events is missing, there will be no accumulation of helium," Bo Sears said.

#### No production --- not economical

Ross 12 [Robert, Junior Analyst at Casey Research, a financial consulting firm, "Where Has All the Helium Gone?," 5-3, http://www.caseyresearch.com/articles/where-has-all-helium-gone]

Much of the helium( as radioactive by-product formed in the Earth's crust) collects in natural gas deposits. But these trace amounts of helium are not worthwhile to recover at current prices; miners typically let the gas escape into the atmosphere. Only a large concentration – usually 0.3% or higher – is economically viable to retrieve. Companies that specialize in the sale of helium and other industrial gases, such as Praxair, Inc. (NYSE.PX) and Airgas Inc. (NYSE.ARG), could reap lucrative profits if the price of helium starts to skyrocket. Further, companies involved in the exploration of natural gas, including Chesapeake Energy (NYSE.CHK) and Devon Energy Corp. (NYSE.DVN), would likely start capturing helium that escapes when harvesting natural gas. However, private industry will have trouble keeping up with the government's basement prices: according to the US Geological Survey, the price the government charged in 2011 for crude helium was $2.70 per m3, while private industry had to charge nearly $6 per m3. As with any commodity, when the government ignores price signals and sets the price of a good below its market value, shortages are inevitable. Similar to the government's reaction to high gas prices in the 1970s when Nixon decreed that companies could not charge the market rate for oil, shortages followed. Allowing the government to dictate price only solves the demand problem, pushing the issue of limited supply onto businesses. By ignoring the role of price signals in the helium market, the US government is squandering a non-renewable resource that took billions of years to develop in just a few decades. Although the market will eventually readjust to higher prices, much of our finite helium supply will be wasted until the federal government alters its policy.

**Hegemony doesn’t prevent war – its absence would have zero effect on international stability   
Friedman 10** [Ben, research fellow in defense and homeland security, Cato. PhD candidate in political science, MIT, Military Restraint and Defense Savings, 20 July 2010, <http://www.cato.org/testimony/ct-bf-07202010.html>]  
  
Another argument for high military spending is that U.S. military hegemony underlies global stability. Our forces and alliance commitments dampen conflict between potential rivals like China and Japan, we are told, preventing them from fighting wars that would disrupt trade and cost us more than the military spending that would have prevented war. The theoretical and empirical foundation for this claim is weak. It overestimates both the American military's contribution to international stability and the danger that instability abroad poses to Americans. In Western Europe, U.S. forces now contribute little to peace, at best making the tiny odds of war among states there slightly more so.7 Even in Asia, where there is more tension, the history of international relations suggests that without U.S. military deployments potential rivals, especially those separated by sea like Japan and China, will generally achieve a stable balance of power rather than fight. In other cases, as with our bases in Saudi Arabia between the Iraq wars, U.S. forces probably create more unrest than they prevent. Our force deployments can also generate instability by prompting states to develop nuclear weapons. Even when wars occur, their economic impact is likely to be limited here.8 By linking markets, globalization provides supply alternatives for the goods we consume, including oil. If political upheaval disrupts supply in one location, suppliers elsewhere will take our orders. Prices may increase, but markets adjust. That makes American consumers less dependent on any particular supply source, undermining the claim that we need to use force to prevent unrest in supplier nations or secure trade routes.9 Part of the confusion about the value of hegemony comes from misunderstanding the Cold War. People tend to assume, falsely, that our activist foreign policy, with troops forward supporting allies, not only caused the Soviet Union's collapse but is obviously a good thing even without such a rival. Forgotten is the sensible notion that alliances are a necessary evil occasionally tolerated to balance a particularly threatening enemy. The main justification for creating our Cold War alliances was the fear that Communist nations could conquer or capture by insurrection the industrial centers in Western Europe and Japan and then harness enough of that wealth to threaten us — either directly or by forcing us to become a garrison state at ruinous cost. We kept troops in South Korea after 1953 for fear that the North would otherwise overrun it. But these alliances outlasted the conditions that caused them. During the Cold War, Japan, Western Europe and South Korea grew wealthy enough to defend themselves. We should let them. These alliances heighten our force requirements and threaten to drag us into wars, while providing no obvious benefit.

**No transition wars**

**Buzan 11** [Barry, Professor of International Relations at the London School of Economics, "The Inaugural Kenneth N. Waltz Annual Lecture A World Order Without Superpowers Decentred Globalism," International Relations, 4-1, vol. 25 no. 1 3-25]

There are many reasons to think that a regionalized international order would work quite well. The generic worry about such an order stems from the experience of most of the 20th century, when imperial powers competed with each other either over their spheres of influence or over whether one of them could dominate the whole world, and the 1930s’ experience is often cited as a warning against going down this route. 45 For several reasons the danger of a struggle for global hegemony seems no longer very salient. First, the West is in relative decline, and other regions are mainly defensive in outlook, trying to maintain their political and cultural characteristics, and find their own route to modernization, against Western pressure. Nobody else obviously wants the job of global leader. Second any potential global hegemon will be constrained both by the breadth and depth of anti-hegemonism, and by the difficulty of acquiring the necessary material preponderance and social standing. Third, there are no deep ideological or racist differences to fuel conflict like those that dominated the 20th century. Fourth, all the great powers fear both war and economic breakdown, and have a commitment to maintaining world trade. Nobody wants to go back to the autarchic, empire-building days of the 1930s. In addition, a good case can be made that sufficient shared values exist to underpin a reasonable degree of global-level coexistence and cooperation even in a more regionalized international order. Logics additional to Waltz’s unit veto ideas about the proliferation of nuclear weapons 46 are in play: cultural, political and economic factors can also work to produce a stable international order. The world will certainly divide on whether the move towards such an order is a good thing or not. Liberals, both in the West and elsewhere, will lament the weakening of their universalist project, and fear the rise of various parochialisms, some possibly quite nasty. Whatever its merits, a more regionalized world order would mark a retreat from universalist liberal agendas of both a political and an economic sort. The loss of hegemonic leadership would probably mean a reduction in the overall management capacity of the system, though even that is not a given. One should not underestimate the possibilities for innovation on this front once the now in-built habit of dependence on US leadership is broken. On the economic side, regions would still provide a halfway house for economies of scale, and there would still be a lot of global trade and cooperation on many functional matters from big science to environmental management. It is not without significance that even during the depths of the Cold War, the Americans and the Soviets were able to negotiate on common survival issues such as nuclear testing, non-proliferation and arms control. However, there would no longer be an attempt to run a financially integrated global economy.

**Alternative to hegemony is regional cooperation – not war**

**Buzan 11** [Barry, Professor of International Relations at the London School of Economics, "The Inaugural Kenneth N. Waltz Annual Lecture A World Order Without Superpowers Decentred Globalism," International Relations, 4-1, vol. 25 no. 1 3-25]

In 2004 I argued, in line with much mainstream thinking, that the most likely scenario for the coming decades was continuation of the US as the sole superpower accompanied by several great powers. This idea still forms the core of the debates about polarity. Its main theme is whether or not the US will be able to preserve its sole superpower status, or whether rising challengers, mainly China, will soon return the world order to bipolarity. It is typical of the Western part of this debate to be looking for ways to preserve US hegemony/leadership either by maintaining and exploiting a power advantage or by relegitimizing its leading role using institutions to accommodate rising powers. 1 My second most likely scenario from 2004 was one in which there would be no superpowers, only great powers, and I argued that this would produce a rather uncertain world. I now think that this scenario is becoming more likely, but can be seen in a more positive light. I argue here that it offers an alternative third way of thinking about the coming world order: not whether there will be one superpower or more, but no superpowers, only great powers. We may be heading quite quickly into such a world, and this may be no bad thing. The mainstream polarity debates typically ignore the fact that there is an alternative to having either to balance against the US or bandwagon with it. Others can, and increasingly do, use the diminished power and authority of the US as a reason to ignore or circumscribe it, and to carve their own pathways in regional and global politics. 2 Continued US leadership is neither necessary nor, arguably, desirable to keep the world order from falling into 1930s-style imperial competition. This argument, therefore, steps outside the main lines of the current debates about polarity. It also steps outside the neorealist framework created by Waltz in two ways. First, I differentiate between superpowers and great powers in a way that neorealists cannot, and see that distinction as being crucial to understanding an international system operating on a truly global scale. By superpower I mean a polity whose political, military, cultural and economic reach extends across the whole international system; by great power I mean one whose reach extends only across more than one region. 3 Second, I reject the neorealist assumption that the major powers of the day will necessarily fall into competition to dominate the whole system. I focus instead on the underpinnings within such a regionalized world order for a coexistence international society with some elements of cooperation. The main part of the article defines superpowers and great powers, and shows why superpowers are dying out. The second section argues that a world with only great powers is likely to take a more regionalized form, and the third section explores why this might work quite well. The fourth section suggests the possible downsides of a more regionalized international society, and the conclusions reflect on some policy implications.

#### Rising powers will preserve the liberal order—US isn’t key

Ikenberry 11—PhD, Albert G. Milbank Professor of Politics and International Affairs at Princeton University in the Department of Politics and the Woodrow Wilson School of Public and International Affairs [May/June issue of Foreign Affairs, G. John, “The Future of the Liberal World Order,” http://www.foreignaffairs.com/articles/67730/g-john-ikenberry/the-future-of-the-liberal-world-order?page=show]

For all these reasons, many observers have concluded that world politics is experiencing not just a changing of the guard but also a transition in the ideas and principles that underlie the global order. The journalist Gideon Rachman, for example, says that a cluster of liberal internationalist ideas -- such as faith in democratization, confidence in free markets, and the acceptability of U.S. military power -- are all being called into question. According to this worldview, the future of international order will be shaped above all by China, which will use its growing power and wealth to push world politics in an illiberal direction. Pointing out that China and other non-Western states have weathered the recent financial crisis better than their Western counterparts, pessimists argue that an authoritarian capitalist alternative to Western neoliberal ideas has already emerged. According to the scholar Stefan Halper, emerging-market states "are learning to combine market economics with traditional autocratic or semiautocratic politics in a process that signals an intellectual rejection of the Western economic model." Today's international order is not really American or Western--even if it initially appeared that way. But this panicked narrative misses a deeper reality: although the United States' position in the global system is changing, the liberal international order is alive and well. The struggle over international order today is not about fundamental principles. China and other emerging great powers do not want to contest the basic rules and principles of the liberal international order; they wish to gain more authority and leadership within it. Indeed, today's power transition represents not the defeat of the liberal order but its ultimate ascendance. Brazil, China, and India have all become more prosperous and capable by operating inside the existing international order -- benefiting from its rules, practices, and institutions, including the World Trade Organization (WTO) and the newly organized G-20. Their economic success and growing influence are tied to the liberal internationalist organization of world politics, and they have deep interests in preserving that system. In the meantime, alternatives to an open and rule-based order have yet to crystallize. Even though the last decade has brought remarkable upheavals in the global system -- the emergence of new powers, bitter disputes among Western allies over the United States' unipolar ambitions, and a global financial crisis and recession -- the liberal international order has no competitors. On the contrary, the rise of non-Western powers and the growth of economic and security interdependence are creating new constituencies for it. To be sure, as wealth and power become less concentrated in the United States' hands, the country will be less able to shape world politics. But the underlying foundations of the liberal international order will survive and thrive. Indeed, now may be the best time for the United States and its democratic partners to update the liberal order for a new era, ensuring that it continues to provide the benefits of security and prosperity that it has provided since the middle of the twentieth century.

**Science diplomacy fails**

**Dickson 9** [David, Direction Science & Development Network. June 2, 2009, “Science diplomacy: the case for caution”, [http://scidevnet.wordpress.com/category/new- frontiers-in-science-diplomacy-2009](http://scidevnet.wordpress.com/category/new-%20frontiers-in-science-diplomacy-2009), SM]

One of the frustrations of meetings at which scientists gather to discuss policy-related issues is the speed with which the requirements for evidence-based discussion they would expect in a professional context can go out of the window. Such has been the issue over the past two days in the meeting jointly organised in London by the American Association for the Advancement of Science (AAAS) and the Royal Society on the topic “New Frontiers in Science Diplomacy“. There has been much lively discussion on the value of international collaboration in achieving scientific goals, on the need for researchers to work together on the scientific aspects of global challenges such as climate change and food security, and on the importance of science capacity building in developing countries in order to make this possible. But there remained little evidence at the end of the meeting on how useful it was to lump all these activities together under the umbrella term of “science diplomacy”. More significantly, although numerous claims were made during the conference about the broader social and political value of scientific collaboration – for example, in establishing a framework for collaboration in other areas, and in particular reducing tensions between rival countries – little was produced to demonstrate whether this hypothesis is true. If it is not, then some of the arguments made on behalf of “science diplomacy”, and in particular its value as a mechanism for exercising “soft power” in foreign policy, do not stand up to close scrutiny. Indeed, a case can be made that where scientific projects have successfully involved substantial international collaboration, such success is often heavily dependent on a prior political commitment to cooperation, rather than a mechanism for securing cooperation where the political will is lacking. Three messages appeared to emerge from the two days of discussion. Firstly, where the political will to collaborate does exist, a joint scientific project can be a useful expression of that will. Furthermore, it can be an enlightening experience for all those directly involved. But it is seldom a magic wand that can secure broader cooperation where none existed before. Secondly, “science diplomacy” will only become recognised as a useful activity if it is closely defined to cover specific situations (such as the negotiation of major international scientific projects or collaborative research enterprises). As an umbrella term embracing the many ways in which science interacts with foreign policy, it loses much of its impact, and thus its value. Finally, when it comes to promoting the use of science in developing countries, a terminology based historically on maximising self-interest – the ultimate goal of the diplomat – and on practices through which the rich have almost invariably ended up exploiting the poor, is likely to be counterproductive. In other words, the discussion seemed to confirm that “science diplomacy” has a legitimate place in the formulation and implementation of policies for science (just as there is a time and place for exercising “soft power” in international relations). But the dangers of going beyond this – including the danger of distorting the integrity of science itself, and even alienating potential partners in collaborative projects, particularly in the developing world – were also clearly exposed.

#### No risk of air power collapse -- we’re far ahead on everything

Carpenter and Deputla 08 US Air Force Colonel and Brigadier General of the Air Force Quadrennial Defense Review Division, respectively

[Mace Carpenter and David Deputla, “Aerospace nations; Invest in improving the Air Force,” The Washington Times, 2-21-2008, Lexis]

We are an aerospace nation in many ways. Our commercial air arm towers over any other nation. Our Navy's ability to project airpower from the sea is unmatched by any other navy. Our Marines' ability to provide close support to surface forces is "par excellence." Our Army's helicopter force - more than 6,000 strong - is the largest in the world. Our Air Force leads the world in aerospace capability in all aspects of the third dimension. Charged with leading military operations in air, space, and cyberspace, the Air Force provides the global vigilance, global reach and global power that underpin us as the world's sole superpower. National security actions are conducted much faster today than in the past; therefore, the speed and accuracy of air, space and cyber operations has become increasingly important. With other nations' growing ability to conduct precise kinetic and cyber attacks against us, we must preserve our capability to preempt, defend and rapidly respond.

#### Air power doesn’t deter -- not perceived

ALLAN 94 Air Force National Defense Fellow at the CSIS

[Charles, “Extended Conventional Deterrence: In from the Cold and Out of the Nuclear Fire?” Washington Quarterly, Summer]

Information. As we have seen, imperfect information about a defender's commitment may be present for both the defender and the attacker. Prior to the crisis, the "intended deterrees [themselves] will not know how much of a politically and technically credible threat it would take to deter them" (Gray 1991, 14). In addition, as Arquilla and Davis point out (Arquilla and Davis 1992; Davis and Arquilla 1991), adversaries have historically discounted key elements of U.S. power such as strategic mobility, precision weapons, maritime power, and airpower due to lack of familiarity with these systems. Without understanding these elements of U.S. military strength, the regional aggressor will view the absence of U.S. heavy ground forces as evidence of a lack of both capability and commitment. Moreover, Adam Garfinkle (1992) asserts that third world leaders are frequently misled into overly optimistic views of their own forces' capabilities. Without clear recognition of U.S. power, deterrence cannot hold.

#### Ground forces outweigh

Collins, ‘6professor of national security studies at the National War College, former deputy assistant secretary of defense for stability operations, and former Army strategist

(Joseph, “From the Ground Up”, Armed Forces Journal, <http://www.armedforcesjournal.com/2006/10/2088164>)

Second, Dunlap's misunderstands what ground forces are supposed to do. He believes ground operations should be adjuncts to air operations, but the opposite has been the more usual case. Even in the 21st century, the seizure of territory and its occupation will be essential in wars of various stripes, even if it increases our casualties and opens us up to the possibility of the abuses attendant to close combat. Third, counterinsurgency and stability operations will likely be a significant part of many future conflict scenarios. Post-Desert Storm, we marched into the 1990s content with our conventional general-purpose forces, only to find that peacekeeping, counterinsurgency, counterterrorism and stability operations were the dominant items on our agenda. Nearly 15 years later, that trend shows no sign of letting up.

## 2NC CP

### AT: Russia Firefighters

#### Forest prevention now

Xinhau 11 ["China,Russia reach agreement on forest fire prevention," 7-13, http://www.china.org.cn/environment/2011-07/13/content\_22981203.htm]

Chinese and Russian officials on Tuesday reached an agreement on increased cooperation in forest-fire prevention along the 4,300-kilometer Sino-Russian border. Du Yongsheng, deputy commander-in-chief of the national forest prevention headquarters and chief of the forest security bureau under the State Forestry Administration, said that China and Russia should establish an annual meeting and the border provinces should hold emergency meetings when a forest fire threatens either side. Victor Chicalyuk, deputy chief of the Russian forestry authorities, said Russia has built more than 230 firefighting centers on the Sino-Russian boundary. "More than 40 aircraft and about 540 smoke jumpers are ready to to engage in firefighting," Chicalyuk said.

**Economic decline empirically denied**

**Friedman 09** – Founder and CEO of STRATFOR, founder of the Center for Geopolitical Studies, former professor of political science, PhD in Government

(George, 7/2“The Russian Economy and Russian Power.” http://www.cdi.org/russia/johnson/2009-141-11.cfm)

Russia has been an economic wreck for most of its history, both under the czars and under the Soviets. The geography of Russia has a range of weaknesses, as we have explored. Russia’s geography, daunting infrastructural challenges and demographic structure all conspire against it. But the strategic power of Russia was never synchronized to its economic well-being. Certainly, following World War II the Russian economy was shattered and never quite came back together. Yet Russian global power was still enormous. A look at the crushing poverty ­ but undeniable power ­ of Russia during broad swaths of time from 1600 until Andropov arrived on the scene certainly gives credence to Putin’s view. The problems of the 1980s had as much to do with the weakening and corruption of the Communist Party under former Soviet leader Leonid Brezhnev as it had to do with intrinsic economic weakness. To put it differently, the Soviet Union was an economic wreck under Joseph Stalin as well. The Germans made a massive mistake in confusing Soviet economic weakness with military weakness. During the Cold War, the United States did not make that mistake. It understood that Soviet economic weakness did not track with Russian strategic power. Moscow might not be able to house its people, but its military power was not to be dismissed. What made an economic cripple into a military giant was political power. Both the czar and the Communist Party maintained a ruthless degree of control over society. That meant Moscow could divert resources from consumption to the military and suppress resistance. In a state run by terror, dissatisfaction with the state of the economy does not translate into either policy shifts or military weakness ­ and certainly not in the short term. Huge percentages of gross domestic product can be devoted to military purposes, even if used inefficiently there. Repression and terror smooth over public opinion. The czar used repression widely, and it was not until the army itself rebelled in World War I that the regime collapsed. Under Stalin, even at the worst moments of World War II, the army did not rebel. In both regimes, economic dysfunction was accepted as the inevitable price of strategic power. And dissent ­ even the hint of dissent ­ was dealt with by the only truly efficient state enterprise: the security apparatus, whether called the Okhraina, Cheka, NKVD, MGB or KGB. From the point of view of Putin, who has called the Soviet collapse the greatest tragedy of our time, the problem was not economic dysfunction. Rather, it was the attempt to completely overhaul the Soviet Union’s foreign and domestic policies simultaneously that led to the collapse of the Soviet Union. And that collapse did not lead to an economic renaissance. Biden might not have meant to gloat, but he drove home the point that Putin believes. For Putin, the West, and particularly the United States, engineered the fall of the Soviet Union by policies crafted by the Reagan administration ­ and that same policy remains in place under the Obama administration. It is not clear that Putin and Russian President Dmitri Medvedev disagree with Biden’s analysis ­ the Russian economy truly is “withering” ­ except in one sense. Given the policies Putin has pursued, the Russian prime minister must believe he has a way to cope with that. In the short run, Putin might well have such a coping mechanism, and this is the temporary window of opportunity Biden alluded to. But in the long run, the solution is not improving the economy ­ that would be difficult, if not outright impossible, for a country as large and lightly populated as Russia. Rather, the solution is accepting that Russia’s economic weakness is endemic and creating a regime that allows Russia to be a great power in spite of that.

#### Roberts Court makes the US a legal backwater

**Liptak 08** [Adam Liptak, “U.S. Court Is Now Guiding Fewer Nations,” The New York Times, September 18, 2008, pg. http://tinyurl.com/c2dw7jz

WASHINGTON — Judges around the world have long looked to the decisions of the [United States Supreme Court](http://topics.nytimes.com/top/reference/timestopics/organizations/s/supreme_court/index.html?inline=nyt-org) for guidance, citing and often following them in hundreds of their own rulings since the Second World War.

But now American legal influence is waning. Even as a debate continues in the court over whether its decisions should ever cite foreign law, a diminishing number of foreign courts seem to pay attention to the writings of American justices.

“One of our great exports used to be constitutional law,” said Anne-Marie Slaughter, the dean of the [Woodrow Wilson](http://topics.nytimes.com/top/reference/timestopics/people/w/woodrow_wilson/index.html?inline=nyt-per) School of Public and International Affairs at Princeton. “We are losing one of the greatest bully pulpits we have ever had.”

From 1990 through 2002, for instance, the Canadian Supreme Court cited decisions of the United States Supreme Court about a dozen times a year, an analysis by The New York Times found. In the six years since, the annual citation rate has fallen by half, to about six.

Australian state supreme courts cited American decisions 208 times in 1995, according to a recent [study](http://works.bepress.com/russell_smyth/1/) by Russell Smyth, an Australian economist. By 2005, the number had fallen to 72.

The story is similar around the globe, legal experts say, particularly in cases involving human rights. These days, foreign courts in developed democracies often cite the rulings of the [European Court of Human Rights](http://topics.nytimes.com/top/reference/timestopics/organizations/e/european_court_of_human_rights/index.html?inline=nyt-org) in cases concerning equality, liberty and prohibitions against cruel treatment, said Harold Hongju Koh, the dean of the Yale Law School. In those areas, Dean Koh said, “they tend not to look to the rulings of the U.S. Supreme Court.”

The rise of new and sophisticated constitutional courts elsewhere is one reason for the Supreme Court’s fading influence, legal experts said. The new courts are, moreover, generally more liberal than the Rehnquist and Roberts courts and for that reason more inclined to cite one another.

Another reason is the diminished reputation of the United States in some parts of the world, which experts here and abroad said is in part a consequence of the Bush administration’s unpopularity around the world. Foreign courts are less apt to justify their decisions with citations to cases from a nation unpopular with their domestic audience.

“It’s not surprising, given our foreign policy in the last decade or so, that American influence should be declining,” said Thomas Ginsburg, who teaches comparative and international law at the [University of Chicago](http://topics.nytimes.com/top/reference/timestopics/organizations/u/university_of_chicago/index.html?inline=nyt-org).

Aversion to Foreign Law

The adamant opposition of some Supreme Court justices to the citation of foreign law in their own opinions also plays a role, some foreign judges say.

“Most justices of the United States Supreme Court do not cite foreign case law in their judgments,” Aharon Barak, then the chief justice of the Supreme Court of Israel, wrote in the Harvard Law Review in 2002. “They fail to make use of an important source of inspiration, one that enriches legal thinking, makes law more creative, and strengthens the democratic ties and foundations of different legal systems.”

Partly as a consequence, Chief Justice Barak wrote, the United States Supreme Court “is losing the central role it once had among courts in modern democracies.”

Justice Michael Kirby of the High Court of Australia said that his court no longer confined itself to considering English, Canadian and American law. “Now we will take information from the Supreme Court of India, or the Court of Appeal of New Zealand, or the Constitutional Court of South Africa,” he said in an interview published in 2001 in The Green Bag, a legal journal. “America” he added, “is in danger of becoming something of a legal backwater.”

### AT: Bioweapons

Zero impact --- no acquisition.

Leitenberg ‘6 (Milton, Senior research scholar at the University of Maryland, Trained as a Scientist and Moved into the Field of Arms Control in 1966, First American Recruited to Work at the Stockholm International Peace Research Institute, Affiliated with the Swedish Institute of International Affairs and the Center for International Studies Peace Program at Cornell University, Senior Fellow at CISSM, http://www.commondreams.org/views06/0217-27.htm)

So what substantiates the alarm and the massive federal spending on bioterrorism? There are two main sources of bioterrorism threats: first, from countries developing bioweapons, and second, from terrorist groups that might buy, steal or manufacture them. The first threat is declining. U.S. intelligence estimates say the number of countries that conduct offensive bioweapons programs has fallen in the last 15 years from 13 to nine, as South Africa, Libya, Iraq and Cuba were dropped. There is no publicly available evidence that even the most hostile of the nine remaining countries — Syria and Iran — are ramping up their programs. And, despite the fear that a hostile nation could help terrorists get biological weapons, no country has ever done so — even nations known to have trained terrorists. It's more difficult to assess the risk of terrorists using bioweapons, especially because the perpetrators of the anthrax mailings have not been identified. If the perpetrators did not have access to assistance, materials or knowledge derived from the U.S. biodefense program, but had developed such sophistication independently, that would change our view of what a terrorist group might be capable of. So far, however, the history of terrorist experimentation with bioweapons has shown that killing large numbers of people isn't as easy as we've been led to believe. Followers of Bhagwan Shree Rajneesh succeeded in culturing and distributing salmonella in Oregon in 1984, sickening 751 people. Aum Shinrikyo failed in its attempts to obtain, produce and disperse anthrax and botulinum toxin between 1990 and 1994. Al Qaeda tried to develop bioweapons from 1997 until the U.S. invasion of Afghanistan in 2001, but declassified documents found by U.S. forces outside Kandahar indicate the group never obtained the necessary pathogens. At a conference in Tokyo this week, bioterrorism experts called for new programs to counter the possibility that terrorists could genetically engineer new pathogens. Yet three of the leading scientists in the field have said there is no likelihood at this time that a terrorist group could perform such a feat. The real problem is that a decade of widely broadcast discussion of what it takes to produce a bioweapon has provided terrorists with at least a rough roadmap. Until now, no terrorist group has had professionals with the skills to exploit the information — but the publicity may make it easier in the future. There is no military or strategic justification for imputing to real-world terrorist groups capabilities that they do not possess. Yet no risk analysis was conducted before the $33 billion was spent. Some scientists and politicians privately acknowledge that the threat of bioterror attacks is exaggerated, but they argue that spending on bioterrorism prevention and response would be inadequate without it. But the persistent hype is not benign. It is almost certainly the single major factor in provoking interest in bioweapons among terrorist groups. Bin Laden's deputy, the Egyptian doctor Ayman Zawahiri, wrote on a captured floppy disk that "we only became aware of (bioweapons) when the enemy drew our attention to them by repeatedly expressing concerns that they can be produced simply with easily available materials." We are creating our worst nightmare.

**Deployment of bioweapons dramatically reduces their death toll.**

Mueller ‘10 (John, Woody Hayes Chair of National Security Studies at the Mershon Center for International Security Studies and a Professor of Political Science at The Ohio State University, A.B. from the University of Chicago, M.A. and Ph.D. @ UCLA, *Atomic Obsession – Nuclear Alarmism from Hiroshima to Al-Qaeda*, Oxford University Press, Accessed @ Emory)

Properly developed and deployed, biological weapons could potentially, if thus far only in theory, kill hundreds of thousands, perhaps even millions, of people. The discussion remains **theoretical** because biological weapons have scarcely ever been used. For the most destructive results, they need to be **dispersed** in very **low-altitude** aerosol clouds. Since aerosols do not appreciably settle, pathogens like anthrax (which is not easy to spread or catch and is not contagious) would probably have to be sprayed **near nose level**. Moreover, **90 percent** of the microorganisms are likely to **die** during the process of aerosolization, while their effectiveness could be reduced still further by **sunlight**, **smog**, **humidity**, and **temperature changes**. Explosive methods of dispersion may destroy the organisms, and, except for anthrax spores, long-term **storage** of lethal organisms in bombs or warheads is difficult: even if refrigerated, most of the organisms have a **limited lifetime**. Such weapons can take days or **weeks** to have **full effect**, during which time they can be **countered** with medical and civil defense measures. In the summary judgment of two careful analysts, delivering microbes and toxins over a wide area in the form most suitable for inflicting mass casualties-as an aerosol that could be inhaled-requires a delivery system of **enormous sophistication**, and **even then** effective dispersal could **easily be disrupted** by unfavorable environmental and meteorological conditions.

## 2NC Case

### Drilling Disad

#### AND, the risk of drilling multiplies with each additional drillers—you must account for the systemic risk of ecosystem collapse.

Craig 11—Associate Dean for Environmental Programs @ Florida State University [Robin Kundis Craig, “Legal Remedies for Deep Marine Oil Spills and Long-Term Ecological Resilience: A Match Made in Hell,” Brigham Young University Law Review, 2011, 2011 B.Y.U.L. Rev. 1863

Systemic risk is as important as individual risk. Notwithstanding the National Environmental Policy Act's requirement that federal permitting agencies consider cumulative impacts to the environment, [n188](http://www.lexisnexis.com.proxy.library.emory.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1348065909828&returnToKey=20_T15563238106&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.735297.7128077165" \l "n188) we currently evaluate the risks of offshore oil drilling primarily with respect to individual oil drilling operations in connection with individual permits and leases. As the Deepwater Horizon Commission recognized, however, the larger systemic context of such drilling is also important, and perhaps arguably more so. From a resilience perspective, a drilling operation that uses the only oil rig in a pristine marine environment is an inherently different risk problem than the Deepwater Horizon's situation of being one of thousands of similar rigs in a pervasively and multiply stressed Gulf. As Clark, Jones, and Holling have suggested, our trial-and-error experiments with Nature in our first-sense resilience  [\*1895] dependence mode "now threaten errors larger and more costly than society can afford." [n189](http://www.lexisnexis.com.proxy.library.emory.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1348065909828&returnToKey=20_T15563238106&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.735297.7128077165" \l "n189) Resilience thinking should more forcibly insist on multilayered systemic awareness, promoting limits on how much exploitation should be occurring simultaneously and encouraging more gradual resource development over longer periods of time.

. Risk to the environment should be presumed, even when all actors follow all best practices. Our current first-sense resilience dependency produces laws that assume that ecosystems can be fixed—and, perhaps more importantly, as embodied in the OPA natural resource damages regulations, that natural processes will often be able to restore themselves without human effort. Resilience thinking, in contrast, effectively assumes that ecosystems could suddenly shift to a new regime at any time for any number of reasons that we do not understand and may not even be able to anticipate—the combined potential of the second and third conceptions of resilience. In the words of Clark, Jones, and Holling, "if a system has multiple regions of stability, then Nature can seem to play the practical joker rather than the forgiving benefactor." [n190](http://www.lexisnexis.com.proxy.library.emory.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1348065909828&returnToKey=20_T15563238106&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.735297.7128077165" \l "n190) To exaggerate the differences in outlook just a bit, our current paradigm presumes that most ecosystems can cope with most human activities, while resilience thinking presumes that all changes to an ecosystem are at least potentially completely destabilizing—i.e., inherently risky, with the outer limits of that risk being potentially massive. To translate this change in presumption into legalese, full resilience thinking promotes a policy framework where most human activities in the environment could be—and perhaps should be—considered inherently dangerous activities.

 [\*1896]  As every first-year law student learns, engaging in inherently dangerous activities tends to subject the actor to strict and fairly absolute liability for the kinds of harm that made the activity inherently dangerous. [n191](http://www.lexisnexis.com.proxy.library.emory.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1348065909828&returnToKey=20_T15563238106&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.735297.7128077165" \l "n191) Under resilience thinking, those kinds of harm would include all of the unpredictable and unexpected changes to the ecosystem that might occur as a result of a disaster like the Deepwater Horizon oil spill, up to and including a substantial shift in ecosystem regime or ecosystem collapse.

While full implementation of an "inherently dangerous activity" legal regime for all marine activities is unlikely, the case is fairly strong for deep sea oil exploration and drilling. It is at least worth pondering what such a consequence of resilience thinking might mean for risk assessment and behavioral incentives in this context. If nothing else, one would predict under such a new view of potential liability that oil companies' insurers might begin charging premiums that more accurately reflect the potentially catastrophic liability that resilience-minded regulations and policies would make legally cognizant—and might insist on the much more precautionary and safety-minded approach to offshore oil drilling that a multitude of commentators and the Deepwater Horizon Commission have sought in the wake of the Deepwater Horizon disaster.

V. Conclusion  
 The second and third senses of resilience, and the socio-ecological risks for humans that they underscore, should not be foreign concepts in the regulation of the marine environment, including (and perhaps especially) when it comes to regulating the offshore oil and gas exploration and drilling taking place at ever-increasing depths. Nor should the possibility that the cumulative stresses to the Gulf of Mexico have pushed its ecosystems to the brink of ecosystem thresholds be ignored in our regulatory regimes.

By acknowledging that ecosystems are dynamic and subject to sudden and fairly catastrophic (at least from a human perspective) changes, full resilience thinking provides a path away from the trap of first-sense resilience dependence. Specifically, full resilience thinking recognizes that exploitative activities that affect the Gulf—not just deep sea oil drilling but also fishing and farming up the Mississippi River—put all of the human beings who depend on the ecosystem services, as well as the ecosystems themselves, at collective risk of catastrophic ecosystem collapse. A liability regime based on these unavoidable and potentially massive environmental risks would likely protect the Gulf of Mexico better than our current regime of natural resource damages, especially when injury occurs in the Gulf's murky depths.

#### They place the Atlantic Coast seamount at risk—rare sponges are at risk.

Chasis 12—Senior attorney @ Natural Resources Defense Council [Sarah Chasis, “Drilling our Atlantic Coast,” Switchboard, Posted March 28, 2012, pg. http://tinyurl.com/d65zy2o]

In the ocean, animals communicate by sound. The sound impact from seismic surveys can displace marine mammals, including the endangered North Atlantic right whale, away from nurseries and foraging, mating, spawning, and migratory corridors. Seismic airgun surveys also have been shown to damage or kill fish and fish larvae and have been implicated in whale beaching and stranding incidents.

And these surveys will be occurring at and around some of the Atlantic’s most amazing submarine canyons. ([“Ocean Oases”](http://www.youtube.com/watch?feature=player_detailpage&v=229zAAC8wM8) is a short NRDC film about the urgent need to protect the Atlantic Coast’s underwater canyons and seamounts.)

Cut into the Atlantic’s continental shelf is a series of vast undersea canyons, starting just north of Cape Hatteras, North Carolina and running up past Cape Cod. The canyons dive down thousands of feet over clay and stone cliffs before reaching the deep ocean bottom. The canyons host an amazing variety and abundance of marine life. Their hard foundations have allowed deep sea corals, rare sponges, and vivid anemones to grow and a bevy of fish and shellfish find food and shelter in these complex and dynamic environments. Endangered sperm whales, beaked whales, dolphins, and other marine mammals feed on congregating schools of squid and small fish. Commercial and recreational fishermen enjoy fishing the waters around the canyons. The types of coral and sponge communities in the seamounts and canyons have even yielded scientific and technological advances, including compounds for cancer treatments, models for artificial synthesis of human bone, and elements for constructing more durable optic cables. The canyons that would be impacted by seismic surveys in the Mid and South-Atlantic include Baltimore, Accomac, Washington, and Norfolk.

The oil and gas industry has not been allowed in these areas since drilling exploratory wells near several of the canyons in the early 1980s; Salazar’s announcement changes this.

#### Sponges solve antibiotic resistance

Sanders 9 [Laura Sanders, “Sponge’s secret weapon restores antibiotics’ power,” Science News, March 14th, 2009; Vol.175 #6 (p. 16), pg. http://www.sciencenews.org/view/generic/id/40894/title/Sponge%E2%80%99s\_secret\_weapon\_restores\_antibiotics%E2%80%99\_power]

CHICAGO — A chemical from an ocean-dwelling sponge can reprogram antibiotic resistant bacteria to make them vulnerable to medicines again, new evidence suggests.

Ineffective antibiotics become lethal once again for bacteria treated with the sponge compound, chemist Peter Moeller reported February 13 at the American Association for the Advancement of Science annual meeting.

“The potential is outstanding. This could revolutionize our approach to thinking about how infections are treated,” comments Carolyn Sotka of the National Oceanic and Atmospheric Administration’s Oceans and Human Health Initiative in Charleston, S.C.

Everything living in the ocean survives in a microbial soup, under constant bombardment from bacterial assaults. Researchers led by Moeller, of Hollings Marine Laboratory in Charleston, found a sponge thriving in the midst of dead organisms. This anomalous life amidst death raised an obvious question, says Moeller: “How is this thing surviving when everything else is dead?”

Chemical analyses of the sponge’s chemical defense factory pointed to a compound called ageliferin. Biofilms, communities of bacteria notoriously resistant to antibiotics, dissolved when treated with fragments of the ageliferin molecule. And new biofilms did not form.

So far, the ageliferin offshoot has, in the lab, successfully resensitized bacteria that cause whooping cough, ear infections, septicemia and food poisoning. The compound also works on Pseudomonas aeruginosa, which causes horrible infections in wounded soldiers, and MRSA infections, which wreak havoc in hospitals. “We have yet to find one that doesn’t work,” says Moeller.

And the results may not just apply to bacteria in communities. The compound is able to reprogram antibiotic-resistant bacteria that don’t form biofilms. When bacteria are treated with the compound, antibiotics that usually have no effect are once again lethal. This substance may be the first one that can eliminate bacteria's resistance, Moeller says. “This resensitization is brand new.”

And the problem of perpetuating a bacterial-resistance arms race, in which bacteria rapidly develop countermeasures against new antibiotics, may be avoided entirely with the new compound. “Since the substance is nontoxic to the bacterium, it’s not throwing up any red flags,” says Moeller.

\* Moeller—Chemist at the Hollings Marine Laboratory in Charleston, SC

#### Resistance risks extinction

Davies 8—Professor of Microbiology and Immunology @ University of British Columbia [Julian Davies, “Resistance redux. Infectious diseases, antibiotic resistance and the future of mankind,” EMBO reports 9, S1, S18–S21 (2008), pg. http://www.nature.com.proxy.library.emory.edu/embor/journal/v9/n1s/full/embor200869.html]

For many years, antibiotic-resistant pathogens have been recognized as one of the main threats to human survival, as some experts predict a return to the pre-antibiotic era. So far, national efforts to exert strict control over the use of antibiotics have had limited success and it is not yet possible to achieve worldwide concerted action to reduce the growing threat of multi-resistant pathogens: there are too many parties involved. Furthermore, the problem has not yet really arrived on the radar screen of many physicians and clinicians, as antimicrobials still work most of the time—apart from the occasional news headline that yet another nasty superbug has emerged in the local hospital. Legislating the use of antibiotics for non-therapeutic applications and curtailing general public access to them is conceivable, but legislating the medical profession is an entirely different matter.

In order to meet the growing problem of antibiotic resistance among pathogens, the discovery and development of new antibiotics and alternative treatments for infectious diseases, together with tools for rapid diagnosis that will ensure effective and appropriate use of existing antibiotics, are imperative. How the health services, pharmaceutical industry and academia respond in the coming years will determine the future of treating infectious diseases. This challenge is not to be underestimated: microbes are formidable adversaries and, despite our best efforts, continue to exact a toll on the human race.

#### AND causes dead zones

#### Yamamoto et al 9 [A., Graduate School of Environmental Science, Hokkaido University, Y. Yamanaka[a](http://www.sciencedirect.com.proxy.library.emory.edu/science/article/pii/S0012821X09003136#aff1), [b](http://www.sciencedirect.com.proxy.library.emory.edu/science/article/pii/S0012821X09003136#aff2), E. Tajika,[c](http://www.sciencedirect.com.proxy.library.emory.edu/science/article/pii/S0012821X09003136#aff3) “Modeling of methane bubbles released from large sea-floor area: Condition required for methane emission to the atmosphere,” 6-21, Ebsco]

Applying our results to PETM, it is suggested that a methane bubble derived directly from the typical hydrate layer could not have contributed substantially to global warming. On the other hand, the methane derived from organic-rich sediments intruded by magma ([Svensen et al., 2004](http://www.sciencedirect.com.proxy.library.emory.edu/science/article/pii/S0012821X09003136#bib34)) could be emitted to the atmosphere. The collapse of methane hydrate would potentially cause a global-scale anoxic condition in the seawater. The methane of 2000 GtC dissolved into the world ocean consumes 3.3 × 1017 mol of dissolved oxygen, which is about the same amount of dissolved oxygen as is in the ocean at the present. The dissolved methane from the methane bubble rapidly consumes in situ and surrounding dissolved oxygen owing to advection and diffusion on the time scale of hundreds of years. Advection and diffusion would determine distribution of the anoxic condition by influencing oxygen supply from the sea surface. In other words, these mixing phenomena would also determine the distribution of dissolved methane without oxidation that would reach the atmosphere. We need General Circulation Models (GCMs) to estimate the expansion of anoxic conditions in the ocean and the amount of methane released into the atmosphere.

#### Extinction

**Maglir 10** [Fand, “Consider the Global Effects of Oil Spill on Oxygen Supply,” 9-6, <http://www.naturalnews.com/029666_oil_spill_oxygen_supply.html>]

Open-ocean microalgae is responsible for consuming about one fifth of all carbon dioxide taken up by global plant-life, and the oxygen they produce through photosynthesis is essential for the survival of life on Earth. More ocean algae means that more carbon dioxide is removed from the atmosphere to be replaced by more oxygen. When these algae blooms die and sink to the ocean floor, they move large amounts of carbon dioxide from the atmosphere to the oceans, which also helps control Earth`s climate. Upsets in the balance of ocean algae can be detrimental to marine life as well as human life. Increasing dead zones in the oceans affect not only local businesses who depend on abundant marine life such as fish, shrimp and the like, but also the very air we breathe! How will the growing number of dead zones in the world`s oceans affect ocean algae and the oxygen levels in the air? Ocean dead zones are created by a number of factors, both naturally occurring and human interference. At the very minimum, sea life requires 30% dissolved oxygen in the water and thrives at 80% or higher. When the amount of dissolved oxygen in the ocean decreases to below 30% the water becomes hypoxic, and below 1% it becomes anoxic. The World Resources Institute`s compiled data states that there are currently 375 dead zones in the world`s oceans. Although excessive algae blooms, due in part to an increase in the basic chemical nutrients in the water, cause oxygen depletion in the oceans, the recent increase in dead zones can be attributed to human alterations and pollution. The Mississippi River deposits Midwest agricultural pollution into the northern Gulf of Mexico, creating a dead zone which spans over 8500 square miles. As if that isn`t enough, BP`s ruptured well in the Gulf of Mexico is creating oxygen depleted dead zones, with methane concentrations as high as 100,000 times normal levels, along with high levels of crude oil and toxic chemical dispersants, killing marine life and oxygen-producing algae. Scientists point out that the oil slick, as well as the chemical dispersants, will kill off the phytoplankton and algal species for which oil is a toxin and will block the sunlight needed for all photosynthesizing algae. What we are looking at is a prospective dead zone of a 200 mile radius from the Deepwater Horizon disaster datum in the Gulf. That`s equivalent to over 125,663 square miles. If the oil contamination of our oceans continue, such as what we`re seeing in areas such as the Gulf of Mexico and the oil rich Niger Delta, the increasing dead zones could threaten Earth`s ability to sustain human life as oxygen-producing ocean algae, a huge contributor to our global oxygen supply, is killed off.

#### Regulations not enforced

#### Mall 13 [Amy, Senior Policy Analyst at the NRDC, "Laws Covering Oil and Gas Wells on Public/Private Lands Poorly Enforced," The Energy Collective, 3-4, http://theenergycollective.com/amymall/194021/enforcing-laws-oil-and-gas-wells-public-and-private-land-not-we]

In Fiscal Year 2011, the BLM conducted an Internal Control Review (ICR) of the onshore oil and gas Inspection and Enforcement (I&E) program. The ICR reviewed ten field offices with major oil and gas responsibilities in California, New Mexico, Oklahoma, Colorado, Utah, Wyoming, North Dakota, Louisiana, Kentucky and Arkansas. Among the findings: A number of offices have low-quality environmental inspections as they struggle to keep up with exploration and production activity. The review made me very concerned about the lack of oversight of oil and gas production on federal oil and gas leases; I got the sense that it's like a party of teenagers with no parents at home. Many rules are going without enforcement. And in some cases I felt that the BLM staff may be having a tough time, trying to enforce the laws without proper resources to do the job appropriately. Just some examples of what was found in this review: In Wyoming, "there was an overall lack of enforcement of identified issues and/or non-compliant items in many records, many conditions of approval (COA) not being followed that were not identified in the inspections as being issues, and non-compliant items requiring action." In New Mexico, Environmental Inspection records were found to be inadequate in detail and not in accordance with the handbook, and it does not appear that non-compliance orders are issued for environmental issues or violations. The reviewers found that the inspectors telephone and ask an operator to comply with surface standards, without documenting the call as a Verbal Warning. In North Dakota: "Not all of the required inspections are being performed due to the demand from the ongoing permitting workload for drilling." In Bakersfield, California the review found that "The drilling inspection process in Bakersfield is best summarized as a light review of drilling activity and, most importantly, exhibited a lack of proper documentation..... Bakersfield is not performing casing or cementing inspections." In Oklahoma, the reviewer was concerned with the lack of environmental protection measures, including unfenced open reserve pits with liquids after drilling operations and erosion of pit berms without sediment traps. There is a lot more in this report, but the bottom line was that the BLM Inspection and Enforcement program has a long way to go before the public can have confidence that the agency is fulfilling its responsibilities to protect our public lands and clean air and clean water, and ensure that laws are being followed. Some problems may be solved by additional resources devoted to inspections and enforcement, but money alone won't solve the problem. Protecting the environment needs to be a much higher priority for the agency.

#### Methane pipeline leaks --- and that independently kills trees

**The Washington Post 3-5** ["Natural gas leaks may hasten global warming," 3-5, http://www.japantimes.co.jp/life/2013/03/05/environment/natural-gas-leaks-may-hasten-global-warming/#.UTY7LjDrzws]

Measuring how much methane gas is leaking from pipes under the District of Columbia could help answer a key policy question. As the production of natural gas expands in the United States and elsewhere, do its dangers for the climate far outweigh its benefits? Methane, the main component of natural gas, is about 25 times more powerful as a heat-trapping gas than carbon dioxide, the largest human contributor to climate change; the atmospheric concentration of methane has doubled since the start of the Industrial Revolution. While it largely dissipates in a few decades and there is far less of it in the atmosphere than carbon dioxide, it continues to drive global warming. Depending on how much leaks out in the journey from wellhead to homes and factories, some experts say, it could be enough to offset the advantages natural gas has over coal. “We don’t have enough data to develop sound policy going forward,” said Steven Hamburg, chief scientist of the advocacy group Environmental Defense Fund. He noted that natural gas has a complex supply chain with “different geographies and geologies” along the way. Hamburg is spearheading a $10 million, two-year effort to measure methane emissions along America’s supply chain. As activists and energy executives debate the natural gas industry’s impact and the Environmental Protection Agency weighs whether to impose new regulations, Hamburg said, “it’s critically important” that America develop a better data set on methane leaks. The group has brought together academics, environmentalists and industry representatives to track different stages of natural gas extraction, production and transmission and will issue its initial report in May. Other teams are also working to unlock the puzzle. Bob Ackley spent January driving the city for 10 to 12 hours a day, usually with a researcher riding alongside. Ackley, who runs a methane detection company, is part of a six-person group financed by Duke University’s Nicholas School of the Environment that has collected data on thousands of methane leaks under Washington’s roads. On a recent trip through the city, Ackley took the wheel while Duke professor Robert Jackson tracked real-time methane concentrations that an instrument stashed in the car’s trunk fed into a computer. Periodically the readings would spike to unsafe levels, with methane escaping from a single manhole making up as much as 32 percent of an air sample. Last fall, the team published the results of a similar survey of Boston, which showed the city’s aging infrastructure had 3,356 leaks. “Washington is at least as leaky as Boston, if not more,” Jackson said. “It looks like it has both more leaks and bigger leaks than Boston.” Researchers disagree about how much methane is leaking into the atmosphere. Cornell University’s Robert Howarth has estimated somewhere between 3.6 percent and 7.9 percent of methane escapes during the production life cycle of shale gas; the Massachusetts Institute of Technology countered with a study saying it is just a fraction of that amount. University of Colorado research scientist Gabrielle Petron, who also works in the National Oceanic and Atmospheric Administration’s (NOAA) global monitoring division, said the rate of increasing atmospheric methane concentrations has accelerated tenfold since 2007. She said it will take a few more years to determine whether the natural gas boom helps explain the change. “All we’ve done now are snapshot measurements,” she said. Their findings have major safety and environmental implications. Gas leaks contribute to smog and can lead to explosions and fires, including the one that leveled a restaurant in Kansas City, Missouri, on Feb. 19, or the 2010 pipeline explosion in San Bruno, California, that killed more than half a dozen people. And leaking gas can also weaken and kill trees in urban areas by replacing oxygen in their roots and drying them out; Ackley has helped organize a lawsuit by five communities surrounding Boston against the region’s gas company, National Grid, and he is consulting with residents of Montgomery County, Maryland, who are concerned about tree deaths there.

### Cooperative Federalism

#### States backlash against the plan

Weaver 2 (Sierra B., Senior Staff Attorney with Expertise in Climate Change, Forests and Public Lands, and Marine Conservation – Defenders of Wildlife (Litigation Group in Washington, DC), “NOTE: Local Management of Natural Resources: Should Local Governments be Able to Keep Oil Out?,” The Harvard Environmental Law Review, 26 Harv. Envtl. L. Rev. 231, Lexis)

II. WHAT LOCAL CONTROL LOOKS LIKE--THE PROBLEM AT HAND A. The Landscape of Local Government Initiatives Since the statutory scheme, as interpreted by federal agencies and courts, has left state and local governments with little protection from federal leasing policies, California and its coastal communities have looked to other ways of controlling offshore development. At the state level, congressional delegations from California and other coastal states have used their powers over appropriations to rein in the relevant federal agencies. n65 This tactic has proven extremely effective in blocking leasing on a year-to-year basis and has sent a clear message to the federal government that these states oppose drilling off their coasts. n66 By 1990, this [\*243] message was loud enough to cause President George H. W. Bush, and then President Bill Clinton in 1998, to protect much of the nation's coastline. n67 The use of appropriations control as a tool, however, requires that such battles be fought on a yearly basis and by no means guarantees victory for anti-oil forces. For example, in the winter of 1985, Congress lifted the moratorium on offshore leasing that had protected the California coast since fiscal year 1982. n68 Despite the California congressional delegation's effort to reinstate the moratorium, the effort lost by one vote in the House Appropriations Committee. n69 In the midst of an aggressively pro-oil Reagan administration, the people of California decided to try another approach, moving their advocacy efforts from the state level down to their local governments. In 1985, in the face of new threatened lease sales, offshore development projects, and a proposal by Chevron to build a large processing plant just north of the city of Santa Barbara at Gaviota, a Santa Barbara group called "Concerned About Oil" placed Measure A on the county ballot. n70 The local initiative specifically provided for three main protections against increased development. First, Measure A would restrict oil and gas development by limiting new construction of onshore processing facilities to just one site on Santa Barbara County's already industrialized southern coast, effectively eliminating the threat of the Gaviota processing facility. n71 Second, it would phase out oil tankering in favor of more environmentally safe pipelining, blocking the construction of marine terminals then being pursued by many of the Santa Barbara oil companies. n72 [\*244] Third, it would strengthen county air quality standards in another attempt to gain control over the offshore activities that were negatively impacting the onshore environment. n73 This initial grassroots effort at local control was defeated, however, by the competing Measure B, which was promoted by the Santa Barbara County Board of Supervisors. According to Linda Krop, Chief Counsel with the Environmental Defense Center in Santa Barbara, who started her career working on Measure A, the initiative failed in part because of its complexity. n74 The comprehensiveness of the three-tiered approach that was so appealing to its proponents simply "looked like a lot of technical mumbo-jumbo" to many lay people casting their votes on the measure. n75 Proponents of Measure B also outspent those of Measure A by a large amount, especially during the final weeks of the campaign when polls showed Measure A might pass. n76 Finally, Measure A suffered from a lack of support by moderate environmentalists who felt it was too strict, and was soundly rejected by the northern section of the county, which was politically conservative and less oil-traumatized. n77 In contrast to the strict requirements of Measure A, Measure B provided weaker environmental protections and left control with the Board of Supervisors essentially unchanged. Measure B allowed for processing facilities at two cites, instead of one, and split the county into North and South from Point Conception to California's eastern border in order to provide for the siting of the two plants. n78 Measure B also expressed pipelining as a preference but not a requirement, and its air quality restrictions were not as strict. n79 As implemented, however, the nonbinding policy recommendations of Measure B proved to be an effective tool to guide the decisions of the Board of Supervisors, and even many Measure A proponents considered it to be a success. This first effort at using local initiatives to control energy development was significant in both its innovation and its determination to escape the impasse that states and the federal government had found themselves in since the Seaweed Rebellion began. By exercising the local government's traditional zoning power to manage conflicting land uses, anti-drilling interests were able to influence offshore development without raising traditional challenges to jurisdictional or legal authority. Oil processing facilities were, in one sense, just like any other undesirable [\*245] land use that a local government would want to avoid--they were noisy, unattractive, foul-smelling, polluting, and a safety risk. However, in the oil context, the land use power went beyond controlling the cities' commercial makeup. Technological constraints and imposition of extra costs on the oil industry meant that land use controls onshore could limit, or in some cases, effectively prohibit drilling offshore. Despite Measure A's failure in Santa Barbara, Central Coast communities became even more determined to prevent expansion of the oil and gas industries in their areas. Rather than initiatives such as Measure A, which merely imposed environmental protections and limited onshore development to a specific area, some localities opted for initiatives and resolutions that completely banned onshore development. n80 In other coastal communities, residents demanded that any oil- or gas-related development approved by the local zoning authority also be approved by an affirmative vote of the public. n81 By March 15, 1987, fourteen California coastal cities and counties had approved measures to completely ban or require public approval for the construction of onshore processing facilities. n82 By 1990, that number had increased to twenty-six. n83 The average [\*246] popular vote in favor of initiatives enacting such measures was seventy-two percent. n84 The speed with which many of these communities acted, the rates at which these local initiatives passed, and the number of communities that pursued them indicate that opposition to oil and gas development in these localities was sincere and broadly felt. Many people in areas such as San Luis Obispo, the county directly up the coast from Santa Barbara, claim that offshore oil is the one issue that unites the entire community. n85 As a result, individuals and community organizations continually use every means possible to reiterate this message to the Minerals Management Service ("MMS"), the branch of Interior that is primarily responsible for both onshore and offshore minerals extraction. n86 For example, at an MMS public hearing held January 22, 2001, in Santa Barbara County, numerous representatives of San Luis Obispo organizations spent over four hours testifying to their opposition to any advancement of oil development on the Central Coast. n87 In 1998, the San Luis Obispo Chamber of Commerce and the Environmental Center of San Luis Obispo ("EcoSlo") issued their first ever cooperative position paper, jointly criticizing the federal government's California Offshore Oil, Gas, and Energy Reserves Study ("COOGER") for its inadequate evaluation of environmental and socioeconomic effects on the County. n88 Actions like these have sent a clear message that the oil industry is not welcome in San Luis Obispo County. [\*247] B. The Threat of NIMBYism What should this local political resolve count for in a debate over the disposition of national resources? The brief history sketched in Part I shows that in prior battles between states and the federal government, the federal government has won. Leaving aside for the moment whether the federal government has used this power to best manage the OCS resources or in the best interest of the nation generally, there are strong policy reasons to favor national control in this instance. First, the OCS is a national resource to be used in the interests of the country, rather than only in the interests of people who live in the affected coastal communities. Second, and more importantly, the national government is in the best position to compare different options for mineral extraction and energy development. It should not be impeded from making these difficult decisions by parochial interests that lack both the information and the public mandate unique to the federal government. Senator Mary Landrieu of Louisiana recently expressed this view when discussing the oil drilling controversy in Florida. Advocating an easing of offshore development restrictions in order to combat the nation's high energy prices, Landrieu asked, "Is it fair for one state or a handful of states to drive up the [energy] costs for everyone else?" n89 We must also inquire about the fairness of a decision-making process that favors the political power of individual states over environmental safety and social equity. For example, in the use of appropriations to block drilling off the coasts of certain states, offshore energy development may be completely divorced from either environmental or energy policy, existing only as a potential financial allocation to be bargained over in the political sphere. With regard to presidential moratoria, or even executive agency action on the standard five-year leasing plans, political power can play a major role. When asked during his presidential campaign whether he would pursue drilling off the Florida coast, George W. Bush tipped his hat to Florida Governor and family member Jeb Bush when he promised that he "would not mess with 'little brother over there.'" n90 President Bush's advisors later noted that family ties would have to take a back seat if he was to fulfill his campaign promise to increase the country's energy supply. n91 As Senator Landrieu's comment suggests, the public generally regards it as unacceptable that a few powerful states, including Florida and [\*248] California, receive political preference at the expense of fulfilling national needs. In the energy context, as well as in the environmental context, the general public simply feels that burdens and benefits should be distributed equitably and be based on legitimate concerns of environmental risks, socioeconomic effects, and physical compatibility. n92 Both our sense of fairness and the law of offshore development require this policy foundation. The California coast unquestionably enjoys a dedicated national base of public interested support for preserving its unique beauty and ecological significance, but because many of the issues in California have evolved into local zoning matters, anti-oil activists have become vulnerable to criticism that they are acting purely out of self interest. Derogatory terms like "NIMBY," standing for "Not In My Backyard," have come to dominate the debate. n93 In some respects the Central Coast looks like the stereotypical NIMBY culprit--relatively wealthy, politically powerful, and socially privileged. n94 The counties of Santa Cruz, Sonoma, Monterey, San Luis Obispo, Mendocino, and Santa Barbara, all of which have protective ordinances that limit energy development within their boundaries, n95 contain few of the economic and environmental problems of Los Angeles County or inland agricultural Bakersfield County. Thus, one is left to wonder whether these communities' conservation efforts are advanced in the spirit of public or private interests. From a policy perspective, one is left with an even more basic question of whether to allow local governments to put up walls around their communities, regardless of their motivations. The NIMBY attacks strike on two levels. First, as articulated by Senator Landrieu's sentiment, local interest-based opposition to siting decisions may hurt the rest of the country, which depends on the resource [\*249] use enabled by the unwanted facilities. Second, this focus on local interests and oil development's potential immediate impacts causes anti-oil advocates to stop short of asking where those seeking extraction might turn to next when some communities close their doors. Localizing the energy debate has, in effect, caused communities to play off each other, continually pushing the risk of development not to the areas better suited for it, but to those most politically welcoming or least able to deter it. The incentive structure of NIMBYism encourages those seeking to site locally undesirable land uses to choose communities where they will face the least resistance, often turning their attention to lower-income and minority areas. This may create a positive outcome if a chosen community desires the development and believes economic benefits will outweigh the costs. Many times, however, this incentive structure simply directs developers to the communities with the least economic and political power, creating the complex social, environmental, and economic problems now commonly addressed in the environmental justice movement. n96 In the latter scenario, the community does not want the facility, but it lacks the power to override decisions made by higher levels of government or wealthy business interests. The tensions between local and federal control over offshore development look very similar to the concerns that arose from the now discredited approach to selecting sites for hazardous waste facilities. n97 The environmental justice debate provides insight into the importance of empowering local communities, particularly those that have been traditionally underrepresented and excluded from the decision-making process. In another sense, however, the environmental justice debate also focuses heavily on leveling the playing field to ensure that the burdens of waste management, natural resource development, and other environmentally destructive or dangerous land uses are spread more evenly to all those who benefit from such development. The current system for developing offshore energy resources does not empower local communities, nor does it benefit from the broad vantage point that responsible top-down siting can contribute. The current system instead relies on ad hoc decision-making and political infighting. This situation is unfair from a justice and equality perspective for the underprivileged people who oppose oil, but are unable to force it out politically. Moreover, it is environmentally unsound to leave the fate of natural resources, which hold significant ecological value to the nation, dependent upon their value to and the power of the local community that houses them. [\*250] C. Conflicting Resources and Conflicting Expertise If one was concerned only with managing the extraction of oil and gas from the OCS and appropriately spreading the burdens of this production, simple fairness and distributive justice would require that communities like those on California's Central Coast be held accountable for their share of the national energy burden. The OCS has more to offer than opportunities for oil and gas extraction, however, and the federal government has shown itself inadequate at multiple-use management of the OCS as a whole. The case law discussed above demonstrates how the federal agencies and courts have consistently prioritized oil extraction over other values of the OCS, which has forced supporters of non-extractive uses to look outside the legal structures of OCSLA and the CZMA. As discussed above, the language and intent of the statutes reflect the need to balance and provide for multiple uses of the OCS. While there is still hope that the statutory mandates will be given effect, it will likely take legislative reform to change the direction of the courts and federal agencies. n98 This gap between the statutes' intent and their implementation is where local governments have stepped in. Despite the appearance of NIMBYism, their role has, in fact, advanced the public interest in protecting California's coast. In this sense, local governments have not been purely protectionist or selfishly warping the distribution of responsibility for energy facilities. Rather, they have instead fulfilled the mandates of OCSLA and the CZMA that the federal government has neglected. n99 Just as the federal government is invested in the current leasing program because of the benefits it provides in the forms of national energy supply and leasing revenues, n100 local governments are invested in the other non-oil resources in the OCS. The deep connection that local communities have to fisheries as local economic resources, wildlife as scientific and recreational resources, and unbroken ocean vistas as tourism [\*251] and quality-of-life resources may put them in the best position to act as stewards for these non-oil resources. One strong example of this type of local expertise can be found in the longstanding commercial and recreational fishing industries. For many coastal communities, fishing has historically been a major component of both their economic and cultural bases. This food and income supply may be just as important, if not more important, to both coastal communities and the country than the need for offshore petroleum resources. n101 Fishermen have objected to oil development because of the noise, the heavy equipment that gets in the way of fishing nets and dredges, and of course, the pollution. They have reported that places along the ocean bottom look like they have been strip-mined, "where the dumping of drill muds has suffocated all life on the bottom." n102 While offshore oil development can find a near perfect substitute in onshore drilling, with potentially less environmental damage, there is no substitute for the oceans' fisheries resources. The Magnuson-Stevens Fisheries Conservation and Management Act ("Magnuson-Stevens Act") reflects this interest at the national level and provides for efficient and sustainable use of this resource. n103 Despite the national and local interests in fisheries resources, however, federal law has largely neglected them in the context of offshore energy development. OCSLA and the Magnuson-Stevens Act instead function independently, doing nothing to legally resolve an economic and resource management conflict that reverberates from the local to the national levels. Resource management decisions are again left to the politics of the moment, and as federal policy has consistently favored oil and gas development over other concerns affecting local economies, many local governments have taken it upon themselves to resolve this conflict between competing oil and non-oil interests. Another example of the failure to coordinate the conflicting resources of the OCS at the national level, leaving the fate of non-oil resources to be protected by state and local governments, can be found in the application of the Marine Protection, Research and Sanctuaries Act of 1972. n104 In 1978, Santa Barbara County attempted to take advantage of the this federal program, which authorizes the National Oceanic and Atmospheric Administration ("NOAA") to designate selected sites as marine sanctuaries for biological, research, recreational, or aesthetic purposes. n105 [\*252] The County submitted a detailed nomination, requesting that the Santa Barbara Islands and Channel be designated a federally protected marine sanctuary, just as nine major energy projects were being planned and expansion of OCS development was expected. In this case, the County acted on a determination that the Channel's non-oil resources were invaluable to the local community and the nation. n106 Predictably, the conflict with oil interests created problems for the County's proposal. Researcher Elizabeth Kaplan notes that nearly 70 percent of the comments on the [Draft Environmental Impact Statement for the Channel Islands Marine Sanctuary] were in favor of prohibiting energy development in the entire channel, but [NOAA], responsible for designating marine sanctuaries, bowed to industry pressure and limited it to six miles, approximately one-half to one-third the original size requested. The muscle of the oil and gas industry was felt heavily in Washington, but had little impact at the state and local level. n107 This example is just one of many instances in which those closest to the non-oil resources have valuable perspectives to contribute to the national debate surrounding offshore development, yet may lack the political power to influence the decision-making process effectively. Although the federal government's broad geographic perspective may provide it with the best position from which to evaluate the nation's energy needs and potential sources of supply, local interests often have special expertise regarding the impacts of oil and gas development on the other resources of the OCS. This is, of course, why Congress encouraged state participation in the CZMA program in the first place. Several federal laws have recognized and incorporated local expertise in environmental protection and natural resources management, but this expertise has not been effectively incorporated into the management of the OCS. Local interests have accordingly suffered at two levels. At the most basic level, local interests have suffered from lack of control over offshore drilling itself. They have also suffered through lack of integration in the federal programs that have granted them the opportunity to [\*253] provide substantive input. For example, under the Clean Air Act the State of California has granted Local Air Quality Management Districts jurisdiction over offshore platforms in order to integrate such offshore air pollution sources into regional air quality schemes. n108 The Magnuson-Stevens Act provides another example. Under this statutory scheme, Regional Fisheries Management Councils determine which fishing gear types are permissible, based on fishing needs and the negative impacts of certain fishing practices on other ocean resources. n109 OCSLA's lack of similar local control measures, however, undermines these avenues for real local input and relegates them to purely mitigatory measures--helping local governments cope with other resource issues once the fundamental OCS development decisions have already been made. The local control measures in the statutes just mentioned provide hope and direction for a reformation of OCSLA. Independently, they recognize the importance of local input in complex resource management decisions. Moreover, they provide avenues of local control that are sanctioned by statute, are guided by a national framework, and work in concert with societal interests in preserving and valuing clean air, endangered species, and the economic and recreational value of our fisheries resources. These examples of local, state, and federal cooperation have made apparent that local interests can advance the public interest in protecting the OCS's non-oil resources. OCSLA and the rest of the OCS management scheme, including the Clean Air Act and the Magnuson-Stevens Act, must now be integrated to truly incorporate the diverse values and interests at stake at each stage of the management decision-making process. D. Making Sense of the Seaweed Rebellion While local control of land use planning has long been a key tenet of federalism, with local governments acting as a kind of public/private hybrid that is enabled by state law, n110 it is undeniable that coastal communities' local energy development policies can directly and indirectly affect the rest of the nation and the world. At its most basic level, the OCS is a national resource that should be subject to national control. Although Congress has to some degree allowed for state and local input in federal decision-making, it could, if it so desired, preempt the entire field. As a [\*254] political matter, this would likely be unfeasible due to strong public commitment to local participation in resource management decisions. n111 In today's world of diminishing resources, local environments and ecosystems have become major national concerns. Protection of the California coast, or any other location, cannot remain simply a matter of local land use preferences. While the nation's energy resources are important, society has also recognized other equally important values in preserving wilderness areas, endangered species, areas of cultural and historic significance, and marine areas of significant productivity, just to name a few. Ignoring these values when oil extraction is at issue both undervalues and undermines national environmental commitments. Because support for these environmental values is deeply rooted in society, it is not surprising that individuals and organizations continue to discover and develop new legal tools to use for environmental protection. Nevertheless, encouraging a system in which state and local governments are forced to work outside the federal framework simply exacerbates the tensions and inconsistencies inherent in OCS management. Throughout the different phases of the Seaweed Rebellion, state and local interests have reacted to what they experience as the federal government's lack of respect for competing values and competing voices in the debate over offshore energy development. With little regard for local priorities, the federal government has pushed ahead with oil and gas extraction as its primary goal for the OCS. This shortsighted and narrow view, however, has in fact prevented the federal government from achieving the extraction it desires. The executive and judicial branches have failed to recognize the public will as it was originally expressed by Congress in OCSLA and the CZMA. Consequently, the federal government has also failed to balance effectively national environmental concerns against its energy interests. As a result, those expressing the public will at the state and local levels have been forced to find other ways to incorporate local control into the federal OCS oil and gas development scheme.

#### fed continues to dominate --- doesn't address concerns

Weaver 2 (Sierra B., Senior Staff Attorney with Expertise in Climate Change, Forests and Public Lands, and Marine Conservation – Defenders of Wildlife (Litigation Group in Washington, DC), “NOTE: Local Management of Natural Resources: Should Local Governments be Able to Keep Oil Out?,” The Harvard Environmental Law Review, 26 Harv. Envtl. L. Rev. 231, Lexis)

[\*231] The system that governs offshore oil and natural gas development of the Outer Continental Shelf ("OCS") has been called one of "cooperative federalism." In practice, however, this system has been anything but cooperative. Although leasing authority is technically divided between state and federal tiers of government, ongoing jurisdictional battles between state and federal agencies, between state and federal political figures, and within the tiers of government themselves have made the regulatory land-scape incredibly complex and controversial. This conflict between coastal states and the federal government over offshore development is often referred to as "the Seaweed Rebellion" and has concerned lawyers, activists, scientists, and politicians since the 1940s. Recently, the Seaweed Rebellion has engaged a new set of actors who are also fighting for jurisdictional control--city and county governments. While these local interests have long shaped the terms of political debate on this topic, during the past two decades they have gone on to influence not only the debate, but also the legal framework in which it occurs. This Note examines the various legal tools that local governments have used to carve out their own areas of control over the management of OCS resources. It also examines the desirability of inserting local interests into this debate, given the nationally important economic and social value of natural resources such as the nation's coastal vistas, marine fisheries, and offshore energy supply. Although this battle directly affects every coastal region in the United States, this Note focuses on the experiences of California's Central Coast and the tactics local residents have developed in response to the community's struggle. This region has had extensive experience with offshore drilling and the fight against it. Not only was Santa Barbara County, California, the site where offshore oil was first discovered in the United States, it was also the site of the country's first major oil disaster, the infamous blowout of Union Oil's Platform A in 1969. Some consider the Santa Barbara blowout to be one of the primary catalysts for resistance to offshore drilling in California in particular, and for the development of the modern environmental movement generally. Moreover, the [\*232] battle between California and the federal government over offshore control has been one of the most intense and publicized of all the coastal states. Simply the number of major offshore oil cases that feature California and national officials as opposing parties indicates the extent of this tension. Localities in California have also taken an active role in attempting to control development activities, and to this date the State has strongly supported and encouraged their efforts. The California example may go beyond the average state's efforts to influence offshore drilling, but using it as the most extreme example of how the Seaweed Rebellion has played out will highlight the tensions in the current OCS resource management system. Part I of this Note provides a brief history of the management conflict between California and the federal government. It moves from the origins of the problem, to the federal/state solution, and then to the undoing of this solution by federal agencies and courts. Part II examines local government responses to the current federal system and what these local efforts have meant to natural resources management. Finally, Part III of this Note suggests additional considerations that are currently missing from the debate, but which should be included within the management scheme in order to resolve the dilemmas posed by the Seaweed Rebellion. Ultimately, this Note seeks to demonstrate that the federal government's failure to address state and local concerns over offshore drilling has hindered the development of an environmentally sound and socially effective energy policy. By focusing on oil and gas extraction to the detriment of other OCS resources, the federal government has, in fact, hindered itself from gaining access to the energy supply it has so aggressively pursued. This ineffectiveness can be directly attributed to the innovation of state and local governments that have taken it upon themselves to assert their interests through a variety of nonfederal legal means. Thus, the system of "cooperative federalism" that Congress originally envisioned has devolved into one of intense competition, subordinating thoughtful energy and environmental policies to the power dynamics of the moment.

## 1NR EPA

### Overview

#### Water scarcity undermines food security

**Wales 12** - Senior Vice President Sustainable Development for [SABMiller plc](http://www.sabmiller.com) [Andy Wales, “Why Water Scarcity Means Food Scarcity,” Triple Pundit, August 30th, 2012, pg. http://www.triplepundit.com/2012/08/water-scarcity-means-food-scarcity/

Greater social mobility also means greater demand for water. An increase in national income is linked with a country’s access to a secure and safe water supply. Security of supply and the stability it brings is critical for businesses to flourish. Clean water also brings with it the economic as well as human benefit associated with improved health. And water security is fundamental in the provision of another pillar of economic development: adequate food supply.

To grow food at the volumes we need to feed the world’s increasing population, and support their improving quality of life, requires a lot of water. This year’s [World Water Week](http://www.triplepundit.com/2012/08/world-water-week-warning-business-about-water-scarcity/) in Stockholm is tackling this conundrum: the nexus between water scarcity and food security. Currently over 70 percent of fresh water withdrawals are for the production of food. The growing number of mouths to feed combined with changing lifestyles and diets means that unless there are significant changes in how we produce and consume, our farmers will have to increase production by about 70 percent by 2050. Some straightforward ‘back of envelope’ maths tells us – that’s a problem.

#### Food shortage is the biggest and best internal link to global wars. Their takeouts will not account for this internal link

**Snyder 12** - Professor of history @ Yale University [“On Their Stomachs:‘The Taste of War,’ by Lizzie Collingham,” New York Times, Published: May 4, 2012, pg. http://tinyurl.com/b7qkdgu

Calories were made to be counted, but they have generally been counted for two very different reasons. We associate calories with excess, but for most of its history this little unit of energy was linked to shortage. The years since [World War II](http://topics.nytimes.com/top/reference/timestopics/subjects/w/world_war_ii_/index.html?inline=nyt-classifier) have been a time of cheap and plentiful food, and of obese and sick citizens. Since our own daily struggle is fought against fat, we fail to see that many of the conflicts of the past were wars against hunger. Just as obesity leads to diabetes and human blindness, so plentiful food leads to decadent forms of history and social blindness. We are fortunate to have a bracing book like “The Taste of War,” which does much to correct understanding of the causes of armed conflict and mass murder.

If World War II were only about bad ideas, as we like to think, then we are all safe. Who among us admires Hitler, Himm­ler or Hirohito? But if the war and its atrocities had to do with material want, we cannot so easily separate ourselves from evil. Lizzie Collingham soberly argues that the expansionist designs of both Nazi Germany and imperial Japan must be understood within a world political economy in which the single crucial commodity was food. The British Empire had dominated a global system of free trade that was disrupted by the Great Depression. States like Germany and Japan, unable to supply themselves with sufficient food for their own citizens from domestic sources, had two choices. They could play the game by the British rules, which could seem humiliating and pointless in the 1930s, or they could try to control more territory.

Collingham, the author of “Imperial Bodies” and “Curry,” sketches the hunger motive on the body of the Japanese soldier in Asia, who not only starved others but was starved himself. The energetic Japanese attacks remembered with chagrin by British and American soldiers were driven by the need to capture food from the enemy. In the end, more Japanese soldiers died from starvation and associated diseases than in combat.

Nazi Germany planned to control a vast Eastern European empire whose inhabitants would be starved in the tens of millions. It was a rare case of planning more murder in war than actually happened. When the Nazis had to choose whom to starve in an uncertain and long war, they thought racially and picked the Jews. Most of the world’s Jews, seen by the Nazis as the source of all ills to Germany, lived in the very territories that were to be colonized. Collingham shows, and here she is in the mainstream of Holocaust historians working beyond the United States, how food shortages were one of the factors that led toward the policy of full ­ extermination.

Another reason we dismiss the material causes of war is that aggressive wars of colonization tend to fail. The Germans and the Japanese lost the war and returned to home territory and home islands. The Germans had hoped to supply themselves for eternity with grain from the rich black soil of Ukraine; but in fact they got very little. This is because, as Collingham demonstrates, war itself tends to disrupt labor, harvests and markets. Even if the intention of the Germans had not been to cause starvation, invasions tend to do so. Some two million people starved to death in French Indochina. At least 10 million starved in China, whose army was living from the land on its own territory. About three million starved in Bengal in British India. Collingham argues that many of them might have been saved if Churchill had not been annoyed with Gandhi and the Free India movement and inclined to see Indians as racial inferiors.

Collingham’s case, in one respect, is even stronger than it seems. Rather than seeing the Soviet Union as an aggressor in the war, which it certainly was in 1939 and 1940, she discusses its fate after it was betrayed by its Nazi ally and invaded in 1941. But larger history confirms her argument. Like Germany and Japan, the Soviet Union too was reacting to an international political economy dominated by Britain. It too wished to create economic self-sufficiency on a continental scale. The solution Stalin advanced was not to seize territory from abroad, but to colonize itself from within. Agriculture was “collectivized,” brought under state control. As Collingham notes, millions of people died of malnutrition as a result. They died in what their own leaders called a “war” against prosperous farmers, and in a process that Stalin saw as necessary preparation for a general war to come.

The result was control without productivity, which left the Soviet Union vulnerable when it was invaded by Nazi Germany. Communist agriculture survived through a kind of parasitism upon capitalism: Stalin allowed collective farmers to work private plots and middlemen to profit on sales of food. In the end, though, it was American food that ensured the Soviet soldier did not go hungry.

As Collingham rightly notes (if not without some self-indulgent swipes at American culture), the war was a very special moment for American agriculture, offering a perfect conjuncture: demand abroad, stability at home and a technological revolution. Prosperity depended in considerable measure upon a world calamity, but in the United States it was ascribed only to domestic freedom. Thus, Collingham argues, the war did not boost policies of planning and redistribution in America as it did in Europe, and it permitted the false lesson that laissez-faire is always enough. The improvements in technology (pesticides, fertilizers, hybrids) were very real, and spread from the United States to the rest of the world after the war. They were and remain enough to oversupply America and Europe with food. Had this green revolution come 20 years earlier, World War II might have been unthinkable. But will such abundance last forever?

The combination of population growth and prosperity in this century means that we have ever more urban people eating ever more meat, which requires ever more grain, ever more land, ever more efficiency. Climate change and water shortages make soil fertility uncertain. The early 21st century is coming to resemble the early 20th century, with expectations of shortfall influencing ideology and strategy.

The American understanding of World War II arises from the special circumstances that made it, for us, the source of postwar plenty. But how would we behave if we anticipated that we will no longer be able to feed ourselves as we are accustomed? How will Asia look in 30 years, after China’s topsoil is eroded and its glaciers have melted? Collingham’s book masterfully corrects our understanding of the great conflict that made America what it is, and thus prepares us for the conflicts that are all too likely to come. Its usefulness is hard to overstate.

#### EPA adaptation prevents wildfires

**GCC 2/10**/13 [Green Car Congress, “EPA Climate Change Adaptation Plan sees likely increase in tropospheric ozone, with more difficulty in attaining NAAQS in many areas,” 10 February 2013, pg. http://www.greencarcongress.com/2013/02/epa-20130210.html

EPA has not yet conducted a detailed quantitative assessment of the vulnerability of its mission to climate change. This Climate Change Adaptation Plan uses expert judgment, combined with information from peer-reviewed scientific literature on the impacts of climate change, to identify potential vulnerabilities. It then presents priority actions the Agency will take to begin integrating climate adaptation planning into its activities.

The relationship between temperature changes and tropospheric ozone formation is well understood, EPA notes in the draft. Higher temperatures and weaker air circulation will lead to more ozone formation even with the same level of emissions of ozone forming chemicals. Studies project that climate change could increase tropospheric ozone levels over broad areas of the country, especially on the highest-ozone days.

Climate change might also lengthen the ozone season and increase individuals’ vulnerability to air pollution.

Increases in ozone due to climate change may make it more difficult to attain or maintain ozone standards that the EPA establishes; this will need to be taken into account when it designs effective ozone precursor emission control programs, the agency noted.

A related concern in terms of air quality is potential that climate change will affect PM levels through changes in the frequency or intensity of wildfires. The potential increase in PM resulting from wildfires may increase the public health burden in affected areas and also complicate state efforts to attain the PM NAAQS and address regional transport of air pollution.

### AT: No water wars

#### Yes water wars and adaptation solves – more qualified evidence

**Sachs 09** – **Professor of Sustainable Development and Health Policy @Columbia University** [Jeffrey D. Sachs (Special Adviser to the United Nations Secretary-General on the Millennium Development Goals) “[Water Wars](http://www.project-syndicate.org:80/commentary/water-wars),” Project Syndicate, Apr. 21, 2009, pg. http://www.project-syndicate.org/commentary/water-wars

NEW YORK – Many conflicts are caused or inflamed by water scarcity. The conflicts from Chad to Darfur, Sudan, to the Ogaden Desert in Ethiopia, to Somalia and its pirates, and across to Yemen, Iraq, Pakistan, and Afghanistan, lie in a great arc of arid lands where water scarcity is leading to failed crops, dying livestock, extreme poverty, and desperation.

Extremist groups like the Taliban find ample recruitment possibilities in such impoverished communities. Governments lose their legitimacy when they cannot guarantee their populations’ most basic needs: safe drinking water, staple food crops, and fodder and water for the animal herds on which communities depend for their meager livelihoods.

Politicians, diplomats, and generals in conflict-ridden countries typically treat these crises as they would any other political or military challenge. They mobilize armies, organize political factions, combat warlords, or try to grapple with religious extremism.

But these responses overlook the underlying challenge of helping communities meet their urgent needs for water, food, and livelihoods. As a result, the United States and Europe often spend tens or even hundreds of billions of dollars to send troops or bombers to quell uprisings or target “failed states,” but do not send one-tenth or even one-hundredth of that amount to address the underlying crises of water scarcity and under-development.

Water problems will not go away by themselves. On the contrary, they will worsen unless we, as a global community, respond. A series of recent studies shows how fragile the water balance is for many impoverished and unstable parts of the world. The United Nations agency UNESCO recently issued The UN World Water Development Report 2009 ; the World Bank issued powerful studies on India ( India’s Water Economy: Bracing for a Turbulent Future ) and Pakistan ( Pakistan’s Water Economy: Running Dry ); and the Asia Society issued an overview of Asia’s water crises ( Asia’s Next Challenge: Securing the Region’s Water Future ).

These reports tell a similar story. Water supplies are increasingly under stress in large parts of the world, especially in the world’s arid regions. Rapidly intensifying water scarcity reflects bulging populations, depletion of groundwater, waste and pollution, and the enormous and increasingly dire effects of manmade climate change.

The consequences are harrowing: drought and famine, loss of livelihood, the spread of water-borne diseases, forced migrations, and even open conflict. Practical solutions will include many components, including better water management, improved technologies to increase the efficiency of water use, and new investments undertaken jointly by governments, the business sector, and civic organizations.

#### Prefer our ev. It’s predictive.

**Null 12** [[Schuyler Null](http://www.newsecuritybeat.org/author/snull/), “Move Beyond “Water Wars” to Fulfill Water’s Peacebuilding Potential, Says NCSE Panel,” New Security Beat, // Thursday, January 26, 2012, pg. http://tinyurl.com/a2rrfdt

Kent Butts, professor and director of the National Security Issues Group at the U.S. Army War College, said that some things have changed that might make conflict over water more likely in the near future. In light of water’s relatively fixed supply, he cited growing human population – the UN median projection is now [more than nine billion people by 2050](http://www.newsecuritybeat.org/2011/05/ten-billion-un-updates-population.html) – and consumption as a key challenge, as well as the uncertain condition of key treaties. The Nile Basin Initiative is on rocky ground – with Ethiopia agitating for a greater share of flow and both Egypt and South Sudan dealing with new governments – and the [Himalayan watershed is under stress](http://www.newsecuritybeat.org/2010/07/is-third-pole-next-site-for-water.html) as demand increases across the region. Butts also pointed to the [tremendous number of new dams](http://wwf.panda.org/what_we_do/footprint/water/dams_initiative/quick_facts/) – many of which no longer need to abide by World Bank conditions as they can get [Chinese loans and other bilateral funding](http://www.newsecuritybeat.org/2010/09/us-v-china-global-battle-for-hearts.html) – as an emerging challenge that may upend the positive historical trend.  
Climate change, too, will likely bring water to the forefront in many areas of the world. “The changing climate changes the dynamics of security in a country,” Butts said. How able a country is to adapt to those changes will quickly expose weak, fragile, or corrupt regimes, threatening stability in some places.  
Butts also warned that, though vehemence over water sharing has mainly been confined to rhetoric between countries up until now, that’s no reason to give it short shrift – it’s possible some countries may become trapped by their own public posturing, narrowing their responses to more bellicose options.

#### Water insecurity jeopardizes every aspect of society and the economy – We have the best internal link for war and Adaptation solves it

**UN Water 12** [Climate change adaptation is mainly about water…,” 2012, pg. www.unwater.org/downloads/UNWclimatechange\_EN.pdf

Water resources and how they are managed impact almost all aspects of society and the economy, in particular health, food production and security, domestic water supply and sanitation, energy, industry, and the functioning of ecosystems. Under present climate variability, water stress is already high, particularly in many developing countries, and climate change adds even more urgency for action. Without improved water resources management, the progress towards poverty reduction targets, the Millennium Development Goals, and sustainable development in all its economic, social and environmental dimensions, will be jeopardized.

Adaptation to climate change is mainly about better water management. Recognizing this and responding to it appropriately present development opportunities. Appropriate adaptation measures build upon known land and water management practices to foster resilience to future climate change, thereby enhancing water security. Innovative technologies and integrated solutions are needed at the appropriate scales, for adaptation as well as mitigation. Any adaptation measures, however, need to be assessed for inadvertent adverse effects, in particular on the environment and on human health. Pg. 1

#### They are wrong. History is on our side

**Arsenault 12** [[Chris Arsenault](http://www.aljazeera.com/profile/chris-arsenault.html), “Risk of water wars rises with scarcity,” Al Jazeera, Last Modified: 26 Aug 2012 09:47, pg. http://tinyurl.com/7b24ttw

Some experts believe the only documented case of a "water war" happened about 4,500 years ago, when the city-states of Lagash and Umma went to war in the Tigris-Euphrates basin.

But Adel Darwish, a journalist and co-author of Water Wars: Coming Conflicts in the Middle East, says modern history has already seen at least two water wars.

"I have [former Israeli prime minister] Ariel Sharon speaking on record saying the reason for going to war [against Arab armies] in 1967 was for water," Darwish told Al Jazeera.

Some analysts believe Israel continues to occupy the Golan heights, seized from Syria in 1967, due to issues of water control, while others think the occupation is about maintaining high ground in case of future conflicts.

Senegal and Mauritania also fought a war starting in 1989 over grazing rights on the River Senegal. And Syria and Iraq have fought minor skirmishes over the Euphrates River.

### AT: Climate leadership addon

#### China and US are both eager to be the green leader—they risk a competition between the two.

Karlsson et al. 11—Professor of Political Science @ Uppsala University [Dr. Christer Karlsson, Charles Parker (Professor of Political Science @ Uppsala University), Mattias Hjerpe (Professor in the Centre for Climate Science and Policy Research @ Linköping University & Björn-Ola Linnér (Professor in Water and Environmental Studies and director of the Centre for Climate Science and Policy Research at Linköping University), “Looking for Leaders: Perceptions of Climate Change Leadership among Climate Change Negotiation Participants,” *Global Environmental Politics* 11:1, Feb 2011]

The list of possible leadership contenders may even be extended as to include countries such as China and Brazil. China’s recent behavior suggests that¶ it is less willing to observe former paramount leader Deng Xiaoping’s wellknown proscription to “never take the lead” and instead is increasingly focusing on his exhortation, contained in the second half of that same famous quote, “to do something big.” 25 China may be coming to the realization that doing something big will require leadership and that its growing structural power now¶ makes this a viable option.

We do not at this point have the full story on why COP-15 failed to produce an ambitious successor agreement to the Kyoto Protocol. It is clear, however, that China’s negotiating preferences were pivotal in shaping the final outcome in Copenhagen. Time will tell if China is indeed aiming for a climate¶ change leadership role, but, by virtue of its economic size and its growing international clout, China already plays a key role in determining the fate of international climate cooperation and may very well emerge as a future leader, particularly among developing countries.

There is apparently no shortage of leadership contenders in the field of climate change. Ever since its decision to save the Kyoto Protocol the EU has strived to portray itself as a leader on climate change. More recently, since President Obama took office, the US is once again eager to be seen as a leader on climate change. Alongside these self-proclaimed leaders, which historically also have been the main movers in the shaping of the climate change regime, we find less obvious but still possible candidates as future leaders. Now, the key question is if the current leadership candidates have managed to become recognized as leaders by the prospective followers? The next step in our effort to identify leaders in the climate change regime will be to examine the demand side of the¶ leadership equation. Pg. 95

#### That impedes US-China green cooperation

Larson 9—Journalist focusing on international environmental issues, based in Beijing and Washington, D.C [[Christina Larson](http://e360.yale.edu/author/Christina_Larson/12/), [[Christina Larson](http://blog.foreignpolicy.com/blog/4714) “[Let's call off the green energy space race with China](http://blog.foreignpolicy.com/posts/2009/04/26/paging_houston_call_off_the_green_space_wars),” Foreign Policy, Monday, April 27, 2009—11:00 AM, pg. http://blog.foreignpolicy.com/posts/2009/04/26/paging\_houston\_call\_off\_the\_green\_space\_wars]

Lastly, and most importantly, I think that highlighting the competition angle could ultimately be counter-productive, as fun as it is to envision a U.S. vs China jolly green smackdown. Stressing a rivalry could ultimately lead -- not necessarily in Osnos’s hands, but in looser, more politically-minded interpretations -- to the impression that the race for green energy is somehow a zero-sum game. That any progress made by China (again, let’s be careful to avoid exaggeration here) is somehow threatening to the U.S. Like if the Soviets got to the moon first; oh no. It’s us or them; only one racer breaks the ribbon; get off our green lunar pathway!

Some might argue that Americans do best when their competitive instincts are aroused. But I tend to agree with Charles McElwee, an environmental lawyer in Shanghai whom Osnos cites and whose insights I've long found valuable: Fanning the flames of us-vs-them-ism -- in the context of global issue that isn't so much a race to win as to survive -- could backfire. It could undercut political support on Capitol Hill for cooperative efforts, technology sharing, and perhaps even climate-treaty negotiations.

#### Extinction

Wittner 11—Professor of History @ State University of New York-Albany [Lawrence S. Wittner, “Is a Nuclear War with China Possible?” Huntington News, Monday, November 28, 2011, http://www.huntingtonnews.net/14446]

While nuclear weapons exist, there remains a danger that they will be used. After all, for centuries national conflicts have led to wars, with nations employing their deadliest weapons. The current deterioration of U.S. relations with China might end up providing us with yet another example of this phenomenon.

The gathering tension between the United States and China is clear enough. Disturbed by China’s growing economic and military strength, the U.S. government recently challenged China’s claims in the South China Sea, increased the U.S. military presence in Australia, and deepened U.S. military ties with other nations in the Pacific region. According to Secretary of State Hillary Clinton, the United States was “asserting our own position as a Pacific power.” But need this lead to nuclear war?

Not necessarily. And yet, there are signs that it could. After all, both the United States and China possess large numbers of nuclear weapons. The U.S. government threatened to attack China with nuclear weapons during the Korean War and, later, during the conflict over the future of China’s offshore islands, Quemoy and Matsu. In the midst of the latter confrontation, President Dwight Eisenhower declared publicly, and chillingly, that U.S. nuclear weapons would “be used just exactly as you would use a bullet or anything else.”

Of course, China didn’t have nuclear weapons then. Now that it does, perhaps the behavior of national leaders will be more temperate. But the loose nuclear threats of U.S. and Soviet government officials during the Cold War, when both nations had vast nuclear arsenals, should convince us that, even as the military ante is raised, nuclear saber-rattling persists.

Some pundits argue that nuclear weapons prevent wars between nuclear-armed nations; and, admittedly, there haven’t been very many—at least not yet. But the Kargil War of 1999, between nuclear-armed India and nuclear-armed Pakistan, should convince us that such wars can occur. Indeed, in that case, the conflict almost slipped into a nuclear war. Pakistan’s foreign secretary threatened that, if the war escalated, his country felt free to use “any weapon” in its arsenal. During the conflict, Pakistan did move nuclear weapons toward its border, while India, it is claimed, readied its own nuclear missiles for an attack on Pakistan.

At the least, though, don’t nuclear weapons deter a nuclear attack? Do they? Obviously, NATO leaders didn’t feel deterred, for, throughout the Cold War, NATO’s strategy was to respond to a Soviet conventional military attack on Western Europe by launching a Western nuclear attack on the nuclear-armed Soviet Union. Furthermore, if U.S. government officials really believed that nuclear deterrence worked, they would not have resorted to championing “Star Wars” and its modern variant, national missile defense. Why are these vastly expensive—and probably unworkable—military defense systems needed if other nuclear powers are deterred from attacking by U.S. nuclear might?

Of course, the bottom line for those Americans convinced that nuclear weapons safeguard them from a Chinese nuclear attack might be that the U.S. nuclear arsenal is far greater than its Chinese counterpart. Today, it is estimated that the U.S. government possesses over five thousand nuclear warheads, while the Chinese government has a total inventory of roughly three hundred. Moreover, only about forty of these Chinese nuclear weapons can reach the United States. Surely the United States would “win” any nuclear war with China.

But what would that “victory” entail? A nuclear attack by China would immediately slaughter at least 10 million Americans in a great storm of blast and fire, while leaving many more dying horribly of sickness and radiation poisoning. The Chinese death toll in a nuclear war would be far higher. Both nations would be reduced to smoldering, radioactive wastelands. Also, radioactive debris sent aloft by the nuclear explosions would blot out the sun and bring on a “nuclear winter” around the globe—destroying agriculture, [and] creating worldwide famine, and generating chaos and destruction.

Moreover, in another decade the extent of this catastrophe would be far worse. The Chinese government is currently expanding its nuclear arsenal, and by the year 2020 it is expected to more than double its number of nuclear weapons that can hit the United States. The U.S. government, in turn, has plans to spend hundreds of billions of dollars “modernizing” its nuclear weapons and nuclear production facilities over the next decade.

To avert the enormous disaster of a U.S.-China nuclear war, there are two obvious actions that can be taken. The first is to get rid of nuclear weapons, as the nuclear powers have agreed to do but thus far have resisted doing. The second, conducted while the nuclear disarmament process is occurring, is to improve U.S.-China relations. If the American and Chinese people are interested in ensuring their survival and that of the world, they should be working to encourage these policies.

#### Lack of redlines makes US-China the most probable scenario for nuclear war

Fisher 11—Associate editor at The Atlantic, where he edits the International channel [Max Fisher, “5 Most Likely Ways the U.S. and China Could Spark Accidental Nuclear War,” The Atlantic, Oct 31 2011, http://tinyurl.com/6nh9yjm]

Neither the U.S. nor China has any interest in any kind of war with one other, nuclear or non-nuclear. The greater risk is an accident. Here's how it would happen. First, an unforeseen event that sparks a small conflict or threat of conflict. Second, a rapid escalation that moves too fast for either side to defuse. And, third, a mutual misunderstanding of one another's intentions.

This three-part process can move so quickly that the best way to avert a nuclear war is for both sides to have absoThlute confidence that they understand when the other will and will not use a nuclear weapon. Without this, U.S. and Chinese policy-makers would have to guess -- perhaps with only a few minutes -- if and when the other side would go nuclear. This is especially scary because both sides have good reason to err on the side of assuming nuclear war. If you think there's a 50-50 chance that someone is about to lob a nuclear bomb at you, your incentive is to launch a preventative strike, just to be safe. This is especially true because you know the other side is thinking the exact same thing. In fact, even if you think the other side probably won't launch an ICBM your way, they actually might if they fear that you're misreading their intentions or if they fear that you might over-react; this means they have a greater incentive to launch a preemptive strike, which means that you have a greater incentive to launch a preemptive strike, in turn raising their incentives, and on and on until one tiny kernel of doubt can lead to a full-fledged war that nobody wants.

The U.S. and the Soviet Union faced similar problems, with one important difference: speed. During the first decades of the Cold War, nuclear bombs had to be delivered by sluggish bombers that could take hours to reach their targets and be recalled at any time. Escalation was much slower and the risks of it spiraling out of control were much lower. By the time that both countries developed the ICBMs that made global annihilation something that could happen within a matter of minutes, they'd also had a generation to sort out an extremely clear understanding of one another's nuclear policies. But the U.S. and China have no such luxury -- we inherited a world where total mutual destruction can happen as quickly as the time it takes to turn a key and push a button.

The U.S. has the world's second-largest nuclear arsenal with around 5,000 warheads (first-ranked Russia has more warheads but less capability for flinging them around the globe); China has only about 200, so the danger of accidental war would seem to disproportionately threaten China. But the greatest risk is probably to the states on China's periphery. The borders of East Asia are still not entirely settled; there are a number of small, disputed territories, many of them bordering China. But the biggest potential conflict points are on water: disputed naval borders, disputed islands, disputed shipping lanes, and disputed underwater energy reserves. These regional disputes have already led to a handful of small-scale naval skirmishes and diplomatic stand-offs. It's not difficult to foresee one of them spiraling out of control. But what if the country squaring off with China happens to have a defense treaty with the U.S.?

There's a near-infinite number of small-scale conflicts that could come up between the U.S. and China, and though none of them should escalate any higher than a few tough words between diplomats, it's the unpredictable events that are the most dangerous. In 1983 alone, the U.S. and Soviet Union almost went to war twice over bizarre and unforeseeable events. In September, the Soviet Union shot down a Korean airliner it mistook for a spy plane; first Soviet officials feared the U.S. had manufactured the incident as an excuse to start a war, then they refused to admit their error, nearly pushing the U.S. to actually start war. Two months later, Soviet spies misread an elaborate U.S. wargame (which the U.S. had unwisely kept secret) as preparations for an unannounced nuclear hit on Moscow, nearly leading them to launch a preemptive strike. In both cases, one of the things that ultimately diverted disaster was the fact that both sides clearly understood the others' red lines -- as long as they didn't cross them, they could remain confident there would be no nuclear war

But the U.S. and China have not yet clarified their red lines for nuclear strikes. The kinds of bizarre, freak accidents that the U.S. and Soviet Union barely survived in 1983 might well bring today's two Pacific powers into conflict -- unless, of course, they can clarify their rules. Of the many ways that the U.S. and China could stumble into the nightmare scenario that neither wants, here are five of the most likely. Any one of these appears to be extremely unlikely in today's world. But that -- like the Soviet mishaps of the 1980s -- is exactly what makes them so dangerous.

(1) China or the Philippines seize a disputed island. Many of these islands are resource rich, important to controlling the South China Sea (one of the world's most important shipping lanes), or both. It's also not clear who owns which. The U.S. has worked hard to create dispute-resolution mechanisms so that the Pacific rim nations can peacefully resolve conflicts over disputed islands. But it's always possible that confusion, greed, or domestic politics could drive one of these three countries to act rashly. There's an off chance that could lead to a naval skirmish, then maybe even a troop deployment. China, which has one of the world's largest militaries, might be tempted to use overwhelming force to quickly and decisively end such a dispute. This might lead the Philippines to act disproportionately aggressive. If the two countries escalate rapidly and unpredictably, the Philippines could remind the U.S. about their mutual defense treaty. And that's how the threat of a Sino-Filipino war could become the threat of a Sino-American war. Photo: Philippine marines watch as U.S. Marines storm a beach with Philippine counterpart during a joint military exercise.

China-watchers may have noticed something missing from this list: a Chinese invasion of Taiwan. It's possible though unlikely this could happen, and just as possible (though even less likely) that it could happen and it could escalate to the point of drawing in U.S. involvement. But this probably poses the least risk of escalating into nuclear conflict precisely because the U.S. and China have spent so much time discussing it and have achieved such mutual clarity on the matter. The U.S. knows exactly where China and Taiwan stands; China knows exactly where Taiwan and the U.S. stand. Even if a Chinese invasion ever does happen, there's enough mutual understanding that both sides will have a good idea how to avoid unwanted escalation. And that's exactly what the U.S. and China need more of if they want to prevent nuclear war: clarity, understanding, and if not trust in each other, then at least trust in each other's incentives and intentions. In the coming decades, one of the above five incidents may very well happen. Where it leads will depend a great deal on what kind of groundwork the U.S. and China can lay now.

### I Link Wall (2nc)

#### Dismantling regulations will chill enforcement – Mixed signals risk confusion

**Andreen 07**– Professor of Law @ University of Alabama (Roll Tide) [William L. Andreen, “Motivating Enforcement: Institutional Culture and the Clean Water Act,” 24 Pace Envtl. L. Rev. 67 (2007) pg: <http://digitalcommons.pace.edu/pelr/vol24/iss1/4>

Mixed signals produced confusion in the EPA's ranks during the early years of the Clinton administration. Although the EPA's new political leadership probably did not intend to interfere with traditional enforcement work, 132 their emphasis on compliance assistance and various incentive programs-clearly encouraged by the anti-regulatory furor on Capitol Hill-caused many staff members to believe that the use of deterrent-based enforcement tools had suddenly fallen out of favor. 133 Nevertheless, traditional enforcement levels remained high during the first two years of the Clinton administration,1 3 4 perhaps because the administration also sent a strong contrary signal when it initiated a reorganization in 1993 that consolidated the agency's headquarters enforcement staff into one centralized office. 135 The reorganization process, however, slowed the agency's enforcement momentum because the process was chaotic, damaged morale in some portions of the program, and resulted in a number of inconsistent organizational approaches at the regional level.1 36 In the midst of this confusion came the election in 1994 of Republican majorities in both houses of Congress. Their subsequent efforts to dismantle environmental law and slice the EPA's budget were not ambiguous and had a real "chilling effect" on EPA enforcement. 137 A highranking EPA enforcement official recalls that:

People got scared that their reputation among Congress was that they were heavy handed and beat up on the little guys. This created a tough environment for [EPA] enforcement to be aggressive. The Agency's reaction was to be cautious not to do anything that would get it negative publicity. 138

This caution, fear perhaps, and a steep decline in staff morale 39 led to the precipitous drop in traditional enforcement activity in 1995 and 1996.140 pg. 86-87 // 2nc link wall

#### EPA will respond to shifting regulatory tides

**Andreen 07**– Professor of Law @ University of Alabama (Roll Tide) [William L. Andreen, “Motivating Enforcement: Institutional Culture and the Clean Water Act,” 24 Pace Envtl. L. Rev. 67 (2007) pg: <http://digitalcommons.pace.edu/pelr/vol24/iss1/4>

The EPA enforcement program is comprised of men and women who are talented professionals, dedicated to their jobs and the task of environmental protection. They do their work well; yet they generally fail to receive any praise from Congress, the top political levels of the EPA, the press, or the environmental community. It is-except from the standpoint of self-satisfaction-a rather thankless job. Moreover, they are often treated as secondclass citizens by at least some lawyers at the Department of Justice, 1 77 where a stronger sense of esprit d'corps holds sway.

The unsung heroes at the EPA also feel vulnerable to the shifting tides of political fortune since their professional role within the agency has been and will always be subject to tough criticism from industry, many state agencies, and those who hold a contrary view about the value of deterrence-based enforcement or even the value of environmental regulation. Even today, many businesses still consider significant elements of the environmental regulatory regime to be "illegitimate,"' 178 and the enforcement program, in many cases, receives the brunt of their ire. In short, the program is a lightning rod for the anti-regulatory critique, both within and without government. It is little wonder then that enforcement personnel look to high agency officials for reassurance about the value of their role, and their insecurity appears to be greatest during the early years of a presidential administration. Pg. 93 // 2nc link wall

#### Lack of a commitment to regulate sends a signal to EPA enforcement

**Mintz 04** - Professor of Law @ Nova Southeastern University [Joel A. Mintz, , 'Treading Water': A Preliminary Assessment of EPA Enforcement During the Bush II Administration. Environmental Law Reporter, Vol. 34, p. 10912, October 2004; NSU Shepard Broad Law Center Research Paper No. 09-009. Available at SSRN: <http://ssrn.com/abstract=1462352>

As David A. Ullrich, a highly experienced and well respected former EPA regional manager, explained it:

The people [at EPA] who work on enforcement are very, very sensitive to signals about what they are doing. Because enforcement has always been and will always be controversial and contentious, it is very critical that the people working on it have entirely clear signals that enforcement is important, that compliance with environmental laws is important, and that the people who do the work will be supported. Those signals have to come from the top. They have to come from the Administrator and from the Assistant Administrator for [the OECA].8

Regrettably for all concerned, the first contacts between EPA’s career enforcement staff and the Agency’s new top managers did not go well. Instead, some of the staff saw in those early meetings and actions a harbinger of an era in which federal enforcement of environmental laws would be given short shrift. These EPA employees assumed that the states would be given a far more prominent role in enforcement than the federal government would be permitted to play, and that the Agency, in general, would drastically cut back on its commitment to regulate and enforce actively, in the public interest.

#### Courts link

Mirengoff 10 [Paul E. Mirengoff, JD Stanford, Attorney in DC, http://webcache.googleusercontent.com/search?q=cache:aNOGdaFrKhYJ:www.fed-soc.org/debates/dbtid.41/default.asp+obama+minimalism+blame+court+confirmation&cd=1&hl=en&ct=clnk&gl=us&client=firefox-a, 6-23-10]

There's a chance that the Democrats' latest partisan innovation will come back to haunt them. Justice Sotomayor and soon-to-be Justice Kagan are on record having articulated a traditional, fairly minimalist view of the role of judges. If a liberal majority were to emerge -- or even if the liberals prevail in a few high profile cases -- the charge of "deceptive testimony" could be turned against them. And if Barack Obama is still president at that time, he likely will receive some of the blame.

#### Supreme Court rulings get blamed on Obama

Harrison 5—Professor of Law—University of Miami, FL [Lindsay, “Does the Court Act as "Political Cover" for the Other Branches?,” http://legaldebate.blogspot.com/]

While the Supreme Court may have historically been able to act as political cover for the President and/or Congress, that is not true in a world post-Bush v. Gore. The Court is seen today as a politicized body, and especially now that we are in the era of the Roberts Court, with a Chief Justice hand picked by the President and approved by the Congress, it is highly unlikely that Court action will not, at least to some extent, be blamed on and/or credited to the President and Congress. The Court can still get away with a lot more than the elected branches since people don't understand the technicalities of legal doctrine like they understand the actions of the elected branches; this is, in part, because the media does such a poor job of covering legal news. Nevertheless, it is preposterous to argue that the Court is entirely insulated from politics, and equally preposterous to argue that Bush and the Congress would not receive at least a large portion of the blame for a Court ruling that, for whatever reason, received the attention of the public.

#### Controversial decisions spark political repercussions

Friedman 5—Professor of Law, NYU [Jacob D., “The Politics of Judicial Review,” Texas Law Review, december]

[\*269] Only recently - sparked, as is typically the case, by a spate of contentious Supreme Court decisions - have many begun to see that constitutional judging cannot be insulated from "ordinary" politics in quite the way theory demands. 60 Recognition of the relationship between law and politics is on the rise. 61 Still, it is apparent that normative scholars remain uncomfortable with the implications of positive scholarship, even as they take notice. Legal theorists indicate their discomfort by moving quickly from positive assertions about the relationship between law and politics to conclusions that positive scholars would suggest simply are implausible. 62 To take a frequent example, some normative scholars look to the political branches to correct errant judges 63 without considering whether there is any reason to think the political branches are likely to do so at present. 64

#### The Supreme Court relies on other actors to implement and enforce its policies- these actions are subject to political pressures

Canon And Johnson 99—Professors of political science [Bradley Canon- professor of political science at the University of Kentucky and Charles Johnson- dept. head of political science at Texas A&M, *Judicial Policies and Impact*]

If studying the implementation of judicial policies is important, then we must study it as a political process. In a general sense, the implementation of any public policy is a political process. The notion that the administration of policy is apolitical has long since been discarded (if it was ever in vogue). Political scientist Michael Lipsky remarks on how postdecision factors may enter the implementation process: “There are many contexts in which the latitude of those charged with carrying out a policy is so substantial that studies of policy implement it.” As we will see in later chapters, many judicial decisions afford a great deal of latitude for interpretation and implementation. Political actors and institutions who follow through on the decisions make the judicial policy. Certainly, the judges who enforced civil rights decisions were subject to political pressures from a variety of sources. Similar pressures affected public and private institutions after court decisions on affirmative action. Even presidential politics may become intertwined with judicial policies, as did Richard Nixon’s 1968 “law and order” presidential campaign criticizing the Supreme Court’s criminal justice decisions or the explosive issue of abortion in virtually every presidential election since 1980. Like Congress and the president, the Supreme Court and other courts must rely on others to translate policy into action. And like the processes of formulating legislative, executive, and judicial policies, the process of translating those decisions into action is often a political one subject to a variety of pressures from a variety of political actors in the system.

#### Courts link—ruling on GHGs caused strong backlash in congress

The Hill 12 [June 26, 2012, Ben Geman, OVERNIGHT ENERGY: For EPA, court win feeds GOP anger <http://thehill.com/blogs/e2-wire/e2-wire/234947-overnight-energy-for-epa-court-win-feeds-capitol-hill-anger>]

State of Play: The idea that everybody loves a winner isn’t really true. Not when it comes to the Environmental Protection Agency, and not on Capitol Hill.

The agency’s big court victory Tuesday against industry challenges to its climate rules will likely intensify ongoing Capitol Hill attacks against greenhouse gas regulations and other EPA policies. Here's where it unfolds for the balance of the week: On Wednesday the House Appropriations Committee will mark up fiscal 2013 spending legislation that seeks deep cuts in EPA’s budget. It also targets specific EPA policies with provisions — draft report language would prevent use of funds for greenhouse gas permitting. But that’s just one venue Republicans will use to attack the agency over various policies this week.

Long before the court ruling, the GOP had put EPA front-and-center in its campaign to allege that the Obama administration’s broader regulatory agenda is too aggressive. On Wednesday the House Small Business Committee will hold a hearing titled “Regulatory Flexibility Act Compliance: Is EPA Failing Small Businesses?” On Thursday, EPA Administrator Lisa Jackson can expect critical questions when she appears before the House Science, Space and Technology Committee. And then, in a rare Friday hearing, a House Energy and Commerce Committee panel will hear from EPA’s top air quality regulator at a hearing about EPA’s greenhouse gas rules.

Already, Tuesday’s sweeping court rejection of state and industry challenges to EPA's power to regulate greenhouse gases is feeding fresh GOP calls for legislation to nullify EPA’s authority. Republicans allege that climate regulations will harm the economy, and some members of the GOP caucus also dispute climate science. Right now those bills most likely can’t get any further than the House, where they have already passed. But this week’s battles are a precursor to higher stakes fights that will occur if Republicans take the Senate and the White House.

# Octos vs Vandy SW

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### T

#### Topical Financial Incentives must be FOR energy production –

#### A. FOR is exclusive

Clegg, 95 - J.D., 1981 Yale Law School; the author is vice president and general counsel of the National Legal Center for the Public Interest. (Roger, “Reclaiming The Text of The Takings Clause,” 46 S.C. L. Rev. 531, Summer, lexis)

Even if it made no sense to limit the clause to takings "for public use"--and, as discussed below, it might make very good sense--that is the way the clause reads. It is not at all ambiguous. The prepositional phrase simply cannot be read as broadening rather than narrowing the clause's scope. Indeed, a prepositional phrase beginning with "for" appears twice more in the Fifth Amendment, and in both cases there is no doubt that the phrase is narrowing the scope of the Amendment. n20

#### B. Energy Production is the production of electricity or fuel

NASA 2011 [NASA Scientific and Technical Information. Scope and Subject Category Guide. <http://www.scribd.com/doc/80662465/sscg>]

Energy Production - The production of electricity, combustible fuels, nuclear and thermonuclear

fuels, and heating and cooling by renewable resources.

#### Violation – the aff incentivizes development of a production technology --- not the production itself

#### Vote negative –

#### PREDICTABLE LIMITS – only limit on the thousands of technologies and process that could be used to potentially produce energy

#### CORE NEG GROUND – all of our disads are based off of increased EXTRACTED PRODUCTS – not better technology or processes

### Politics

#### Obama pushing compromise and working together – key to getting House GOP on board for his agenda – Immigration’s only chance

AFP 3 – 7 – 13 Obama tries new tack -- talking to Republicans, http://www.google.com/hostednews/afp/article/ALeqM5js8Vq2BpvFfWBXu5jLLYKRSN\_sMA?docId=CNG.da8c946c1afca2a51f978806a1ab4ca4.311

President Barack Obama has hit on a novel antidote to Washington's endless cycle of political crises: breaking bread with Republicans

Since his re-election triumph in November, Obama has used his political capital to harangue his foes, holding rallies across the country at which he accused rival Republicans of obstructing legislation and serving the rich.

His strategy worked up to a point -- securing new higher tax rates for the wealthy as he pocketed a political win in December over the fiscal cliff showdown.

But with the glow of his re-election waning, Obama came up short in the sequester clash last week as Republicans refused to bend on raising taxes -- and $85 billion in economy-sapping austerity was set in motion.

Two years of incessant budget melodrama between Obama and his foes on Capitol Hill have poisoned the political well but done little to tackle the debt load endangering America's future prosperity.

Now, Obama and conservative Republicans in the House of Representatives are left staring across a seemingly unbridgeable ideological divide.

Since Obama's ambitious second term agenda must clear a divided Congress, the onus is on the president to plot a way through Washington's dysfunction.

So Obama, who disdains the superficiality of backslapping politics, has embarked on a charm offensive -- and on Wednesday night he bought dinner for a dozen Republican senators out of his own pocket.

At an expensive hotel, Obama supped with senators John McCain, Lindsey Graham and others, vocal foes who have also expressed frustration at being stuck in the political purgatory of a Washington where nothing gets done.

Next week, the president will make a rare foray into enemy territory on Capitol Hill to address Republicans from both the Senate and the House.

For now, Obama appears to have dropped the "outside" game of campaigning to move public opinion against Republicans, instead probing whether there is any space for a deal on key issues.

Steven Smith, a former congressional staffer who is now a professor of political science at Washington University, St Louis, said the president had little choice but to try to change the political climate in Washington.

"If you can't deal with the House Republicans in the current political environment -- see if you can change the political environment," he said.

"What (Obama) is hoping is that Republicans in the Senate can start serving almost as opinion leaders for a new way of tackling these fiscal challenges."

Obama is courting Republican senators who may be willing to deal on issues like the national debt, the deficit and growing costs threatening entitlement programs like health care for the elderly.

"The President is interested in finding the members of the 'caucus of common sense,'" said White House spokesman Jay Carney.

A person familiar with Obama's thinking said the White House believes there may be a window for action since -- after the sequester and fiscal cliff dramas -- Washington is finally not on the cusp of an immediate crisis.

Obama aides also think some Senate Republicans may be ready to compromise -- a feeling bolstered by Graham's recent comment that he would swap $600 billion in new revenues in return for entitlement reform.

It is not the first time that Obama has tried dialogue with Republicans -- he tried unsuccessfully to conclude a grand bargain with House Speaker John Boehner aimed at $4 trillion in deficit reduction during his first term.

Obama says that offer is still on the table, but so frayed are his relations with Boehner that it seems doubtful the two of them share the necessary trust to strike a bargain.

Should he fare better with Senate Republicans, Obama hopes his new dance partners can build pressure on their brethren in the House to compromise, which might also ease the way for other top initiatives, like immigration reform.

Republicans, who have long accused Obama of hectoring them, welcome his change of tone.

"Where this goes, I don't know," said Graham, who recently met Obama along with McCain at the White House.

"I do believe (in) what the president has been doing lately, getting off the campaign trail (and) back into the normal way of doing business up here, of talking to each other."

Moderate Republican Senator Susan Collins agreed.

"The important thing is, for the first time in a very long time, the president appears to be doing some outreach to both Republicans and Democrats, and that's long overdue," she said.

Wednesday's dinner might have been a good start, but such is the philosophical gulf between Obama and Republicans that any deal still seems a long shot.

And with mid-term congressional elections in 2014, the window for bipartisan comity is short.

#### Capital is key – Obama is spending it now

CBS NEWS 3 – 4 – 13 <http://www.cbsnews.com/8301-250_162-57572441/white-house-obama-not-focused-on-2014-right-now/>

Carney today said that Mr. Obama does believe his agenda -- which includes a plan to reduce gun violence, immigration reform and measures like raising the minimum wage -- would be easier to enact with Democrats in control of both chambers. "But it is also the president's belief, and it is established in fact in recent history, that you can achieve important policy objectives with divided government," he said.

Carney insisted the president is expending "great political capital and energy" on working quickly to pass immigration reform. Republicans have shown interest, he noted, in both immigration reform and some gun control measures.

#### Fundamental mistrust the nuclear energy means plan can only be spun as a loss

Ramana 2011 [MV, Princeton University Program on Science and Global Security Physicist August 3, 2011 “Nuclear power and the public,” http://www.thebulletin.org/web-edition/features/nuclear-power-and-the-public]

Opinion polls show that public support for nuclear power has declined since the Fukushima crisis began, not only in Japan but also in other nations around the world. People oppose nuclear power for a variety of reasons, but the predominant concern is the perception that it is a risky technology. Some communities that are closely associated with it even suffer from stigmatization. The nuclear industry has tried a variety of strategies to break down public resistance to nuclear power -- including information campaigns, risk comparisons, and efforts to promote nuclear power as a solution to climate change. None of these strategies has worked well, mostly because the public lacks trust in the nuclear industry. Public resistance to nuclear power is likely to continue, making it difficult to site and build new reactors. This resistance may be a major obstacle to the rapid expansion of nuclear power.

**And it Solves the economy**

**Krudy, 13** (Edward, “Immigration reform seen boosting US economic growth,” January 29th, 2013, <http://www.nbcnews.com/business/economywatch/immigration-reform-seen-boosting-us-economic-growth-1C8159298>)

The sluggish U.S. economy could get a lift if President Barack Obama and a bipartisan group of senators succeed in what could be the biggest overhaul of the nation's immigration system since the 1980s. Relaxed immigration rules could encourage entrepreneurship, increase demand for housing, raise tax revenues and help reduce the budget deficit, economists said. By helping more immigrants enter the country legally and allowing many illegal immigrants to remain, the United States could help offset a slowing birth rate and put itself in a stronger demographic position than aging Europe, Japan and China. "Numerous industries in the United States can't find the workers they need, right now even in a bad economy, to fill their orders and expand their production as the market demands," said Alex Nowrasteh, an immigration specialist at the libertarian Cato Institute. The emerging consensus among economists is that immigration provides a net benefit. It increases demand and productivity, helps drive innovation and lowers prices, although there is little agreement on the size of the impact on economic growth. First Thoughts: Obama to embrace Senate immigration deal President Barack Obama plans to launch his second-term push for a U.S. immigration overhaul during a visit to Nevada on Tuesday and will make it a high priority to win congressional approval of a reform package this year, the White House said. The chances of major reforms gained momentum on Monday when a bipartisan group of senators agreed on a framework that could eventually give 11 million illegal immigrants a chance to become American citizens. Their proposals would also include means to keep and attract workers with backgrounds in science, technology, engineering and mathematics. This would be aimed both at foreign students attending American universities where they are earning advanced degrees and high-tech workers abroad. An estimated 40 percent of scientists in the United States are immigrants and studies show immigrants are twice as likely to start businesses, said Nowrasteh. Boosting legal migration and legalizing existing workers could add $1.5 trillion to the U.S. economy over the next 10 years, estimates Raul Hinojosa-Ojeda, a specialist in immigration policy at the University of California, Los Angeles. That's an annual increase of 0.8 percentage points to the economic growth rate, currently stuck at about 2 percent.

**Nuclear war.**

**Kemp 10** Director of Regional Strategic Programs at The Nixon Center, served in the White House under Ronald Reagan, special assistant to the president for national security affairs and senior director for Near East and South Asian affairs on the National Security Council Staff, Former Director, Middle East Arms Control Project at the Carnegie Endowment for International Peace

(Geoffrey Kemp, The East Moves West: India, China, and Asia’s Growing Presence in the Middle East, p. 233-4)

The second scenario, called Mayhem and Chaos, is the opposite of the first scenario; everything that can go wrong does go wrong. The world economic situation weakens rather than strengthens, and India, China, and Japan suffer a major reduction in their growth rates, further weakening the global economy. As a result, energy demand falls and the price of fossil fuels plummets, leading to a financial crisis for the energy-producing states, which are forced to cut back dramatically on expansion programs and social welfare. That in turn leads to political unrest: and nurtures different radical groups, including, but not limited to, Islamic extremists. The internal stability of some countries is challenged, and there are more “**failed states**.” Most serious is the collapse of the democratic government in Pakistan and its takeover by Muslim extremists, who then take possession of a large number of **nuclear weapons**. The danger of war between **India and Pakistan** increases significantly. **Iran**, always worried about an extremist Pakistan, expands and weaponizes its nuclear program. That further enhances **nuclear proliferation** in the **Middle East**, with Saudi Arabia, Turkey, and Egypt joining Israel and Iran as nuclear states. Under these circumstances, the potential for nuclear **terrorism** increases, and the possibility of a nuclear terrorist attack in either the Western world or in the oil-producing states may lead to a further devastating collapse of the world economic market, with a tsunami-like impact on stability. In this scenario, major disruptions can be expected, with dire consequences for two-thirds of the planet’s population.

### Uranium Prices

#### Undermines global uranium demand.

I.B Lambert, 2012. Geoscience Australia, Secretary General 34th IGC. “Global Uranium And Thorium Resources: Are They Adequate To Satisfy Demand Over The Next Half Century?” Geophysical Research Abstracts, Vol 14, meetingorganizer.copernicus.org/EGU2012/EGU2012-2544.pdf.

This presentation will consider the adequacy of global uranium and thorium resources to meet realistic nuclear power demand scenarios over the next half century. It is presented on behalf of, and based on evaluations by, the Uranium Group - a joint initiative of the OECD Nuclear Energy Agency and the International Atomic Energy Agency, of which the author is a Vice Chair. The Uranium Group produces a biennial report on Uranium Resources, Production and Demand based on information from some 40 countries involved in the nuclear fuel cycle, which also briefly reviews thorium resources.¶ Uranium: In 2008, world production of uranium amounted to almost 44,000 tonnes (tU). This supplied approxi- mately three-quarters of world reactor requirements (approx. 59,000 tU), the remainder being met by previously mined uranium (so-called secondary sources). Information on availability of secondary sources – which include uranium from excess inventories, dismantling nuclear warheads, tails and spent fuel reprocessing – is incomplete, but such sources are expected to decrease in market importance after 2013. In 2008, the total world Reasonably Assured plus Inferred Resources of uranium (recoverable at less than $130/kgU) amounted to 5.4 million tonnes. In addition, it is clear that there are vast amounts of uranium recoverable at higher costs in known deposits, plus many as yet undiscovered deposits. The Uranium Group has concluded that the uranium resource base is more than adequate to meet projected high-case requirements for nuclear power for at least half a century. This conclusion does not assume increasing replacement of uranium by fuels from reprocessing current reactor wastes, or by thorium, nor greater reactor efficiencies, which are likely to ameliorate future uranium demand. However, progressively increasing quantities of uranium will need to be mined, against a backdrop of the relatively small number of producing facilities around the world, geopolitical uncertainties and strong opposition to growth of nuclear power in a number of quarters – it is vital that the market provides incentives for exploration and development of environmentally sustainable mining operations.¶ Thorium: World Reasonably Assured plus Inferred Resources of thorium are estimated at over 2.2 million tonnes, in hard rock and heavy mineral sand deposits. At least double this amount is considered to occur in as yet undiscovered thorium deposits. Currently, demand for thorium is insignificant, but even a major shift to thorium-fueled reactors would not make significant inroads into the huge resource base over the next half century.

#### That destroys Kazakh economic modernization.

Gregory Gleason, 12/14/2011. Professor at the University of New Mexico and the George C. Marshall European Center for Security Studies. “KAZATOMPROM LOOKS EAST,” Central Asia Caucasus Institute Analyst, http://cacianalyst.org/?q=node/5683/print.

BACKGROUND: Kazakhstan’s uranium industry is a key part of the country’s diversification and modernization strategy. Kazakhstan played an important role in the Soviet nuclear industry with major mining, processing, fabricating and industrial facilities. Kazakhstan was the home of the Soviet Union’s major experimenting and testing facilities. The end of the Soviet Union brought the Soviet-era nuclear complex to a standstill. The first decree signed by Nursultan Nazarbayev, Kazakhstan’s first president, was to immediately close the Soviet nuclear weapons test range. Kazakhstan’s government moved quickly to eliminate the Soviet-era nuclear weapons and weapons facilities, and the country signed on to the basic principles of the Nuclear Non-proliferation treaty by rejecting nuclear armaments while endorsing peaceful use of the atom. Due to Kazakhstan’s large uranium mineral reserves, the development of the uranium industry for peaceful uses became one of Kazakhstan’s economic policy priorities.¶ Kazakhstan’s industrial privatization program in the mid-1990s gave rise to numerous industrial enterprises but the uranium industry, because of its dual role as a commercial as well as a strategic resource, was retained under government control. In 1997, the Kazakhstani government formed Kazatomprom, a state-run mineral and industrial complex with direct responsibility for the uranium industry as well as for some other specialized industrial metals such as beryllium and tantalum. In a very short period of time Kazatomprom brilliantly succeeded in cobbling together Kazakhstan’s remnants of the Soviet-era uranium complex to build an industrial juggernaut in the uranium business. Kazatomprom surpassed its competitors in 2009 by emerging as the world’s largest producer of uranium ore. ¶ Kazatomprom’s success was achieved through a business model which linked Kazakhstan’s upstream mineral extraction with the downstream industrial facilities located elsewhere. Kazatomprom turned first to the Russian uranium industry, drawing on long-standing relations with Russia’s state-run nuclear complex under the control of Rosatom and with Russia’s related nuclear industry commercial firms. Later Kazatomprom moved outside the connections of the former Soviet space to forge business connections with foreign partners, forming joint ventures with leading technological partners such as France’s Areva and Canada’s Cameco. But Russia’s nuclear industry remained the locomotive driving Kazakhstan’s nuclear sector as it moved from the role of primary commodity supplier to the role of an integrated transnational industrial enterprise. Working in parallel, driven by state-financed enterprises and focused on jointly gaining a position to capture the expanding nuclear services market, Russia’s Rosatom and Kazakhstan’s Kazatomprom made major investments in a coordinated effort to corner the future nuclear reactor fuel supply market in Asia, focusing on China, India, Japan and Korea.

#### Kazakh economic development is a key model for Central Asia --- instability would spread and trigger Central Asian conflict.

Margarita Assenova et al, 2008. Director of Institute for New Democracies @ CSIS; with Natalie Zajicova, Program Officer (IND); Janusz Bugajski, CSIS NEDP Director; Ilona Teleki, Deputy Director and Fellow (CSIS); Besian Bocka, Program Coordinator and Research Assistant (CSIS). “Kazakhstan’s Strategic Significance,” CSIS Institute for New Democracies, http://eurodialogue.org/Kazakhstan-Strategic-Significance.

The decision by the Organization for Security and Cooperation in Europe (OSCE) to award Kazakhstan the chairmanship of the organization for 2010 underscores a growing recognition of the country’s regional and continental importance. Kazakhstan is a strategic linchpin in the vast Central Asian-Caspian Basin zone, a region rich in energy resources and a potential gateway for commerce and communications between Europe and Asia.

However, it is also an area that faces an assortment of troubling security challenges. Ensuring a stable and secure Central Asia is important for the international interests of the United States and its European allies for several prescient reasons:

• Asian Security: Because of its proximity to Russia, China, Iran, and the South Asian sub-continent, Kazakhstan’s security and stability is an increasingly vital interest to all major powers. Kazakhstan’s tenure as chair of the OSCE will become an opportunity for greater multilateral cooperation in achieving this objective while strengthening the role and prestige of the OSCE throughout Central Asia.

• Afghanistan: Central Asia is a key staging area for U.S. and NATO military operations in Afghanistan against Taliban insurgents and Al Qaeda militants. Central Asia is a crucial conduit for U.S. and NATO troops and supplies into Afghanistan. U.S. offi cials recently reached new agreements with Russia, Kazakhstan, and other Central Asian countries to allow Afghanbound non-military supplies through their territories.

• Trans-National Terrorism: The Taliban resurgence in Afghanistan stimulates cross-border terrorism that may endanger the stability of several Central Asian neighbors and undermine Western interests. Central Asian states have been the victims of Afghanistan-based transnational terrorism. These states, including Kazakhstan, can support international efforts to counter regional terrorist networks.

• Organized Crime and Drug Traffi cking: Central Asia is an important transit region for narcotics traffi cking between Afghanistan and the countries of Europe and Asia. Joint initiatives that will enable the Kazakh government to control and monitor borders more effectively, intercept smuggling operations, and eradicate criminal networks will buttress international security and curtail funding to cross-border terrorist groups.

• Energy Security: Central Asia has the potential to be a vital energy source for Europe. The region contains a vast storehouse of oil and natural gas, which Europe urgently needs in order to lessen its reliance on Russian and Middle Eastern energy supplies. Disputes between Russia and several energy transit states, such as Ukraine, have increased Europe’s interest in developing direct supply lines between Europe and the Caspian countries.  
Challenges to International Interests

Despite the strategic significance of Central Asia and the Caspian Basin, in recent years Western countries have not paid sufficient attention to the region. This is due to a combination of factors, including the absence of a shared strategic framework for helping to stabilize and develop the heartland of Asia; insufficient focus on consolidating close political ties with key countries in the region through ustained high-level engagement; and opposition on the part of other major powers competing for influence in Central Asia.

Many Western experts conclude that Russia’s leaders have sought to use multi-national organizations, Moscow’s political connections and its economic leverage to assert greater control over ex-Soviet neighbors. There are reports that the Central Asian governments were pressured to curtail Western security interests, including limiting its military presence in the region by, for example, urging Uzbekistan and Kyrgyzstan to evict the U.S. military from bases on their territory.

Kazakh leaders are supportive of a more effective American and European role in Central Asia to help promote the region’s security and development, but without undermining Astana’s cordial relations with Russia. Kazakhstan’s independent foreign policy helps provide Western access to the region and enhances its position as a vital transport corridor. Kazakhstan is also a stabilizing factor in the geopolitical competition of the regional powers for access and influence across Central Asia. With its reinvigorated commitment to securing Afghanistan and stabilizing the wider region, the Obama administration has an ideal opportunity to reach out to key partners such as Kazakhstan and to enhance Astana’s role as a regional stabilizer.  
Kazakhstan as a Regional Stabilizer

Despite having the largest territory and economy in Central Asia, Kazakhstan is not a source of insecurity or threat to any of its neighbors. It does not employ territorial, ethnic, economic, or energy instruments to target and undermine any government in the region. On the contrary, Astana has sought to establish a system of collective security in Eurasia that would avert the emergence of a single dominant power. Kazakhstan’s “multi-vector” foreign policy, which seeks to pursue cooperative relations with all major powers, leads Astana to resist any hegemonic ambitions by larger countries that would undercut Kazakhstan’s political or economic independence.

While it is a member of the Commonwealth of Independent States (CIS), the Collective Security Treaty Organization (CSTO), and the Shanghai Cooperation Organization (SCO), Kazakhstan has sought to diversify its security relations and keep its freedom to establish and maintain international partnerships. Indeed, Astana has developed productive contacts with NATO by participating in NATO’s Euro-Atlantic Partnership Council (EAPC) and its Partnership for Peace (PfP) program. It was the only Central Asian government to negotiate an Individual Partnership Action Plan (IPAP) with NATO in January 2006.

NATO’s June 2004 summit affirmed the growing importance of Central Asia by designating the region as an area of “special focus” and stationing a liaison officer in the Kazakh capital of Astana in order to develop NATO assistance programs to modernize national military structures. A NATO Secretary General Special Representative for the Caucasus and Central Asia was also appointed.

Astana has underscored that neither the CSTO nor the SCO should become exclusive military alliances or anti-Western blocs that would challenge NATO’s mission in the wider region. Kazakhstan supports NATO operations in Afghanistan and grants overflight rights to U.S. and other NATO warplanes transporting non-lethal cargo to Afghanistan, as well as emergency landing rights for U.S. military aircraft in the Kazakh city of Almaty. The Kazakh authorities are also developing a Peacekeeping Battalion (KAZBAT), which is slated to become fully operational by 2011 and potentially available for international peace stability missions.

Kazakhstan is the only Central Asian country to have an Action Plan to assist in the reconstruction process in Afghanistan, including granting more than $3 million in the 2007-2008 fiscal year for social and infrastructure projects, humanitarian aid, and training for Afghan law enforcement and border patrol officers. For 2009-2011, Kazakhstan has committed an additional $5 million to improve the water supply and distribution infrastructure for shipments of grain and other commodities.

Kazakhstan also provides funding to support U.S. objectives in the region. Astana is the only regional donor giving significant aid to Kyrgyzstan, Tajikistan, and Afghanistan. According to the U.S. State Department’s Background note on Kazakhstan, “in 2006, Kazakhstan became the first country to share directly in the cost of a U.S. Government’s foreign assistance program. Through 2009, the Government of Kazakhstan will contribute over $15 million of a $40 million USAID economic development project aimed at strengthening Kazakhstan’s capacity to achieve its development goals.”

Kazakhstan has initiated and championed the Conference on Interaction and Confidence-Building in Asia (CICA). Modeled after the OSCE, the CICA process aims to promote peace and security throughout Eurasia through confidence-building measures and other means. The first CICA summit, held in June 2002, was attended by leaders from 16 states who signed the “Almaty Act,” as well as a declaration to eliminate terrorism and promote inter-cultural dialogue. The second CICA summit (hosted by Kazakhstan in June 2006) adopted the Catalogue of Confidence Building Measures (CBM) – a road map for implementing the CBM on a bilateral and multilateral basis. At the last CICA working meeting in India in February 2009, the participating states selected Turkey to chair the conference and host the third CICA summit in 2010. The Turkish chairmanship will expand CICA geographically and move it closer to Europe.  
Multi-National Counter-Terrorism

Kazakhstan has been combating several potential threats to its own stability and that of its neighbors, including terrorism, drug smuggling, and organized crime. Although Kazakhstan is generally not a source of these maladies, it is a transit country for such illicit activities. Kazakh leaders have been especially concerned about possible terrorist strikes against their country’s energy infrastructure that could affect exports to European and other consumers. To counter terrorist threats, the Kazakh government has supported multilateral efforts in key multilateral organizations to make counter-terrorism an essential ingredient of their security focus. Astana has also assigned troops to the Central Asian Rapid Reaction Force (CARRF), which is designed to defend each country against major terrorist threats.  
Regional Non-Proliferation

KazakhstanwasthefirstformerSovietrepublictoabandon its nuclear arsenal. It closed the largest nuclear weapons test site and has spearheaded regional denuclearization. Kazakh leaders have also made major progress in downgrading nearly all of the country’s highly enriched uranium, thus lessening the opportunities for such material to fall into the hands of foreign governments or terrorist groups. Astana’s non-proliferation initiatives have earned it praise from a number of international leaders.

With impetus from Kazakhstan, the Central Asian states have agreed to coordinate their nonproliferation and export control policies, especially to prevent the smuggling of Weapons of Mass Destruction (WMD) and related materials from the former Soviet Union. In September 2006 in Semipalatinsk, a former Soviet nuclear testing site in Kazakhstan, representatives of the five Central Asian states signed a treaty to create a Central Asian Nuclear Weapon Free Zone, which entered into force on March 21, 2009. The signatories pledged not to develop, manufacture, or otherwise acquire nuclear devices or to assist third parties in developing nuclear weapons programs. The treaty further addressed environmental protection as each of the five states share common problems of environmental damage resulting from the production and testing of Soviet nuclear weapons.  
Counter-Narcotics Trafficking

Countering the trafficking of narcotics from Afghanistan through Central Asia is a major security challenge for all countries in the region, as well as an issue of concern for European and Asian states seeking to stabilize Afghanistan. Proceeds from large-scale smuggling finance organized crime and cross-border terrorism. Central Asian states, including Kazakhstan, have been active in joint operations to intercept drug shipments from Afghanistan and are expanding their counter-narcotics agencies to deal more effectively with the threat. The Central Asian Regional Information and Coordination Centre (CARICC), established in Almaty under UN auspices, serves as the main regional communication center for analysis and exchange of information on transnational crime and the coordination of joint operations. The OSCE, which Kazakhstan will chair in 2010, has established the priority of curbing drug and arms smuggling, strengthening border controls to curtail illegal migration, and countering the financing of terrorist and criminal organizations.  
Energy Security

Kazakhstan is a major producer and exporter of crude oil, projected to export three million barrels of oil per day, or 150 million tons per year, by 2015. Kazakhstan also possesses substantial natural gas reserves and some of the world’s largest reserves of uranium.

The three energy-rich states of Central Asia (Kazakhstan, Uzbekistan, and Turkmenistan) understand that their political independence and energy security requires diversifying their energy customers and avoiding reliance on any single power or transit route. Currently, Russia is the main transit route for energy exports from Central Asia. Kazakhstan supports building oil and gas pipelines that would channel its energy resources directly to Europe and China. The Kazakh energy industry favors a direct energy connection with Azerbaijan across the Caspian Sea that would help supply the European market.

Astana is seeking to diversify its economy and avoid over-dependence on natural resources and energy exports. Until recently, oil and gas revenues have been aggressively used to develop a stronger economic foundation for expansion into new markets. Kazakhstan seeks to attract advanced technologies and modern management practices into its priority economic sectors, including high technology, financial services, and agriculture. However, the current global financial crisis poses considerable challenges to this agenda, not least because of the weaknesses it has exposed in Kazakhstan’s banking and financial services sector.  
Economic Development

Sustained economic development is a major determinant of long-term regional stability. Kazakhstan has emerged as a successful model of economic development in Central Asia and the secular Muslim world. It has the largest economy in Central Asia with a Gross Domestic Product (GDP) exceeding the combined total of its four Central Asian neighbors. The government is in the process of negotiating its entry into the World Trade Organization (WTO) and is a leading proponent of deepening economic cooperation in Central Asia and the Caspian region.

Kazakh leaders have focused on developing the Euro-Asian Economic Community (EurAsEC), an organization that also involves Belarus, Kazakhstan, Kyrgyzstan, Russia, and Tajikistan. More generally, Kazakhstan has strongly supported deeper economic integration among these states. Nonetheless, Astana opposes over-reliance on any single country because this would undermine Kazakhstan’s independence and integration into the global economy.

In positioning Kazakhstan as a potential economic hub and the core of a “Eurasian transport corridor,” President Nursultan Nazarbayev has proposed creating a regional organization, styled as the Eurasian Economic Union (EEU), to harness and intensify trans-border cooperation in such areas as water resource management, transportation infrastructure, crisis-response, environmental protection, and region-wide economic development. Such a process, even without the support of all Central Asian countries, could be the first steps toward lowering barriers to trade, harmonizing customs, and building closer economic associations. Kazakh officials contend that closer economic integration would reduce regional tensions, attract greater levels of foreign direct investment, and increase the region’s leverage and competitiveness in the international arena. Integration has also been fostered by tangible investments and capital flows as Kazakhstan has played a major role in exporting capital to its neighbors.

#### Nuclear war

Ahrari 1 (M. Ehsan, Professor of National Security and Strategy of the Joint and Combined Warfighting School at the Armed Forces Staff College, August 2001, “Jihadi Groups, Nuclear Pakistan and the New Great Game,” http://www.strategicstudiesinstitute.army.mil/pdffiles/pub112.pdf)

South and Central Asia constitute a part of the world where a well-designed American strategy might well help avoid crises or catastrophe. The U.S. military would provide only one component of such a strategy, and a secondary one at that, but has an important role to play through engagement activities and regional confidence building. Insecurity has led the states of the region to seek weapons of mass destruction, missiles and conventional arms. It has also led them toward policies which undercut the security of their neighbors. If such activities continue, the result could be increased terrorism, humanitarian disasters, continued low-level conflict and potentially even major regional war or a thermonuclear exchange. A shift away from this pattern could allow the states of the region to become solid economic and political partners for the United States, thus representing a gain for all concerned.

### Accidents

#### Civilian nuclear globalization risks nuclear terrorism and miscalculation—the impact is qualitatively different than prolif

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Finally, in 20 years, there could be more nuclear weapons-ready states – countries that could acquire nuclear weapons in a matter of months, like Japan and Iran. In addition, more than 25 states have announced plans to launch large civilian nuclear programs. If they all realize their dreams of bringing their first nuclear power reactors on line by 2030, it would constitute a near doubling of the 31 states that currently have such programs, most of which are in Europe (see figures 4 and 5).

If this civilian nuclear expansion is realized, it could have major military implications. Every current weapons state first brought a large reactor on line prior to acquiring its first bomb. The United Kingdom, France, Russia, India, Pakistan, and the United States all made many of their initial bombs from reactors that also provided power to their electrical grids. The United States still uses a power reactor, a ‘proliferation resistant’ light-water reactor operated by the Tennessee Valley Authority, to make all of its weapons-grade tritium for its nuclear arsenal.

Other plants besides large power reactors, of course, would be needed to chemically separate out weapons-usable plutonium from the spent power-reactor fuel or to enrich the uranium used to power such machines. Yet, as the recent cases of Iran and North Korea demonstrate, such fuel-making plants can be built – and in ways that can be difficult to detect – and operated to make timely detection of illicit production unlikely. Certainly, if all of the announced civilian nuclear power programs are completed as planned, the world in 2030 would be far less stable. Instead of there being several confirmed nuclear weapons states (most of which the United States can claim are either allies or strategic partners) there could be an unmanageable number of additional nuclear weapons-capable states – armed or weapons-ready (i.e., able to acquire weapons in 12 to 24 months) – to contend with, as figures 6 and 7.

In such a world, the United States, its allies and the EU might know who their friends and potential adversaries might be but they would have difficulty knowing what such states might do in a crisis – close ranks, go their own way developing weapons options, or follow the lead of some other nuclear-capable nation. As for possible adversaries, the United States, its allies and the EU would have difficulty determining just how lethal these adversaries’ military forces might be.

Finally, these nuclear trends would surely aggravate the prospects for nuclear terrorism. Not only would there be more opportunities to seize nuclear weapons and nuclear weapons materials, there would be more military and civilian nuclear facilities to sabotage. In addition, the potential for miscalculation and nuclear war could rise to a point where even non-nuclear acts of terror could ignite larger conflicts that could turn nuclear.

This sort of international volatility is similar to that which preceded World War One and Two. These were periods in which overly ambitious arms-control objectives were pursued while states completed major covert and overt military preparations that heightened tensions and subsequently were employed in unrestricted warfare. The difference would be that over the next 20 years, the ammunition in these conflicts would not just be highly explosive, but nuclear.

#### Nuclear expansion in the U.S. significantly increases the risk of meltdown—kills thousands immediately

Lyman 8—Edwin Lyman is Senior Global Security Scientist with the Union of Concerned Scientists (UCS). He specialises in nuclear proliferation, nuclear terrorism, and nuclear power safety. He has published many articles in journals and magazines and written many reports. Lyman was president of the Nuclear Control Institute. He has a Ph.D. in physics from Cornell University. [September/October 2008, “Can nuclear plants be safer?” *Bulletin of the Atomic Scientists*, Vol. 64, No. 4, pp. 34-37, http://www.psr.org/nuclear-bailout/resources/can-nuclear-plants-be-safer.pdf]

Even with subsidies provided by Congress, $5 billion–$9 billion for each new nuclear plant is still a staggeringly expensive proposition. Utilities will be under tremendous pressure to cut costs wherever they can. Unfortunately, in the past the industry has tried to save money all too often by cutting corners on safety. Can a nuclear expansion be carried out without either breaking the bank or exposing the public to unacceptable risk?

Because there hasn’t been a serious core-melt accident in the United States since Three Mile Island in 1979, some nuclear power advocates assert that safety concerns are overblown. Although such accidents are unlikely, they are far from impossible. According to NRC estimates, the annual average chance that one of the 104 nuclear reactors in the country will experience a core melt while operating at full power is about 1 in 500 due to internal events such as pipe breaks. Taking into account the risks of external events such as earthquakes and floods and the risks during shutdowns (which are high because the fuel remains hot but some emergency cooling systems may be down for maintenance), this chance rises to almost 1 in 100 per year. In addition, today’s reactors are vulnerable to sabotage from the ground or the air in ways that cannot be eliminated by simply increasing the numbers of guns, guards, and gates.

U.S. nuclear power promoters argue that a massive release of radioactive material, comparable to the 1986 Chernobyl disaster in the Soviet Union, can’t happen here because U.S. reactors, unlike Chernobyl-type reactors, have robust containment structures. Yet not all U.S. containments could survive the most severe events that can occur, such as a hydrogen explosion. For some containment types, in certain accident scenarios the chance of containment rupture or bypass is nearly 100 percent. A core-melt accident could occur when a reactor is being refueled and the containment hatch is open. Terrorists armed with explosives and seeking to inflict maximum harm would encounter little difficulty breaching a containment structure.

A 9/11-style attack on a nuclear plant could pose a serious threat of breaching any containment structure that is not designed to withstand the deliberate impact of a large passenger jet. Although the NRC has proposed requiring all new plant designs to be evaluated with regard to their vulnerability to aircraft attacks, the rule would not require designers to make changes to their designs to fix deficiencies they may find. Plant designs that have already received NRC certification, such as the AP1000, would be exempt (although Toshiba-Westinghouse has committed to doing the assessment on a voluntary basis).

The consequences of such events at a U.S. nuclear plant could be grave. About 5 million Americans—more than 1 percent of the population—live within 10 miles of a nuclear plant. A 2004 study by this author for the Union of Concerned Scientists and Hudson Riverkeeper found that an event leading to a core melt and containment breach at the Indian Point nuclear plant 25 miles from New York City could be far worse than the 9/11 attacks. It could cause tens of thousands of deaths within weeks from acute radiation syndrome and hundreds of thousands of deaths within decades from cancer. Children could receive high exposures to radioactive iodine as far as hundreds of miles downwind of the plant. Such an event would have a chilling effect on prospects for a U.S. nuclear plant revival.

Unless new nuclear reactors are designed to be significantly safer and more secure against accidents and attacks than the current fleet, a large U.S. nuclear expansion could make the risk of a Chernobyl-scale release of radioactivity uncomfortably high. But the NRC and the nuclear industry are squandering the opportunity to lock in major safety and security improvements for the next generation of nuclear plants. According to a 1986 policy statement, the NRC “expects” new nuclear plants to be safer than current plants but does not require them to be safer. In fact, the NRC sets the bar for acceptable risk of core damage in new plants so low that most operating plants would meet it. Apparently the NRC fears that requiring new plants to be safer than current plants would imply that current plants are not safe enough. But this timid policy has discouraged reactor vendors from designing new plants that are clearly safer than current ones. Consequently, the next generation of plants likely to be built in the United States— which will operate for 60 years or longer—will not provide the major advances in safety and security that are needed.

#### Risks all life on Earth

#### Adams 11 [Mike, Editor of NaturalNews.com “Solar flare could unleash nuclear holocaust across planet Earth, forcing hundreds of nuclear power plants into total meltdowns,” 9-13, <http://www.naturalnews.com/033564_solar_flares_nuclear_power_plants.html>]

Forget about the 2012 Mayan calendar, comet Elenin or the Rapture. The real threat to human civilization is far more mundane, and it's right in front of our noses. If Fukushima has taught us anything, it's that just one runaway meltdown of fissionable nuclear material can have wide-ranging and potentially devastating consequences for life on Earth. To date, Fukushima has already released 168 times the total radiation released from the Hiroshima nuclear bomb detonated in 1945, and the Fukushima catastrophe is now undeniably the worst nuclear disaster in the history of human civilization.

### CP

#### The United States Executive Branch should substantially increase the purchase of tactical nuclear weapons from Russia by forgiving Russian debt. The United States federal government should use the material for asteroid deflection.

#### Solves the aff

#### Nartker 4 – Mike, Nuclear Threat Initiative ~Western Nations Should Buy Russian Tactical Nuclear Weapons to Reduce Proliferation Risk, Experts Say, July 8, 2004, [http://www.nti.org/gsn/article/western-nations-should-buy-russian-tactical-nuclear-weapons-to-reduce-proliferation-risk-experts-say](http://www.nti.org/gsn/article/western-nations-should-buy-russian-tactical-nuclear-weapons-to-reduce-proliferation-risk-experts-say~~cs)

The United States and other Western nations should seek to reduce nuclear proliferation risks by purchasing and disposing of Russian tactical nuclear weapons, according to a paper by two U.S. nuclear weapons experts published in the spring edition of the U.S. Naval War College Review (see GSN, May 27). Russia possesses anywhere from 3,000 to 20,000 tactical nuclear weapons, which are intended for battlefield use and generally have smaller yields than strategic nuclear weapons, experts say. Citing ongoing security concerns at Russian nuclear weapons storage sites, experts have warned that terrorists seeking to acquire nuclear arms may seek to steal or purchase tactical weapons. The nuclear weapons range from artillery shells to landmines to missile-launched warheads, according to the Council for a Livable World. To help reduce that proliferation threat, Timothy Miller and Jeffrey Larsen, senior analysts at U.S. defense contractor Science Applications International Corp (SAIC), have proposed that Western nations enter into a “cash for kilotons” agreement with Russia to purchase and dismantle tactical nuclear weapons. The United States and Russia already have a similar agreement in place with the Megatons to Megawatts effort, which seeks to eliminate 500 metric tons of highly enriched uranium removed from Russian strategic nuclear weapons. Under the 20-year program, which was launched in 1994, Russia converts material removed from its nuclear warheads into low-enriched uranium, which is then purchased by the U.S. Enrichment Corp. for sale as civilian nuclear plant fuel (see GSN, June 17). Miller and Larsen’s proposal calls for both the United States and Russia to fully inform each other about the size and details of their tactical nuclear weapons arsenals, which would probably need to be verified by taking a joint inventory, and to then decide which weapons are in excess of national security needs. A group of Western nations would then negotiate with Russia the price of each weapon based on a “per-kiloton-of-warhead” basis. Miller and Larsen proposed making the NATO-Russia Council responsible for the financial arrangements. The council, acting as an executive committee for the effort, would establish an initial price per unit yield for various classes of weapons, which would serve as the basis for later negotiations for final prices, according to the paper. While the overall costs of purchasing Russian tactical weapons would probably run into the billions of dollars, such payments could be spread out over a multiyear period, Miller and Larsen wrote, adding that the weapons to be dismantled would have to be transferred immediately. The experts also proposed that Russia could be offered debt forgiveness, instead of money, for each weapon. In their paper, Miller and Larsen called for “tight time constraints” on the purchase price negotiations. They proposed that the countries involved should set a timetable for negotiations, and if they are not completed under that schedule, the entire process should stop and price penalties be put into effect based on which parties were responsible for the delay. Once Russian tactical weapons were purchased, according to Miller and Larsen, they would be “immediately” secured and dismantled. In their paper, the two experts proposed that the International Atomic Energy Agency be given the role of custodian for the purchased weapons and responsibility for operating a facility in Russia to demilitarize the weapons and to blend down any highly enriched uranium they contain. “We believe that a neutral third party, one that would not pose a military threat to either side, would enhance mutual confidence in a way that is critical to removing suspicion,” Miller and Larsen wrote.

#### Nuclear power advocates perform scientific idolatry – the aff produces authoritarian technology and politics

Brian **WYNNE** Science Studies and Research Director of the Centre for the Study of Environmental Change @ Lancaster (UK) **’11** *Rationality and Ritual* 2nd Edition p. 8-11 [**Gender Paraphrased]**

Such detachment of ambitious technological commitment from organized fantasy has to be a hope; but this hope also has to be interrogated, cold-bloodedly, carefully, and openly. As I tried to assert in this book, nuclear proponents including its scientists belied their own claims to objective hard-factual discipline, with their intense and unbridled emotional commitments clearly evident. These scientistic emotions (and their denial) manifested profound insecurities on the part of their agents, combined with an effective assumption of almost superhuman powers. Thus the mutual identification and reinforcement of nuclear technology with a culture of exaggeration is no less real and no less dangerous just because other technologies have also suffered from similar such idolatry in the past (Ezrahi, 1990) as well as since the 1980s. Although it was Lewis Strauss - a non-scientist head of the scientific body for both weapons and civil nuclear power, the US Atomic Energy Commission (AEC) - who voiced in 1954 the infamous promise that his generation's children would enjoy 'electrical energy too cheap to meter' (Strauss, 1954; Weart, 1988, p166), what is notable is the refusal of any nuclear expert to refute such fatuous promises made in the public name of their science (Laurence, 1959, p251).10 If science claims the credit for the putative benefits from such technologies, as it does, then it cannot easily distance itself from the related discredits - nor from the arguments over which is which. Paradoxically, as nuclear energy prepares to return, society still has not come to terms with the cultural significance of its mass-destructive and apocalyptic military origins and consequences. With the failure of the Atoms for Peace programme and its global institutional UN 'safeguards' supposedly to arrest nuclear weapons proliferation (granted that it must have slowed it down), the systematic and sustained social unrealism of this 60-year commitment cannot but encourage a continuing sense of public unease and distrust of nuclear energy technologies, even if the reprocessing option is forestalled. The imagery of Figure 1 is referred to in Chapter 2 of the original book, but was not printed there. Looking back now, I realize I did not do justice to the issues it raised. Thanks to various theoretical, technological and public developments since then, it deserves fuller treatment now. The image is from a supplement on 'The Atomic Age' published by the Financial Times in 1956, at the birth of both the UK civil nuclear power programme (claimed to be the first in the world) and the UN global Atoms for Peace programme.11 This 50-page publication celebrated the Queen's forthcoming opening of the Calder Hall (Windscale) nuclear electricity (and weapons plutonium) reactors.12 This imagery did not just project nuclear technology as human perfection. It portrayed much more about the nuclear imagination and its mode of public communication and self-promotion, thus of nuclear technology's material social being. This includes its normative characterization (and performance, as explained below) of 'the public' which it imagined as part of the nuclear era. It emphasized the religious forces and feelings animating this science-inspired technology, the epitome of modern scientific rationality as public authority. The technology is shown not just as precise, pure, pristine and clinical. It is also hovering in its own superhuman realm, above the Earth and beyond mere human life, even surrounded by a glowing celestial halo. The text indicates an imagined (and desired) awestruck public: 'Millions of people ['mankind'] stand amazed at the prospect of heat light and power from a source that cannot even be seen.' There is not the slightest sense of a technology and its embodied science that envisages any hint of public engagement: indeed quite the opposite, only distant awe, exclusion and admiration. These extra-terrestrial, extra-social experts 'know best', not only about nuclear power, but about what is best for '[hu]mankind'. Public exclusion, subordination, passivization and alienation are here actively cultivated, through symbolic action. The Windscale book is about how this same kind of symbolic imagination of 'the public' was, through a participatory public inquiry, its report and parliamentary and media uptake, enacted into material performance in later policy culture and commitments. These processes, their forms of reason and discourse, can be said to have performed a particular imagination of their public, and encouraged the material enactment of that imagination into society. If we also refer back here to the practices of pollution management at the Windscale-Sellafield site, as reflected in Dunster's 1958 description earlier of how routine marine radioactive discharges were set, we can see in this account, and in the ensuing environmental contamination and human exposures from this, a performance of nuclear technology's imagined publics. We can see from not only the typical symbolism but also in corresponding material practices that as democratic participants, worthy of respectful recognition and to be given standing as part of the moral --community in which nuclear technology exists, effectively there is no public. It has been one of the most significant shifts of collective understanding amongst many - contributed by the late twentieth century social sciences and humanities, that symbolic actions carry corresponding changes in material social relations. Thus the normatively imposed social relations of technoscience here are not just symbolically projected, but also materially performed. In addition to the instances noted above, a further routinized example of the latter was the sustained extreme secrecy and misinformation that was practised by the UK nuclear authorities behind the scenes of this 1956 flood of positive publicity, and in imposed assumptions-in-practice about what people's concerns, needs and capacities are and should be. These were in no need of co ll ective negotiation; they were subsumed into the dominant assumed ontology. Inquiry inspector Mr Justice Parker's later empiricist framing and interpretation of the Windscale inquiry's conflicting ontological commitments, as these were embodied in the irreconcilable arguments of the parties but represented by him as measurable - and measured by him - against an empirically discoverable standard, did the same. Despite all the noise and fury of public debate and controversy, his discrete translations of expressed public concerns into his own terms were not subjected to any direct accountable scrutiny. Of course, his rational arguments in favour of THORP's approval were, but that is not what I am referring to here. This book still stands as a sole, modest and utterly marginal witness to this.

#### Technocratic management makes extinction inevitable.

Crist 7 [Eileen Crist, Associate Professor of Science and Technology in Society at Virginia Tech University, 2007, “Beyond the Climate Crisis: A Critique of Climate Change Discourse,” *Telos*, Volume 141, Winter, Available Online to Subscribing Institutions via Telos Press, p. 49-51]

If mainstream environmentalism is catching up with the solution promoted by Teller, and perhaps harbored all along by the Bush administration, it would certainly be ironic. But the irony is deeper than incidental politics. The projected rationality of a geoengineering solution, stoked by apocalyptic fears surrounding climate change, promises consequences (both physical and ideological) that will only quicken the real ending of wild nature: "here we encounter," notes Murray Bookchin, "the ironic perversity of a 'pragmatism' that is no different, in principle, from the problems it hopes to resolve."58 Even if they work exactly as hoped, geoengineering solutions are far more similar to anthropogenic climate change than they are a counterforce to it: their implementation constitutes an experiment with the biosphere underpinned by technological arrogance, unwillingness to question or limit consumer society, and a sense of entitlement to transmogrifying the planet that boggles the mind. It is indeed these elements of techno-arrogance, unwillingness to advocate radical change, and unlimited entitlement, together with the profound erosion of awe toward the planet that evolved life (and birthed us), that constitute the apocalypse underway—if that is the word of choice, though the words humanization, colonization, or occupation of the biosphere are far more descriptively accurate. Once we grasp the ecological crisis as the escalating conversion of the planet into "a shoddy way station,"59 it becomes evident that inducing "global dimming" in order to offset "global warming" is not a corrective action but another chapter in the project of colonizing the Earth, of what critical theorists called world domination.

Domination comes at a huge cost for the human spirit, a cost that may or may not include the scale of physical imperilment and suffering that apocalyptic fears conjure. Human beings pay for the domination of the biosphere—a domination they are either bent upon or resigned to—with alienation from the living Earth.60 This alienation manifests, first and [end page 50] foremost, in the invisibility of the biodiversity crisis: the steadfast denial and repression, in the public arena, of the epochal event of mass extinction and accelerating depletion of the Earth's biological treasures. It has taken the threat of climate change (to people and civilization) to allow the tip of the biodepletion iceberg to surface into public discourse, but even that has been woefully inadequate in failing to acknowledge two crucial facts: first, the biodiversity crisis has been occurring independently of climate change, and will hardly be stopped by windmills, nuclear power plants, and carbon sequestering, in any amount or combination thereof; and second, the devastation that species and ecosystems have already experienced is what largely will enable more climate-change-driven damage to occur.

Human alienation from the biosphere further manifests in the recalcitrance of instrumental rationality, which reduces all challenges and problems to variables that can be controlled, fixed, managed, or manipulated by technical means. Instrumental rationality is rarely questioned substantively, except in the flagging of potential "unintended consequences" (for example, of implementing geoengineering technologies). The idea that instrumental rationality (in the form of technological fixes for global warming) might save the day hovers between misrepresentation and delusion: firstly, because instrumental rationality has itself been the planet's nemesis by mediating the biosphere's constitution as resource and by condoning the transformation of Homo sapiens into a user species; and secondly, because instrumental rationality tends to invent, adjust, and tweak technical means to work within given contexts—when it is the given, i.e., human civilization as presently configured economically and culturally, that needs to be changed.

**Nukes are the best way to deflect asteroids**

**Uttley 11** [[Caitlin Uttley](http://science.howstuffworks.com/hsw-contact.htm), “Could we really blow up an incoming asteroid with a nuclear bomb?,” 2011, http://science.howstuffworks.com/asteroid-nuclear-bomb1.htm

In 2005, U.S. Congress asked NASA to develop plans for preventing an asteroid-[Earth](http://science.howstuffworks.com/environmental/earth/geophysics/earth.htm) collision. In 2007, the space agency presented its ideas at the Planetary Defense Conference in Washington, D.C. (which sounds like something out of a sci-fi flick). In its [report](http://www.nasa.gov/pdf/171331main_NEO_report_march07.pdf), NASA outlined several options, a few of which involved using nuclear explosives to deflect the asteroid away from Earth. The force from the explosions would (hopefully) provide enough momentum to nudge the asteroid in a different direction, preventing disaster.

In the explosions category, NASA discovered that nuclear explosives are way more effective for asteroid deflection than non-nuclear explosives, due to the sheer amount of energy they produce. NASA tested four nuclear scenarios: a surface explosion, a delayed surface explosion, a subsurface explosion and a standoff explosion (where the bomb doesn't come into contact with the asteroid). The surface and subsurface explosions are the most effective, but there's a good chance of splitting the asteroid. In the end, the space agency determined that a series of standoff nuclear explosions would be the most effective way to deflect an asteroid headed for Earth.

#### Earths sits in a cosmic shooting gallery—it has already faced multiple asteroid induced extinctions and the risk of another extinction level impact is both inevitable and potentially immediate. The ability to deflect asteroids is a policy imperative.

Lt Col. Peter **Garretson**, USAF Maj. Douglas **and Kaupa**, USAF, “Planetary Defense Potential Mitigation Roles of the Department of Defense” 9-10-**2008** http://www.nss.org/resources/library/planetarydefense/2008-PlanetaryDefense-PotentialMitigationRolesOfTheDepartmentOfDefense.pdf

Earth’s orbit around the sun is a hazardous location**, and our collective safety so far has been pure**ly **a matter of luck.** Despite the image of a pristine “harmony of spheres” that we inherited from the ancients, the solar system is a cosmic shooting gallery filled with leftover debris from planetary formation. This debris, including asteroids and comets, orbits the sun at relative velocities of 11–25 kilometers (km) per second or 10 times faster than a speeding bullet.1 as our planet transits this dangerous ocean, we have established no worldwide security network to warn of or mitigate collisions with space debris. Both a position paper by the American institute for aeronautics and astronautics entitled “Protecting Earth from asteroids and Comets” (2004) and a 2007 planetary-defense conference in Washington, D, examined the issue of finding a home in government for asteroid defense, designating it a top priority.2 this article advocates establishing a lead agency, such as us strategic Command (stratCoM), for handling mitigation procedures, creating lines of communication, and defining planetary-defense policy for the united states and perhaps for the united nations. According to the national aeronautics and space administration (nasa), “Every day, Earth is bombarded with about 25 tons of dust and sand-sized particles. about once a year, an automobile-sized asteroid hits Earth’s atmosphere, creat[ing] an impressive fireball.”3 us missile-warning satellites annually record as many as 30 bolides (meteoroids that detonate in the atmosphere, otherwise known as fireballs), often releasing as much energy as a nuclear blast (see fig. 1, which includes several years of data superimposed over Earth’s surface).4 Composed of ice-rock mixtures, these bolides range in size from a few meters in diameter up to 50–60 meters. it is important to emphasize that objects smaller than 50–60 meters seldom penetrate the entire depth of the atmosphere to create impact disasters.5 however, more massive objects occasionally do so, causing greater concern. We shouldn’t become complacent because even larger objects intersect Earth’s orbit. the surfaces of the moon, Mercury, and Mars show that debris has hit with relative frequency. unlike these heavenly bodies, Earth is an active planet with tectonic and erosion forces that largely obscure impact craters. nevertheless, geologists have now confirmed that asteroids or comets have scarred Earth with 160 craters (fig. 2), and they discover more each year. although we have found impact craters mostly on land (fig. 2), bolides can occur anywhere on our home planet (fig. 1). this article divides potential Earth-impacting asteroids into four categories. Generally, asteroids with a density less than or equal to that of rock and less than .5 km across can cause “local damage,” defined as destruction of an area equivalent to a moderate-sized city, such as Kansas City, Missouri. these “city-killers” would reduce most houses and buildings to rubble, and any combustible material within 8 to 16 km of the impact would burn. debris would scatter for tens of kilometers, possibly causing widespread fires. if the asteroid fell into the ocean, it could produce tsunamis more powerful than the indian ocean earthquake of 2004, leaving thousands dead. based on lunar-cratering studies, local-damage asteroids collide with Earth every 200 to 300 years, on average.6 (other studies indicate every few thousand years. a defined planetary defense would refine such estimates of the danger of impact.)7 a city-killing asteroid hit tunguska, siberia, in 1908, missing Moscow, russia, by only three hours.8 this atmospheric explosion flattened a forested area three times as large as the district of Columbia.9 definitive research published in Nature magazine indicates that the Tunguska bolide had asteroid origins and detonated approximately 10 km above the ground with a force of 10 to 20 megatons of tnt, making it over 1,000 times more powerful than the first atomic weapons.10 asteroids with diameters between .5 and 2 km, known as “nation destroyers,” can create “regional destruction,” wiping out countries such as the united Kingdom or india. having the potential of killing and injuring a substantial portion (up to 25 percent) of the human population, these asteroids could significantly disrupt our modern way of life. asteroids between 2 and 10 km in diameter could cause “global effects” due to impact casualties and debris thrown into the atomsphere. Clouds of ash and dust might circle Earth, devastating crop production for months or even years. they could also induce acid rain, which would pollute fisheries and contaminate farming. the consequent elimination of more than 25 percent of the human population would greatly affect civilization, setting it back several decades. Finally, asteroids more massive than 10 km can become “planet killers,” imparting kinetic energy equivalent to 100 million megatons of tnt—hundreds of times greater than all the nuclear weapons in the world (fig. 3).11 **impacts of this size would destroy the entire ecosystem and cause mass extinctions**. Earth might have suffered a few of these since life began. an impact nearly 65 million years ago that created the Chicxulub crater off the Yucatan peninsula might have eliminated the dinosaurs.12 Zipping near Earth’s orbit, most of these potentially hazardous objects travel in predictable orbits, allowing us to spot them decades in advance. however, we have only begun to comprehend the threat. Comets such as shoemaker-Levy 9 orbit too infrequently for us to characterize them and arrive with very little warning. this particular one hit Jupiter in 1994, raining down approximately 20 fragments several hundred meters in size and delivering several hundred megatons of explosive power per fragment.13 Furthermore, city killers can arrive without warning due to the spotty nature of our current surveillance. one such minimal warning occurred on 18 March 2004, when an asteroid came within 3.4 Earth diameters or 43,000 km from Earth, having been identified only 48 hours prior.14 this distance lies just outside the geostationary orbits of satellites circling our home. since detection efforts began in the mid1990s, nasa and supporting teams (using only ground-based telescopes and a meager budget of $5 million/year) have catalogued over 4,000 near-Earth asteroids (nEa).15 the discovery rate has increased each year during the past decade (fig. 4). We predict that a subset of the total nEas shown in figure 4—potentially hazardous asteroids (Pha)—will come within 750,000 km of our home, less than two times the distance between Earth and the moon. Phas are too massive to burn up in Earth’s atmosphere. as of november 2006, we have detected 843 of them, 700 larger than 1 km and capable of regional destruction.16 no known asteroids target Earth now or for the next several years. however, this information can change rapidly. nobody knows how long Earth will be spared. our planet has not been so fortunate in the past. With 843 Phas and counting, we must seriously consider mitigation options. Rather than debate whether we need planetary defense, we must determine when we will need it. From a policy perspective, we know that at least 843 asteroids prowling our neighborhood could cause local, regional, or global destruction, so we have just begun to understand the total threat. We won’t comprehend its full extent until we overcome the “giggle factor” and stop erroneously ascribing such thinking to science fiction. **We need** to create contingency plans and establish guidelines as **an insurance policy**—a far less expensive proposition than the consequences of suffering a direct hit. Policy Perspectives the good news is that, unlike predicting earthquakes and hurricanes, we can actually see most asteroids and comets arriving years or decades in advance and do something about it. the technology required to avert a catastrophe lies within our reach, at a comparatively modest expenditure. however, no one is in charge, no one owns the problem, and no one has been assigned the mission— not nasa ,airForcespaceCommand(aFsPC), or the department of homeland security(dhs). We have no on-the-shelf contingency plans, tabletop interagency scenarios, interagency memoranda of agreements, standard operating procedures, or hardware available for a mitigation mission. having a decade of advance warning might seem like plenty of time to construct these policies and a mitigation operation, but it isn’t. We would need most of this time to slowly affect the velocity of an asteroid with a low-thrust, high-efficiency tug. reaching a menac38 ing asteroid will take several years of flight time as well. Clearly, we need mission planning, spacecraft development, and testing. Current department of defense (dod) system development and procurement can easily run longer than a decade. the F-22 fighter aircraft alone has taken nearly 25 years to evolve from a list of requirements to initial operating capability.17 asteroids and comets differ significantly. no two are alike. rotation rates will affect docking techniques, and different densities and surface compositions will call for varying deflection tactics. Given a very short time until impact, we may have only one option: use explosives to reduce the inbound asteroid into smaller pieces. however, the efficacy of this approach remains subject to technical debate and might result in several smaller impacts scattered across the globe. Even if each meteoroid piece is small enough to burn up within the atmosphere, no nation wishes to have fireballs redirected to its backyard. before we need these proactive approaches that anticipate such problems, we must research and document them. **Because we may have only one opportunity to evade an NEA, we must be prepared.** Planetary defense may seem an abstract and unreal national security risk. however, it proved quite a serious problem for the dinosaurs, who previously inhabited our planet, and it poses no less a threat today. No matter how remote some people might think the chances of having rocks fall on their heads, they should at least be concerned that no government or dod contingency plan exists to counter an impact or mitigate its consequences.

### Solvency

#### Russia will say no

#### Nartker 4 Mike, Nuclear Threat Initiative ~Western Nations Should Buy Russian Tactical Nuclear Weapons to Reduce Proliferation Risk, Experts Say, July 8, 2004, [http://www.nti.org/gsn/article/western-nations-should-buy-russian-tactical-nuclear-weapons-to-reduce-proliferation-risk-experts-say](http://www.nti.org/gsn/article/western-nations-should-buy-russian-tactical-nuclear-weapons-to-reduce-proliferation-risk-experts-say~~cs)

In Russia, though, the proposal is likely to run into more opposition for a variety of reasons, according to experts. Russia would likely be less interested in direct financial compensation alone in exchange for tactical nuclear weapons due to the improving state of its economy and reduced concerns over the security of its nuclear arsenal, said Mike Jasinski of the University of Georgia’s Center for International Trade and Security. In addition, according to Jasinski, Russia views the possibility of a future arms control agreement on tactical nuclear weapons as a “bargaining chip” with which to obtain concessions from the United States on other issues, such as missile defense and U.S. plans to study new low-yield nuclear weapons (see [GSN](http://www.nti.org/gsn/GSN_20040422_BA93DA3A.php), April 22). “There is a long list of issues that create as much concern and apprehension in Moscow as the TNW [tactical nuclear weapons] issue does in Washington. Therefore, in my view, any proposal aiming at addressing the Russian TNW issue will also have to do something about alleviating Russian concerns,” Jasinski said in a written response to Global Security Newswire. Russia’s continued concerns regarding NATO could also prevent any agreement on reducing tactical nuclear weapons, said Nikolai Sokov of the Monterey Institute for International Studies’ Center for Nonproliferation Studies. He said last week that Russia was unlikely to address the issue until questions of NATO’s future intentions toward Moscow and the current technological and numerical imbalance between Russian forces and those of the alliance were resolved (see [GSN](http://www.nti.org/gsn/GSN_20040407_FF8D87B5.php), April 7). “If Americans are concerned about Russian NSNW [nonstrategic nuclear weapons], why worry? Russian intentions are as benign as those of NATO. I think the relationship as a whole must change if Russia is to change its current stance,” Sokov said in a written response to GSN.

### Terrorism

The risk of nuclear terrorism is vanishingly small --- terrorists must succeed at each of twenty plus stages --- failing at one means zero risk.

Mueller ‘10 (John, Woody Hayes Chair of National Security Studies at the Mershon Center for International Security Studies and a Professor of Political Science at The Ohio State University, A.B. from the University of Chicago, M.A. and Ph.D. @ UCLA, *Atomic Obsession – Nuclear Alarmism from Hiroshima to Al-Qaeda*, Oxford University Press, Accessed @ Emory)

LIKELIHOOD In his thoughtful, influential, and well-argued 2004 book, Nuclear Terrorism: The Ultimate Preventable Catastrophe—a work Nicholas Kristof of the New York Times finds "terrifying"—Graham Allison relayed his "considered judgment" that "on the current path, a nuclear terrorist attack on America in the decade ahead is more likely than not." He repeated that judgment in an article published two years later—albeit without reducing the terminal interval to compensate—and he had presumably relied on the same inspira-tional mechanism in 1995 to predict: "In the absence of a determined program of action, we have every reason to anticipate acts of nuclear terrorism against American targets before this decade is out."1 He has quite a bit of company in his perpetually alarming conclusions. In 2003, UN Ambassador John Negroponte judged there to be a "a high probability" that w&Jjjn two years al-Qaeda would attempt an attack using a nuclear or other weapon of mass destruction. When some 85 foreign policy experts were polled by -Senator Richard Lugar in 2004 and 2005, they concluded on aver-age that there was a 29 percent likelihood a nuclear explosion would occur somewhere in the world within the next ten years, and they overwhelmingly anticipated that this would likely be carried out by terrorists, not by a government. And in 2007, physicist Richard Garwin put the likelihood of a nuclear explosion on an American or European city by terrorist or other means at 20 percent per year, which would work out to 87 percent over a ten-year period.2 In late 2008, after working for six months and interviewing more than 250 people, a congressionally mandated task force, the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism (possibly known as COPWOMDPAT to its friends) issued its report, portentously entitled World at Risk. It led by expressing the belief that "unless the world community acts decisively and with great urgency, it is more likely than not that a weapon of mass destruction will be used in a terrorist attack somewhere in the world by the end of 2013." Although the report is careful to reassure its readers that it does not intend to frighten them about the current state of terrorism and weapons of mass destruction, it failed miserably in that admirable goal almost immediately. Representative Ellen Tauscher (D-Calif.), chairwoman of the Strategic Forces Subcommittee of the House Armed Services Committee, proclaimed shortly after the report was issued, that it "scared the pants off of most of us."3 In its dire forecast, the report's phraseology echoes, of course, Allison's formulation of 2004, and this may owe something to the fact that he was one of the commission's nine members. There are a couple of differences, however. In Allison's earlier rendering, bad things happen only if we stay on "the current path." Thus, should bad things fail to occur, this happy result could be taken as proof that we somehow managed somewhere along the line to alter our path, and who, pray, will be able exactly to designate what a "current path" actually is (or was)? The commission, in stark contrast, claims bad things are likely to happen "unless the world community acts decisively and with great urgency" something, experience suggests, that is next to impossible. On the other hand, the commission artfully broadens its definition of bad things from Allison's "acts of nuclear terrorism against American targets" to the use of a "weapon of mass destruction" by terrorists "some-where in the world." As one critic points out, there is certainly a good chance that someone somewhere will release some germs, killing few, if any, or, as insurgents have done in Iraq, ineffectually lace the occasional bomb with chlorine. Although no normal person would consider either act to constitute "mass destruction," the report can, strictly speaking, claim vindication. Actually, the report is on even safer ground. A man in Rockford, Illinois, who purchased some bogus hand grenades from an FBI informant with the intent to detonate them at a local shopping mall, has been convicted of attempting to use weapons of mass destruction under laws that creatively define hand grenades to be weapons of mass destruction.4 Even those who decidedly disagree with such scary-sounding, if somewhat elusive, prognostications about nuclear terrorism often come out seeming like they more or less agree. In his Atomic Bazaar, William Langewiesche spends a great deal of time and effort assessing the process by means of which a terrorist group could come up with a bomb. Unlike Allison—and, for that matter, the considerable bulk of accepted opinion—he concludes that it "remains very, very unlikely. It's a possibility, but unlikely." Also: The best information is that no one has gotten anywhere near this. I mean, if you look carefully and practically at this process, you see that it is an enormous undertaking full of risks for the would-be terrorists. And so far there is no public case, at least known, of any appreciable amount of weapons-grade HEU [highly enriched uranium] disappearing. And that's the first step. If you don't have that, you don't have anything. The first of these bold and unconventional declarations comes from a book discussion telecast in June 2007 on C-SPAN and the second from an inter-view on National Public Radio. Judgments in the book itself, however, while consistent with such conclusions, are expressed more ambiguously, even coyly: "at the extreme is the possibility, entirely real, that one or two nuclear weapons will pass into the hands of the new stateless guerrillas, the jihad-ists, who offer none of the retaliatory targets that have so far underlain the nuclear peace" or "if a would-be nuclear terrorist calculated the odds, he would have to admit that they are stacked against^ffen," but they are "not impossible."5 The previous chapter arrayed a lengthy set of obstacles confront-: v ,„ ing the would-be atomic terrorist—often making use in the process of Langewlesche's excellent reporting. Those who warn about the likelihood of a terrorist bomb contend that a terrorist group could, if often with great difficulty, surmount each obstacle—that doing so in each case is, in Langewiesche's phrase, "not impossible."6 But it is vital to point out that, while it may be "not impossible" to surmount each individual step, the likelihood that a group could surmount a series of them could quickly approach impossibility. If the odds are "stacked against" the terrorists, what are they? Lange-wiesche's discussion, as well as other material, helps us evaluate the many ways such a quest—in his words, "an enormous undertaking full of risks"— could fail. The odds, indeed, are stacked against the terrorists, perhaps massively so. In fact, the likelihood a terrorist group will come up with an atomic bomb seems to be *vanishingly small*. ARRAYING THE BARRIERS Assuming terrorists have some desire for the bomb (an assumption ques-tioned in the next chapter), fulfillment of that desire is obviously another matter. Even the very alarmed Matthew Bunn and Anthony Wier contend that the atomic terrorists' task "would clearly be among the most difficult types of attack to carry out" or "one of the most difficult missions a terrorist group could hope to try" But, stresses the CIA's George Tenet, a terrorist atomic bomb is "possible" or "not beyond the realm of possibility." In his excellent discussion of the issue, Michael Levi ably catalogues a wide array of difficulties confronting the would-be atomic terrorist, adroitly points out that "terrorists must succeed at every stage, but the defense needs to succeed only once," sensibly warns against preoccupation with worst-case scenarios, and pointedly formulates "Murphy's Law of Nuclear Terrorism: What can go wrong might go wrong." Nevertheless, he holds nuclear terrorism to be a "genuine possibility," and concludes that a good defensive strategy can merely "tilt the odds in our favor."7 Accordingly, it might be useful to take a stab at estimating just how "difficult" or "not impossible" the atomic terrorists' task, in aggregate, is— that is, how far from the fringe of the "realm of possibility" it might be, how "genuine" the possibilities are, how tilted the odds actually are. After all, lots of things are "not impossible." It is "not impossible" that those legendary monkeys with typewriters could eventually output Shakespeare.8 Or it is "not impossible"—that is, there is a "genuine possibility"—that a colliding meteor or comet could destroy the earth, that Vladimir Putin or the British could decide one morning to launch a few nuclear weapons at Ohio, that an underwater volcano could erupt to cause a civilization-ending tidal wave, or that Osama bin Laden could convert to Judaism, declare himself to be the Messiah, and fly in a gaggle of mafioso hit men from Rome to have himself publicly crucified.9 As suggested, most discussions of atomic terrorism deal in a rather piecemeal fashion with the subject—focusing separately on individual tasks such as procuring HEU or assembling a device or transporting it. However, as the Gilmore Commission, a special advisory panel to the president and Congress, stresses, setting off a nuclear device capable of producing mass destruction presents "Herculean challenges," requiring that a whole series of steps be accomplished: obtaining enough fissile material, designing a weapon "that will bring that mass together in a tiny fraction of a second" and figuring out some way to deliver the thing. And it emphasizes that these merely constitute "the minimum requirements." If each is not fully met, the result is not simply a less powerful weapon, but one that can't produce any significant nuclear yield at all or can't be delivered.10 Following this perspective, an approach that seems appropriate is to catalogue the barriers that must be overcome by a terrorist group in order to carry out the task of producing, transporting, and then successfully detonating an improvised nuclear device, an explosive that, as Allison acknowledges, would be "large, cumbersome, unsafe, unreliable, unpredictable, and inefficient." Table 13.1 attempts to do this, and it arrays some 20 of these— all of which must be surmounted by the atomic aspirant. Actually, it would be quite possible to come up with a longer list: in the interests of keeping the catalogue of hurdles down to a reasonable number, some of the entries are actually collections of tasks and could be divided into two or three or more. For example, number 5 on the list requires that heisted highly enriched uranium be neither a scam nor part of a sting nor of inadequate quality due to insider incompetence, but this hurdle could as readily be rendered as three separate ones. In contemplating the task before them, woixftlsbe atomic terrorists effectively must go through an exercise that looks much like this. If and when they do so, they are likely to find the prospects daunting and accordingly uninspiring or even terminally dispiriting. "

#### No impact to terror

Mueller and Stewart 12 [John Mueller is Senior Research Scientist at the Mershon Center for International Security Studies and Adjunct Professor in the Department of Political Science, both at Ohio State University, and Senior Fellow at the Cato Institute in Washington, D.C. Mark G. Stewart is Australian Research Council Professorial Fellow and Professor and Director at the Centre for Infrastructure Performance and Reliability at the University of Newcastle in Australia, “The Terrorism Delusion”, International Security, Vol. 37, No. 1 (Summer 2012), pp. 81–110, Chetan]

It seems increasingly likely that the official and popular reaction to the terrorist attacks of September 11, 2001, has been substantially deluded—massively disproportionate to the threat that al-Qaida has ever actually presented either as an international menace or as an inspiration or model to homegrown amateurs. Applying the extensive datasets on terrorism that have been generated over the last decades, we conclude that the chances of an American perishing at the hands of a terrorist at present rates is one in 3.5 million per year—well within the range of what risk analysts hold to be “acceptable risk.”40 Yet, despite the importance of responsibly communicating risk and despite the costs of irresponsible fearmongering, just about the only official who has ever openly put the threat presented by terrorism in some sort of context is New York’s Mayor Michael Bloomberg, who in 2007 pointed out that people should “get a life” and that they have a greater chance of being hit by lightning than of being a victim of terrorism—an observation that may be a bit off the mark but is roughly accurate.41 (It might be noted that, despite this unorthodox outburst, Bloomberg still managed to be re-elected two years later.) Indeed, much of the reaction to the September 11 attacks calls to mind Hans Christian Andersen’s fable of delusion, “The Emperor’s New Clothes,” in which con artists convince the emperor’s court that they can weave stuffs of the most beautiful colors and elaborate patterns from the delicate silk and purest gold thread they are given. These stuffs, they further convincingly explain, have the property of remaining invisible to anyone who is unusually stupid or unfit for office. The emperor finds this quite appealing because not only will he have splendid new clothes, but he will be able to discover which of his officials are unfit for their posts—or in today’s terms, have lost their effectiveness. His courtiers, then, have great professional incentive to proclaim the stuffs on the loom to be absolutely magnificent even while mentally justifying this conclusion with the equivalent of “absence of evidence is not evidence of absence.” Unlike the emperor’s new clothes, terrorism does of course exist. Much of the reaction to the threat, however, has a distinctly delusionary quality. In Carle’s view, for example, the CIA has been “spinning in self-referential circles” in which “our premises were flawed, our facts used to fit our premises, our premises determined, and our fears justified our operational actions, in a self-contained process that arrived at a conclusion dramatically at odds with the facts.” The process “projected evil actions where there was, more often, muddled indirect and unavoidable complicity, or not much at all.” These “delusional ratiocinations,” he further observes, “were all sincerely, ardently held to have constituted a rigorous, rational process to identify terrorist threats” in which “the avalanche of reporting confirms its validity by its quantity,” in which there is a tendency to “reject incongruous or contradictory facts as erroneous, because they do not conform to accepted reality,” and in which potential dissenters are not-so-subtly reminded of career dangers: “Say what you want at meetings. It’s your decision. But you are doing yourself no favors.”42 Consider in this context the alarming and profoundly imaginary estimates of U.S. intelligence agencies in the year after the September 11 attacks that the number of trained al-Qaida operatives in the United States was between 2,000 and 5,000.43 Terrorist cells, they told reporters, were “embedded in most U.S. cities with sizable Islamic communities,” usually in the “run-down sections,” and were “up and active” because electronic intercepts had found some of them to be “talking to each other.”44 Another account relayed the view of “experts” that Osama bin Laden was ready to unleash an “11,000 strong terrorist army” operating in more than sixty countries “controlled by a Mr. Big who is based in Europe,” but that intelligence had “no idea where thousands of these men are.”45 Similarly, FBI Director Robert Mueller assured the Senate Intelligence Committee on February 11, 2003, that, although his agency had yet to identify even one al-Qaida cell in the United States, “I remain very concerned about what we are not seeing,” a sentence rendered in bold lettering in his prepared text. Moreover, he claimed that such unidentified entities presented “the greatest threat,” had “developed a support infrastructure” in the country, and had achieved both the “ability” and the “intent” to inflict “signi ficant casualties in the US with little warning.”46 Over the course of time, such essentially delusionary thinking has been internalized and institutionalized in a great many ways. For example, an extrapolation of delusionary proportions is evident in the common observation that, because terrorists were able, mostly by thuggish means, to crash airplanes into buildings, they might therefore be able to construct a nuclear bomb. Brian Jenkins has run an internet search to discover how often variants of the term “al-Qaida” appeared within ten words of “nuclear.” There were only seven hits in 1999 and eleven in 2000, but the number soared to 1,742 in 2001 and to 2,931 in 2002.47 By 2008, Defense Secretary Robert Gates was assuring a congressional committee that what keeps every senior government leader awake at night is “the thought of a terrorist ending up with a weapon of mass destruction, especially nuclear.”48 Few of the sleepless, it seems, found much solace in the fact that an al-Qaida computer seized in Afghanistan in 2001 indicated that the group’s budget for research on weapons of mass destruction (almost all of it focused on primitive chemical weapons work) was $2,000 to $4,000.49 In the wake of the killing of Osama bin Laden, officials now have many more al-Qaida computers, and nothing in their content appears to suggest that the group had the time or inclination, let alone the money, to set up and staff a uranium-seizing operation, as well as a fancy, super-high-technology facility to fabricate a bomb. This is a process that requires trusting corrupted foreign collaborators and other criminals, obtaining and transporting highly guarded material, setting up a machine shop staffed with top scientists and technicians, and rolling the heavy, cumbersome, and untested finished product into position to be detonated by a skilled crew—all while attracting no attention from outsiders.50 If the miscreants in the American cases have been unable to create and set off even the simplest conventional bombs, it stands to reason that none of them were very close to creating, or having anything to do with, nuclear weapons—or for that matter biological, radiological, or chemical ones. In fact, with perhaps one exception, none seems to have even dreamed of the prospect; and the exception is José Padilla (case 2), who apparently mused at one point about creating a dirty bomb—a device that would disperse radiation—or even possibly an atomic one. His idea about isotope separation was to put uranium into a pail and then to make himself into a human centrifuge by swinging the pail around in great arcs.51 Even if a weapon were made abroad and then brought into the United States, its detonation would require individuals in-country with the capacity to receive and handle the complicated weapons and then to set them off. Thus far, the talent pool appears, to put mildly, very thin.

**Russian nuclear security has been and will continue to be top notch---zero risk of theft.**

**Frost ‘5** (Robin, Professor of Political Science @ Simon Fraser University, British Colombia, *Nuclear Terrorism after 9/11*, Adelphi Papers)

The NIC’s 2004 report also addressed the security of nuclear warheads in general: ‘All nuclear weapons storage sites, except those subordinate to the strategic missile troops, fall under the 12th GUMO’s responsibility, thus facilitating a uniform policy in matters of operation and physical security. In peacetime all nuclear munitions except those on ICBMs and SLBMs on alert status are stored in nuclear weapons storage sites. The Russians employ a multi-layered approach that includes physical, procedural, and technical measures to secure their weapons.’ Globalsecurity.org describes the security around nuclear weapons under the control of the 12th GUMO in similar terms to the NIC: ‘The system for the protection of nuclear munitions is echeloned and generally extremely reliable. Access to them is multilayered, and it is virtually impossible for unauthorized individual [sic] to gain access to the warheads. The transport of nuclear munitions is also properly organized. Special security units are in a high state of readiness to thwart any attempt to seize them. To date there has not been a single loss from the nuclear arsenals.’ Clearly, nuclear weapons are not ‘strewn across Russia’, nor are they ‘scattered throughout’ the country.

**Russian nuclear security is strong---empirically proven.**

**Frost ‘5** (Robin, Professor of Political Science @ Simon Fraser University, British Colombia, *Nuclear Terrorism after 9/11*, Adelphi Papers)

Russian nuclear weapons. Russian nuclear weapons appear to be under the generally good control of élite troops. There is no evidence in open-source material that a single nuclear warhead, from any national arsenal or another source, has ever made its way into the world's illegal arms bazaars, let alone into terrorist hands. No actual or aspiring nuclear-weapon state has ever claimed to have nuclear weapons without also having all of the technical infrastructure necessary to produce them ab initio, although they could, if the ‘loose nukes’ arguments were sound, easily have bought a few on the black market. Even the extravagant sums sometimes mentioned as the alleged asking price for stolen weapons would be tiny fractions of the amount required to develop an indigenous nuclear-weapon capability, yet circumstances seem to have compelled states to choose the more expensive course.

**Difficulty in terrorist acquisition of weapons or material from Russia is extreme.**

**Kamp ‘96** (Karl-Heinz, Heads the Foreign and Security Policy Section of the Konrad-Adenauer-Stiftung in Sankt Agustin, Bulletin of the Atomic Scientists, July)

Well, maybe. But it must be noted that the military organizations responsible for nuclear weapon security in the former Soviet Union have proven more reliable than feared a few years ago. There has been no illegal passing on of complete nuclear weapons or key components. And none of the reports about the marketing of ex-Soviet nuclear materials has involved critical items taken from weapon stocks. There seem to be two decisive reasons for the stability of the ex-Soviet nuclear weapons sector, particularly in Russia. First, even if Russian leaders did not take Western fears about nuclear-weapon security seriously, they would still be concerned about the risks that uncontrolled nuclear proliferation could pose to their own country. As far as possible, resources have been channeled into the nuclear armed forces sector to guarantee its workability. Soldiers in this sector are better paid and facilities have been better maintained than in other areas. Second, the military's nuclear elites have met very high standards in the past. It is hard to imagine that nuclear units trained during the Soviet era would neglect their tasks under hostile conditions and abuse the goods placed under their command. It would be extremely difficult for terrorists to steal complete nuclear weapons from depots or to obtain them with the help of security personnel. Of course, there is no guarantee that the current stability in the military nuclear sector will continue in the indefinite future.

Al Qaeda is the only organization that could has interest in nuclear weapons --- they do not want to.

Mueller ‘10 (John, Woody Hayes Chair of National Security Studies at the Mershon Center for International Security Studies and a Professor of Political Science at The Ohio State University, A.B. from the University of Chicago, M.A. and Ph.D. @ UCLA, *Atomic Obsession – Nuclear Alarmism from Hiroshima to Al-Qaeda*, Oxford University Press, Accessed @ Emory)

PROGRESS AND INTEREST The degree to which al-Qaeda has pursued, or even has much interest in, a nuclear weapons program may have been exaggerated— often by the same people who so alarmingly warned us about Saddam Hussein's nonexistent WMD development. Al-Qaeda and its potential atomic capacity are the central concerns here because it "is the only Islamic terrorist organization that targets the U.S. homeland," as stressed by Glenn Carle, 23-year veteran of the Central Intelligence Agency, where he was deputy national intelligence officer for transnational threats.1 Somewhat more broadly, Middle East specialist Fawaz Gerges points out that, over time, mainstream Islamists—the vast majority within the Islamist political movement—have given up on the use of force. That is, the jihadist who are still willing to apply violence constitute a tiny minority. But he also notes that the vast majority even of this small group primarily focuses on various infidel Muslim regimes (as well as on Israel) and consider those among men who carry-out violence against the "far enemy"—mainly Europe and the \* United States—to be irresponsible and reckless adventurers who endanger the survival of the whole movement.2 Al-Qaeda, then, is a fringe group of a fringe group. Some other terrorist organization or a millennial one, either within the country or without, could in the future generate designs to harm the United States directly. But for now, certainly, al-Qaeda stands essentially alone. There is some occasional evidence to indicate that the group might have some interest in atomic weapons, but this is limited and often ambiguous. The same can said about evidence that it has actively sought to achieve an atomic capacity. This chapter evaluates that evidence.

Terrorist nuclear use would not kill massively less than a million people.

Mueller ‘10 (John, Woody Hayes Chair of National Security Studies at the Mershon Center for International Security Studies and a Professor of Political Science at The Ohio State University, A.B. from the University of Chicago, M.A. and Ph.D. @ UCLA, *Atomic Obsession – Nuclear Alarmism from Hiroshima to Al-Qaeda*, Oxford University Press, Accessed @ Emory)

In the ensuing decades, massiveexaggerations of the physical effects of nuclear weapons have been very much **the rule**. Words like "liquidate," "annihilate," and "vaporize," not to mention "Armageddon" and "apocalypse," have been commonly applied in scenarios where those sorts of extreme characterizations are simply not sound. As with Oppenheimer in 1946, it remains a massive overstatement to confidently insist, as the prominent foreign policy analyst Joseph Cirincione docs today, that "a nuclear 9/11 would destroy an entire city," or to conclude with Robert Gallucci that a single terrorist atom bomb would be capable of “obliterating a large portion of a city." Nor is it correct to casually assert, as journalist Lawrence Scott Sheets does, that an atomic bomb of the size exploded at Hiroshima (or smaller) could, in the hands of terrorists, "kill millions of people."" And defense analyst Brian Jenkins is (presumably knowingly) engaging in rather extravagant hyperbole when he says that America's "awesome nuclear arsenal" during the cold war could have "destroyed the planet." But his auditors are likely to take him literally, and they are likely to do so as well for Cirincione when he asserts that the world's remain-arsenal of 26,000 nuclear weapons is enough "to destroy the planet several times over." By contrast, as one physicist points out, "the largest bomb that has ever been exploded anywhere was sixty megatons, and that is **one-thousandth the force** of an earthquake, one-thousandth the force of a hurricane."

### Relations

#### Kerry solves now

**Gvosdev 3/1**/13 - Former editor of the National Interest & Currently on the faculty of the U.S. Naval War College. Nikolas Gvosdev, “The Realist Prism: Can Kerry Salvage the Russia Reset?,” 01 Mar 2013, pg. http://www.worldpoliticsreview.com/articles/12756/the-realist-prism-can-kerry-salvage-the-russia-reset

U.S. Secretary of State John Kerry and Russian Foreign Minister Sergei Lavrov [had what sources are describing as constructive talks](http://english.ruvr.ru/2013_02_27/106295330/) in their first face-to-face meeting in Berlin since Kerry was confirmed as Hillary Clinton's replacement. While there were no major breakthroughs on any of the contentious issues in the U.S.-Russia bilateral relationship, the two men seemed to establish the basis for a good working relationship. This will be important if any vestige of the Obama administration's reset of relations with Russia is to endure, given the lack of any strong personal connection between Russian President Vladimir Putin and U.S. President Barack Obama. Indeed, Obama is not scheduled to even meet with Putin until September, and then only in the context of the St. Petersburg G-20 summit. Given that there is "no program for a new reset," [in the words of Alexey Pushkov](http://rt.com/politics/obama-putin-us-russia-reset-pushkov-236/), the head of the foreign relations committee of the Duma, it will be up to Kerry and Lavrov to keep up the old program.  
There are some indications that cautious optimism may be in order. From his time as chairman of the Senate Foreign Relations Committee, Kerry has been a strong proponent of diplomatic engagement. He is known as someone who enjoys the art of negotiation -- of finding a way to a deal. In assessing his voting record in the Senate, China's People's Daily concluded that the new secretary of state [puts more of an emphasis](http://www.washingtonpost.com/blogs/worldviews/wp/2013/02/27/china-is-happy-with-john-kerry-because-it-thinks-hell-drop-the-pivot-to-asia/) "on coordination rather than confrontation in foreign relations.” Kerry's strong advocacy of the New START agreement in the Senate was appreciated in Moscow, where he was seen, in contrast to many other U.S. legislators, as someone who was interested in pursuing better relations with Russia. Kerry has also been measured in his language and tone. While he has never shied away from defending U.S. interests or advancing American values, he has tended to be moderate in his rhetoric and willing to engage in dialogue rather than sermonizing.  
 This latter point is important given the Russian perception that Clinton, during her tenure as secretary of state, was more willing to take a public hard line when disagreements arose with Moscow. Putin himself "dueled" with Clinton on several occasions, beginning with the aftermath of the 2011 Duma elections, when Putin blamed the rise of a protest movement on Clinton [having sent a “signal"](http://www.nytimes.com/2011/12/09/world/europe/putin-accuses-clinton-of-instigating-russian-protests.html?_r=0) to disaffected elements inside Russia. In one of her last major speeches as secretary, Clinton took aim squarely at a foreign policy project that is near and dear to Putin, the proposal to create a "Eurasian Union" linking Russia with some of the other post-Soviet states, [describing it as an attempt to re-Sovietize the region](http://www.worldpoliticsreview.com/articles/12569/the-realist-prism-u-s-stance-on-eurasian-union-threatens-russia-reset) and pledging that America would take steps to prevent this project from coming to fruition. In addition, Clinton and U.N. Ambassador Susan Rice were not shy about publicly condemning what they saw as Russia's active support for the regime of Bashar al-Assad in Syria. In the aftermath of public criticism from Clinton, Lavrov [frequently characterized her position as "disrespectful"](http://english.ruvr.ru/2011/12/07/61775269.html) and intimated that her harder line on Russia was designed to "woo her voters and those of the Democratic Party" by displaying the requisite degree of toughness with Moscow.  
 A number of observers have commented on the positive atmosphere following the first direct encounter between Kerry and Lavrov [as a hopeful sign](http://rt.com/op-edge/moscow-washington-kerry-lavrov-reset-543/) that the two can successfully mediate the irritants in the bilateral relationship. What will be interesting to see is whether there will be renewed efforts to narrow the gaps between Moscow and Washington on a number of issues.

#### US and Russia will always have a partnership, never an alliance --- we’ll cooperate when there are mutual interests, but fundamental differences prevent broad-scale coordination.

Igor Zevelev, 3/27/2012. Director of the Russian Office at the John D. and Catherine T.  MacArthur Foundation. “Russian-American relations: Resetting the Reset,” Valdai Club (RIA Novosti), http://valdaiclub.com/usa/40440.html.

Dr. Zevelev, can Russia and the United States break their vicious cycle in their bilateral relationship and at least achieve stability without confrontation in their cooperation?  
I think that the main difficulty in Russian-American relations is that **the overall international goals of the two countries' foreign policies are not very compatible**. This doesn't mean that they have to confront each other on every single issue in global politics. They can be partners in many areas, be it Afghanistan, Iran or North Korea. However, Russia will probably be a very difficult partner for the United States and other Western states, for that matter. And Moscow has repeatedly expressed its displeasure, **not with concrete American or European policies, but with the whole system** of international relations dominated by the West led by the United States. At the beginning of the 21st century the United States is still a superpower, but it is a superpower facing competition from beyond its borders, as well as internal difficulties. And Russia actually is one of the leading forces in the opposition to U.S. global dominance. Russia does not recognize unconditional American leadership. It insists on its own status of great power, or as an influential center of a multipolar world, as Russian foreign policy documents say. So, a true Russian-American partnership is possible, and they can cooperate in concrete areas. However, these overall goals that I just described make this partnership difficult.  
But can we, in the long run, become allies of a kind, and base our cooperation on an alliance? Is this possible?

There were probably two periods in history when the United States and Russia were true allies.  First, during World War II, and second, in 2001-2002, in concrete areas of combating international terrorism. To be a true ally, you probably need to have a common threat. And I do not see such a common threat at this moment. So I would not describe a desirable relationship between the United States and Russia as an alliance. I would call it a partnership.

#### Putin’s anti-American rhetoric is self-reinforcing and prevents cooperation.

Ambassador Richard S. Williamson, 2/28/2012. Principal at Salisbury Strategies, LLP, and a senior fellow at the Chicago Council on Global Affairs. “Time to Reset Obama’s Reset Policy,” The American, http://www.american.com/archive/2012/february/time-to-reset-obamas-reset-policy.

Throughout this political drama, Putin and his colleagues have increased their anti-American rhetoric. Repeatedly, Putin and others have blamed outsiders, and particularly the United States, for stirring up unrest and seeking to destabilize Russia. Following the December protests, Putin accused Secretary of State Hillary Clinton of sending a signal to the demonstrators to protest the election. And in February, when Putin’s spokesman was asked whether American money was being used to support the protests, Dmitry Peskov replied, “I don’t believe it, I know it.” And since the January arrival of the new American ambassador to Russia, Mike McFaul, the anti-American rhetoric has escalated at an alarming rate. Mikhail Leontyev, a commentator on Russian state TV, said McFaul was close to U.S. intelligence services. Others have said McFaul has been sent to Moscow to foment an Orange Revolution in Russia. Moscow’s TV Channel One reported at length on a reception McFaul had for Russian civil society leaders. Under the screen, the caption read, “US Embassy: Receiving instructions from the new Ambassador” while the names of opposition politicians were read out. Ruling party legislators have said any legislator entering the U.S. embassy is a traitor. Some commentators say this heated anti-American rhetoric is merely a campaign tactic. They say the ruling party wants to cultivate the idea that Russia is besieged and Putin is their savior. The narrative is that the United States is trying to weaken Russia and push it back into chaos. Political analyst Dmitry Oreshkin says, “Putin revived the Soviet-era argument. We are poor because we are surrounded by enemies. That serves as an explanation for the economic inefficiency and an argument against a leadership change.” Even if such outrageous charges are just political tactics, they reveal a disturbing mindset reminiscent of the Soviet-era KGB. And **such rhetoric does have consequences**. “(The Russian) people have been poisoned by television, and many sincerely believe in U.S. aggressive intentions,” said Russian political analyst Alexander Konovalov. “The focus now is on showing the domestic audience that (Putin) doesn’t fear standing up to the United States.” Boris Nemtsov, an opposition leader, has observed that Putin is “posturing as a defender against American expansion and the guarantor of stability … Television is ramming through thoughts about American spies and the paid protesters.”

Putin’s experience with Bush undermined trust and there is also no agenda for cooperation anyway.

Fyodor Lukyanov, 3/15/2012. Editor-in-Chief of the Russia in Global Affairs journal, senior member of the Council on Foreign and Defense Policy and a member of the Presidential Council on Human Rights and Civic Society Institutions. “Uncertain World: Russia - U.S. - Back to Business?” RIA Novosti, <http://en.ria.ru/columnists/20120315/172192064.html>.

Putin’s guarded and mistrustful attitude to the United States is common knowledge, and he makes no attempt to conceal it. The reasons for it lie not in his record during the Cold War, as many often claim, but in his experience in dealing with the George W. Bush administration during its first and, particularly, second term. Whether fair or not, Putin has come to the conclusion that a gentlemen’s agreement is not possible with the United States. He thinks Bush responded with base ingratitude to Moscow’s positive gestures more than once – from its support during 9/11 and the subsequent war on terror, to its voluntary closing of military facilities in Vietnam and Cuba. Putin believes that these gestures were met with aggressive efforts of the United States to bolster its presence in the post-Soviet space, expand NATO, and deploy missile defense systems on Polish and Czech territory, to name a few. As a result, Putin has come to the conclusion that agreements with the United States are possible but only following tough and uncompromising bargaining, as was the case with the New START treaty and Russia’s accession to the WTO. However, **the bigger problem is that the new governments** (and meaningful talks are not possible earlier than next spring when the presidential election is over in the United States as well) **do not have a clear-cut positive agenda**. They have carried through the reset. Now they are facing the same old issues: Afghanistan and Iran. The former is simpler: the organized withdrawal of U.S. troops and maintaining relative stability there is in the interests of all parties. This should not create any special problems. The situation around Iran strongly depends on numerous external factors. Moscow and Washington will discuss both issues, but they can hardly form the basis of a new bilateral agenda. The first obstacle the new leaders will face will be the same old story of missile defense. Putin dealt with this issue during his previous presidency, when he made proposals to Bush. He does not intend to give up now. A compromise is hardly possible because missile defense is a matter of principle for both sides. Russia insists that the United States plan is a threat to its security whereas the United States is confident of its right to move forward regardless of any country’s response. The potential for conflict is obviously strong. Moscow acknowledges that as long as the principle of strategic stability – Mutual Assured Destruction (MAD) – remains, missile defense talks will be stuck in an impasse. But there does not appear to be any other principle that would suit both sides. There is nothing else to discuss. There will be no opportunity to maintain dialogue by negotiating nuclear arms cuts again. First, Russia believes further reductions would diminish its defensive capabilities. After all, Moscow has to consider other factors as well, such as China, which is gradually building up its military strength. Second, even if Russia and the United States decide to resume talks on this issue, this is not a full-scale agenda of the 21st century. For the time being the sides are surviving on table scraps from the 20th century, but they are almost all gone.

**Single disputes don’t spill over -- Georgia proves.**

**Blank, ‘9**

[Stephen J., Professor of Research – Strategic Studies Institute, “Prospects for US-Russian Security Cooperation”, March, http://www.strategicstudiesinstitute.army.mil/pdffiles/PUB892.pdf]

Many might argue that this is a singularly inauspicious time to assess the prospects for U.S.- Russian security cooperation. Arguably, the prospects for bilateral cooperation lay buried under the wheels of Russia’s invasion of Georgia in August 2008. As Vice-President Richard Cheney has said to Georgian President Mikhail Saakashvili, “Russian aggression must not go unanswered,” and that “its continuation would have serious consequences for its relations with the United States.”1 Undoubtedly this invasion will have repercussions across the broad bilateral agenda, most of all insofar as regional security in the Caucasus is concerned. But ultimately, given their power, standing, and nuclear capability, dialogue and cooperation will be resumed at some point in the future. Therefore, an analysis of the prospects for and conditions favoring such cooperation is an urgent and important task that cries out for clarification precisely because current U.S.-Russian relations are so difficult. Russia, despite claims made for and against its importance, remains, by any objective standard, a key player in world affairs. It possesses this standing by virtue of its geographical location, Eurasia, its proximity to multiple centers of international tension and rivalry, its possession of a large conventional and nuclear force, its energy assets, and its seat on the UN Security Council. Beyond those attributes, it is an important barometer of trends in world politics, e.g., the course of democratization in the world. Furthermore, if Russia were so disposed, it could be the abettor and/or supporter of a host of negative trends in the world today. Indeed, some American elites might argue that it already is doing so. Even so, if U.S. policymakers and analysts see Russia more as a spoiler than as a constructive partner (whether rightly or wrongly), the fact remains that during the Cold War the Soviet Union was an active supporter of threats to world order such as international terrorism, and carried on a global arms race with the West. We negotiated productively with it on issues like arms control and proliferation.2 Today, no matter how bad Russo-American or East-West relations may be, no such threats are present or immediately discernible on the horizon.

#### No relations collapse -- both sides will maintain cooperation.

**Sestanovich, ‘8**

[Stephen, Kathryn and Shelby Cullom Davis Professor of International Diplomacy at Columbia University and George F. Kennan Senior Fellow for Russian and Eurasian Studies at the Council on Foreign Relations; Ambassador-at-Large for the former Soviet Union from 1997 to 200November/December. “What Has Moscow Done?” Foreign Affairs, Vol. 87, Iss. 6, Nov/Dec 2008]

Against this backdrop, Russia's invasion of a small neighbor might have seemed to be final confirmation of the view that Russia has become, in the words of the British economist Robert Skidelsky, "the world's foremost revisionist power." And yet, for all the recent references to the Sudetenland and the crushing of the Prague Spring, Western governments have made clear that such parallels will not guide their response. Government officials and pundits alike have been coupling their denunciations of Moscow with assurances that they want to work with it in advancing common interests, whether on nuclear proliferation, terrorism, energy security, drug trafficking, or climate change. The more these issues are invoked, the less one should expect U.S. policy toward Russia to change. Harry Truman, it might be recalled, did not usually speak of his determination to work with Joseph Stalin. For two decades, the idea that the United States needs Russia for practical reasons has led Washington, even in moments of shock and confusion over Russia's actions, to want to keep relations with Russia from becoming any worse than necessary. Although U.S. policymakers have considered Moscow a high-maintenance partner with whom getting to yes is extremely frustrating and sometimes almost hopeless, they have never been ready to give up on the effort. Even Russia's war with Georgia has not changed this outlook, and for the foreseeable future probably nothing will.

#### Russia won’t lash out against the US --- domestic problems

**Washington Post 11** – March 13, “Increase in oil revenue amid unrest in Arab world gives Russia some breathing room” <http://www.washingtonpost.com/wp-dyn/content/article/2011/03/10/AR2011031005961.html>

Russia is currently the world's largest oil producer. When the price last spiked, in 2007, Moscow was flooded with money and people close to Putin were suggesting that Russia was genuinely self-sufficient and had no need to engage more deeply with the West. The economic crisis the following year brought that talk to an abrupt end, and Medvedev began pushing for a Western-oriented program of modernization and diversification away from dependence on energy exports. The Kremlin moved to stimulate the economy in 2008 by increasing government salaries and hiking pensions by 35 percent. Now it is stuck with those increases. With oil revenue providing 40 percent of the Russian budget, the Gaidar Institute for Economic Policy here has calculated that at any price less than $105 a barrel the government will be in the red. That tempers any inclination toward hubris, said Daniel Treisman, a political scientist at UCLA who follows Russian developments. The Kremlin was looking at a difficult financial crunch, with parliamentary elections coming late this year and a presidential election next March, so the timing of this rise in revenue is more a relief than a goad to aggressive behavior. "We don't need high prices," said Leonid Grigoriev, an economist and former World Bank adviser. "We need good relations, a long-term market and reasonable prices," which he put in the $70-to-$90 range. **Russia will not turn its back on the West, by any means,** he said.

**Too many alt causes – grievances on both sides – NATO, Serbia, BMD, Georgia democracy, crankiness**

**Katz 9/8/09** – Professor of Government and Politics at George Mason University who writes about Russian foreign policy

(Mark N. “Disappointed with Russia.” http://www.sitnews.us/0909Viewpoints/090809\_mark\_katz.html)

Russians, we know, have a long list of grievances against the West in general and America in particular. NATO expansion, intervention against Serbia, recognition of Kosovo, the plan to deploy an American ballistic missile defense system in Eastern Europe, and criticism of Russia for going to war with Georgia are just some of them. But has it ever occurred to Russians that Westerners - especially those who hoped for friendly relations with Russia after the Cold War - might be disappointed in Russia? Well, we are. And there are several reasons why. First and foremost: we fully expected that Russia could and would become a Western democracy that respected human rights and the rule of law. Instead, it has reverted into an increasingly authoritarian regime that does neither. Even more amazingly, the vast majority of Russians seem to be satisfied with this situation. Why? How was it that the former communist countries of Eastern Europe and even some former Soviet republics have been able to make substantial progress toward democracy, but not Russia? Why is it that the people in these countries wanted to make the transition to democracy, but Russians apparently did not? This is the biggest disappointment with Russia and Russians that underlies everything else. Although the West does not believe that NATO expansion threatens Russia, I understand why many Russians think that it does. What I don't understand, though, is why it is that Moscow is doing more than Washington to promote NATO expansion. Even if Russia had evolved into a Western democracy after the end of the Cold War, surely it would be understandable that the experience of Soviet domination would result in East European as well as former Soviet states being fearful of Russia. The United States government is not the driving force behind NATO expansion; the continued fear of an increasingly assertive Russia in these countries is instead. It shouldn't take a genius to understand, then, that friendly Russian behavior toward its neighbors would be far more effective in reducing their desire to join NATO than the hostile behavior toward them Moscow has engaged in which has only reinforced their demand to do so. On the other hand, it may be unrealistic to expect that a gov ernment which does not treat its own citizens decently could recognize the advantages of self-restrained, non-threatening behavior toward others. Russians are furious that America and many Western nations recognized the independence of Kosovo. Unlike them, Moscow is prepared to ignore the desire of the vast majority of the people of Kosovo for independence or the fact that Serbian behavior toward them was instrumental in inculcating this desire. Moscow, Russian leaders told us, opposes secession unless the state being seceded from (in this case, Serbia) agrees to it. Moscow, they told us, pursues a principled foreign policy. So why, then, did Moscow then turn around and recognize the independence of Abkhazia and South Ossetia from Georgia (which clearly did not consent)? Can't Moscow see how contradictory its policy is? Nor does Moscow seem to have considered that recognizing Abkhazian and South Ossetian independence from Georgia might encourage Muslims in the North Caucasus to think that they can secede from Russia. It may be clear to the Russian nationalist mind that secession from Russia is a very different thing than secession from Georgia. It is doubtful, though, that this distinction is so clear to the North Caucasus' restive Muslims. Is it just a coincidence that Moscow's recognition of Abkhazian and South Ossetian independence last year has been followed by increased unrest in the North Caucasus? And as for those ballistic missile defense deployments in Poland and the Czech Republic: surely it is obvious that the Obama Administration is not nearly as enthusiastic about this as the Bush Administration was. But canceling the plan while Moscow fulminates about how Russia will retaliate if the U.S. goes forward with it would reinforce East European convictions about how they need American protection against Russia. Moscow would do the Obama Administration, and itself, a favor if it would just stop talking about this issue and make an effort to behave moderately and reassuringly toward Poland, the Czech Republic, and other countries in its vicinity. What is especially disappointing to those of us who hoped for improved relations between Russia and the West is that Moscow doesn't seem to understand how its own behavior harms its interests. Although clumsily executed, the Obama Administration's call to "reset" the Russian-American relationship was an earnest effort to improve the bilateral relationship. Moscow's aggrieved, suspicious response, though, was highly counter-productive. Perhaps the Russian foreign policy "elite" (as it is fond of calling itself) calculates that such a response will result in Washington coming to its senses; about how upset Moscow is, and thus will change American foreign policy in order to please it. What is far more likely, however, is that the Obama Administration will see Moscow as unwilling to work with it to improve relations, thus making a continuation of the effort not worthwhile.

**No Arms Sales**

**Weir 10** (¶ Why Russia is cutting off major arms sales to Iran¶ Russia, a major global arms dealer, decided Wednesday to nix a controversial arms sale that would have given Iran missiles.¶ By Fred Weir, Correspondent / September 23, 2010¶ http://www.csmonitor.com/World/Europe/2010/0923/Why-Russia-is-cutting-off-major-arms-sales-to-Iran)

After months of sending conflicting signals about whether Russia would fulfill a controversial contract to supply advanced S-300 antiaircraft missiles to Iran, the Kremlin has ordered a halt to all sales of sophisticated Russian weaponry to the Islamic Republic.

A decree signed by President Dmitry Medvedev on Wednesday bans the supply of battle tanks, armored vehicles, large-caliber artillery systems, warplanes, military helicopters, ships, and missiles – including S-300 air defense systems – to Iran as part of measures to bring Russia into compliance with tough sanctions agreed by the UN Security Council in June.

Iran has purchased more than $5 billion in Russian weaponry over the past decade, including Tor-M1 short-range antiaircraft missiles, warplanes, submarines, and armored vehicles.

Russian Deputy Foreign Minister Sergei Ryabkov said unspecified defense cooperation with Iran would continue, despite the end of major arms sales. "There are other directions," he told journalists.

The ban on weapons sales has been praised by the US and Israel, but was angrily denounced by Iran, which has felt increasingly alienated over the past year by Mr. Medvedev's Westward foreign policy drift.

#### No Israeli strike – ignore evidence from before the election on January 22

Duss, 1/24/13 – Matthew Duss is a foreign policy analyst based in Washington [“Netanyahu’s ballot humiliation can only help Obama’s Israel policy”. Globe and Mail. http://www.theglobeandmail.com/commentary/netanyahus-ballot-humiliation-can-only-help-obamas-israel-policy/article7757337/]

Many analysts had predicted that the election would further consolidate the power of Israel’s pro-settlement right wing. But Tuesday’s results show once again the particular ability of Israeli politics to surprise everyone. In this case, it was the impressive showing by political newcomer Yair Lapid, a former newscaster whose centrist party Yesh Atid won 19 seats. Just a month ago, Yesh Atid was predicted to get as few as six seats . Mr. Lapid now finds himself in the unexpected role of kingmaker, expected to be a part of a new coalition headed by Mr. Netanyahu.

As for Mr. Netanyahu, even though his party’s relatively poor showing reveals him to be not quite the “King Bibi” that Time magazine proclaimed him to be last year, the fact is he will serve another term as prime minister, though presiding over a somewhat more politically diverse coalition than many had thought, which means that Mr. Obama must find a way to work with him.

The election could have consequences for the two key policy issues that created the most tension between the two leaders, the Israeli-Paliestinian peace process and Iran, with the former continuing to be a source of strain and the latter becoming slightly less of one.

The peace process was notable mainly for its absence in most of the political debate around the elections. Only two parties, the left-wing Meretz and Tzipi Livni’s center-left Hatnua, made the occupation and need for a two-state solution a major issue. While Mr. Lapid, whose campaign primarily focused on social and economic issues, promised not to join any government that stalled on the peace process, he also said that Jerusalem must remain undivided under Israeli sovereignty (a red line for Palestinians, who hope to establish their own capital in Arab East Jerusalem) – and said so in the sprawling Ariel settlement in the heart of the occupied West Bank.

On the other hand, according to Yariv Oppenheimer, secretary-general of Israel’s Peace Now movement (who also ran as a member of the Labor Party's list), “Lapid understands the damage that was done to the image of Israel” by Mr. Netanyahu and by Foreign Minister Avigdor Lieberman’s refusal to engage in the peace process in a serious way, “and he will do his best to make that change.”

At the same time, Mr. Oppenheimer acknowledged, Mr. Lapid “doesn’t have the power to push forward in a major way. So I can see progress, but I don’t see Lapid going all the way [with a peace initiative], at least not for this year. But it’s important and encouraging. It’s more than we had before.” Indeed, on Thursday morning, Mr. Lapid followed through on his campaign promise and announced that a resumption of peace talks is a condition of Yesh Atid entering any governing coalition.

As for Iran, it was clearly Mr. Netanyahu’s hope to have a more hawkish coalition that could help him overcome internal opposition – much of it voiced by Israel’s own security establishment – against a unilateral Israeli strike on Iran, something the Obama administration also worked diligently to prevent. Now, having to contend with what will likely be a more centrist coalition, “[i]t will be much more difficult for Netanyahu to go on an adventure,” Mr. Oppenheimer said.

According to Israeli journalist Nahum Barnea, Mr. Netanyahu’s relatively poor showing should be understood partly as blowback from his near-endorsement of Mitt Romney during the U.S. elections. Appearing to so clearly favor Mr. Romney over Mr. Obama “looked like a dangerous and unprecedented move that most Israelis didn’t like,” Mr. Barnea said yesterday on a conference call organized by Israel Policy Forum.

Unlike during Mr. Obama’s first term, if Mr. Netanyahu continues fighting with his U.S. counterpart now, “he will lose on all fronts,” Mr. Barnea said. In the view of many Israelis, Mr. Netanyahu tried and failed to prevent Mr. Obama’s re-election. But having been re-elected, Mr. Obama will remain president for a full term, Mr. Barnea said, whereas, in the Israeli system, “Netanyahu could face elections, and Netanyahu knows this.”

#### \*\*\* Won’t escalate

Rogan 8/18/12 (Thomas, MSc in Middle East politics from the School of Oriental and African Studies.

Israel could attack Iran without causing a major war in the region

http://www.guardian.co.uk/commentisfree/2012/aug/18/israeli-attack-iran)

While it is likely Israel will attack Iran in the near future, it is not in either party's interest to allow retaliation to escalate

Over the last few days, Israeli newspapers have been consumed by reports that the prime minister, Binyamin Netanyahu, has decided to launch an attack on Iranian nuclear facilities some time this autumn. Although Netanyahu has an obvious interest in increasing pressure on Iran, it would be an error to regard these reports as simple rhetorical sensationalism. In my opinion, whether this year or next, Israel is likely to use its airforce to attack Iran.

While it is impossible to know for sure whether Netanyahu will act, it is possible to consider the likely repercussions that would follow an Israeli attack. While it is likely that Iran would retaliate against Israel and possibly the US in response to any attack, it is unlikely that Iran will instigate a major war. Albeit for different reasons, Iran, Israel and the US all understand that a war would not serve their interests.

First, the Israeli policy angle. If Netanyahu decides to order an attack on Iran, his focus will be on maximising the success of that action and minimising any negative consequences that might follow. In terms of Iranian retaliation, Israel would expect Iran's core non-state allies Hamas, the Palestinian Islamic Jihad and Hezbollah to launch rocket attacks into Israeli territory.

However, present success with advanced defence systems has helped increase Israeli confidence in their ability to absorb this method of retaliation. Beyond rocket attacks, the Israeli leadership also understands that a likely mechanism for Iranian retaliation is via attacks against Israeli interests internationally. Whether carried out by the Iranian Quds Force or Hezbollah, or a combination of both, various incidents this year have shown Israel that Iran continues to regard covert action as a powerful weapon.

The key for Israel is that, while these Iranian capabilities are seen as credible, they are not seen to pose intolerable threats to Israel. Faced with rocket strikes or limited attacks abroad – to which the likely response would be air strikes or short-duration ground operations (not a repeat of 2006) in Lebanon and Gaza – Israel would be unlikely to pursue major secondary retaliation against Iran. Certainly, Israel would not want to encourage intervention by Syria's Assad alongside Iran (an outcome that might follow major retaliatory Israeli action).

If Netanyahu does decide to take action, Israeli objectives would be clearly limited. The intent would be to prevent Iran from acquiring a nuclear capability while minimising escalation towards war. Israel has no interest in a major conflict that would risk serious damage to the Israeli state.

Though holding opposite objectives, Iran's attitude concerning a major war is similar to Israel's.

While Iran regards nuclear capability as prospectively guaranteeing the survival of its Islamic revolution, clerical leaders also understand that initiating a major war would make American intervention likely. Such intervention would pose an existential threat to the theocratic project that underpins the Islamic Republic.

Thus, in the event of an Israeli attack, Iran's response would be finely calibrated towards achieving three objectives:

• First, punishing Israel for its attack.

• Second, deterring further Israeli strikes and so creating space for a reconstituted Iranian nuclear programme.

• Finally, weakening US/international support for Israel so as to increase Israeli isolation and vulnerability.

Hezbollah, Hamas and other non-state allies would play a major role in effecting Iranian retaliation. Iran may also attempt to launch a number of its new Sajjil-2 medium-range missiles against Israel. Again, however, using these missiles would risk major retaliation if many Israeli citizens were killed.

As a preference, Iran would probably perceive that utilising Hamas and Hezbollah would allow retaliation without forcing Netanyahu into a massive counter-response. Crucially, I believe Iran regards that balancing its response would enable it to buy time for a reconstituted, hardened nuclear programme. In contrast to the relatively open current structure, sites would be deeper underground and far less vulnerable to a future attack. The nuclear ambition would not be lost, simply delayed.

As a final objective for retaliation, Iran would wish to weaken Israel's relationship with the US and the international community. This desire might encourage Iran to take action against US navy assets in the Gulf and/or attempt to mine the Strait of Hormuz, so as to cause a price spike in global oil markets and increased international discomfort.

However, beyond their rhetoric, the Iranian leadership understand that they cannot win a military contest against the US, nor hold the strait for longer than a few days. For Iran then, as with Israel, regional war is far from desirable.

Finally, consider the US. It is now clear that Obama and Netanyahu disagree on Iran. In my opinion, Netanyahu does not believe Obama will ever be willing to take pre-emptive military action against Iran's nuclear programme. Conversely, Obama believes Netanyahu's diplomatic expectations are too hasty and excessively restrictive.

The policy distance between these two leaders appears increasingly irreconcilable. If Netanyahu decides to go it alone and attack Iran, the US president will face the unpleasant scenario of having to protect American interests while avoiding an escalation dynamic that might spin out of control towards war. This difficulty is accentuated by Obama's re-election race and his fear of the domestic economic fallout that may come from the decisions that he might have to make. Again, the simple point is that the US government has no interest in a war with Iran.

If Netanyahu decides to take military action, he will do so in a strategic environment in which Israel, Iran and the US have no preference for a major war. Each state views the prospect of a war as counter to their particular long-term ambitions.

Because of this, while serious, Iranian retaliation would be unlikely to produce an escalatory dynamic leading to war. The leadership of each of these states will restrain their respective actions in the pursuit of differing long-term objectives but common short-term ones.

#### No disease can cause human extinction—burnout

Posner 5—judge on the U.S. Court of Appeals, Seventh Circuit, and senior lecturer at the University of Chicago Law School [Richard A, Winter, “Catastrophe: the dozen most significant catastrophic risks and what we can do about them,” http://findarticles.com/p/articles/mi\_kmske/is\_3\_11/ai\_n29167514/pg\_2?tag=content;col1]

Yet the fact that Homo sapiens has managed to survive every disease to assail it in the 200,000 years or so of its existence is a source of genuine comfort, at least if the focus is on extinction events. There have been enormously destructive plagues, such as the Black Death, smallpox, and now AIDS, but none has come close to destroying the entire human race. There is a biological reason. Natural selection favors germs of limited lethality; they are fitter in an evolutionary sense because their genes are more likely to be spread if the germs do not kill their hosts too quickly. The AIDS virus is an example of a lethal virus, wholly natural, that by lying dormant yet infectious in its host for years maximizes its spread. Yet there is no danger that AIDS will destroy the entire human race. The likelihood of a natural pandemic that would cause the extiinction of the human race is probably even less today than in the past (except in prehistoric times, when people lived in small, scattered bands, which would have limited the spread of disease), despite wider human contacts that make it more difficult to localize an infectious disease. The reason is improvements in medical science. But the comfort is a small one. Pandemics can still impose enormous losses and resist prevention and cure: the lesson of the AIDS pandemic. And there is always a lust time.

#### New tech solves disease spread—locates infection threats in real time.

SecurityInfoWatch 9—[July 6, 2009, “Real-time locating technology helps contain pandemic outbreaks,” http://www.securityinfowatch.com/root+level/1312122?pageNum=1]

Last week, the World Health Organization declared the H1N1 virus, also commonly referred to as "swine flu", a worldwide pandemic. National and state health officials in the U.S. are urging healthcare providers to take precautions to limit the spread of the virus from infected patients to healthy patients and staff. In response to this latest threat, Intelligent InSites, Inc. today announced a solution that state healthcare agencies, hospitals, and senior care facilities can utilize to help prevent the transmission and spread of communicable diseases, such as H1N1, common influenza, and other infectious diseases. The solution uses location technology in conjunction with Intelligent InSites popular "enterprise visibility" software to identify the location of patients, staff, and equipment anywhere in a facility in real time. With access to real-time location information, healthcare providers are able to quickly identify people and assets that currently are or have been in the same location with an infected person, which allows the hospital to take appropriate actions to contain the spread of the virus. U.S. Secretary of Homeland Security, Janet Napolitano, urges state and local governments, school districts, and the private sector to modify and update their pandemic plans, as the state of pandemic preparedness in the U.S. is not at a desirable level. According to a recent report published by the Vendome Group, entitled "Trends in Disaster Preparedness and Recovery Technologies", nearly two-thirds of healthcare organizations consider themselves not well prepared for a pandemic. Mary Jagim, RN, a nationally recognized leader and consultant in emergency preparedness in hospitals, has seen the lack of preparedness first hand. "Working for over 20 years in an emergency department setting, I know how critical it is to have the ability to instantly and reliably trace all exposures between an infected person and others. This is truly a vital step in successful containment and control of infectious diseases. Emergency preparedness plans should harness the use of technology which can mitigate the chaos when a crisis arises. The solution Intelligent InSites provides is designed to help healthcare organizations effectively manage large-scale emergency events, including infectious disease outbreaks, and should be considered by healthcare providers and agencies as part of a comprehensive emergency response strategy." The InSites Enterprise Visibility Platform(TM) uses real-time locating technologies, such as RFID, infrared, or ultrasound to reliably track the location and all interactions among patients, staff members, and equipment without disruption to the process of care delivery. The InSites Platform automatically senses and records the location of each person as they move about the facility through the use of a small tag provided to them when they check in. This data can then be used to quickly and accurately provide meaningful information to care givers. For example, when a patient is positively tested for a virus, staff can instantly run a report identifying everywhere that patient has been in the hospital, as well as all patients, staff, and even equipment that were in the same location at the same time. The staff then uses that information to initiate the disease control protocols established by the hospital, screening exposed personnel or patients, and the provision of antiviral treatment. The system also provides reports that help risk management personnel analyze infection patterns and assist with compiling data requested by government agencies, such as Centers for Disease Control & Prevention. This not only protects patients and hospital employees, but it also increases the safety of the entire community. "We are currently working with several government agencies and healthcare providers who wish to incorporate the use of our system in their emergency preparedness and continuity of operation plans. Given that our technology is capable of rapid and noninvasive deployment, the InSites Platform is seen by healthcare authorities as an immediate answer to managing the H1N1 virus threat, as well as preparing for other emergency situations," stated Mark Rheault, President and CEO of Intelligent InSites.

#### US decline will not spark wars.

MacDonald & Parent 11—Professor of Political Science at Williams College & Professor of Political Science at University of Miami [Paul K. MacDonald & Joseph M. Parent, “Graceful Decline? The Surprising Success of Great Power Retrenchment,” International Security, Vol. 35, No. 4 (Spring 2011), pp. 7–44]

Our findings are directly relevant to what appears to be an impending great power transition between China and the United States. Estimates of economic performance vary, but most observers expect Chinese GDP to surpass U.S. GDP sometime in the next decade or two. 91 This prospect has generated considerable concern. Many scholars foresee major conflict during a Sino-U.S. ordinal transition. Echoing Gilpin and Copeland, John Mearsheimer sees the crux of the issue as irreconcilable goals: China wants to be America’s superior and the United States wants no peer competitors. In his words, “[N]o amount of goodwill can ameliorate the intense security competition that sets in when an aspiring hegemon appears in Eurasia.” 92

Contrary to these predictions, our analysis suggests some grounds for optimism. Based on the historical track record of great powers facing acute relative decline, the United States should be able to retrench in the coming decades. In the next few years, the United States is ripe to overhaul its military, shift burdens to its allies, and work to decrease costly international commitments. It is likely to initiate and become embroiled in fewer militarized disputes than the average great power and to settle these disputes more amicably. Some might view this prospect with apprehension, fearing the steady erosion of U.S. credibility. Yet our analysis suggests that retrenchment need not signal weakness. Holding on to exposed and expensive commitments simply for the sake of one’s reputation is a greater geopolitical gamble than withdrawing to cheaper, more defensible frontiers.

Some observers might dispute our conclusions, arguing that hegemonic transitions are more conflict prone than other moments of acute relative decline. We counter that there are deductive and empirical reasons to doubt this argument. Theoretically, hegemonic powers should actually find it easier to manage acute relative decline. Fallen hegemons still have formidable capability, which threatens grave harm to any state that tries to cross them. Further, they are no longer the top target for balancing coalitions, and recovering hegemons may be influential because they can play a pivotal role in alliance formation. In addition, hegemonic powers, almost by definition, possess more extensive overseas commitments; they should be able to more readily identify and eliminate extraneous burdens without exposing vulnerabilities or exciting domestic populations.

We believe the empirical record supports these conclusions. In particular, periods of hegemonic transition do not appear more conflict prone than those of acute decline. The last reversal at the pinnacle of power was the AngloAmerican transition, which took place around 1872 and was resolved without armed confrontation. The tenor of that transition may have been influenced by a number of factors: both states were democratic maritime empires, the United States was slowly emerging from the Civil War, and Great Britain could likely coast on a large lead in domestic capital stock. Although China and the United States differ in regime type, similar factors may work to cushion the impending Sino-American transition. Both are large, relatively secure continental great powers, a fact that mitigates potential geopolitical competition. 93 China faces a variety of domestic political challenges, including strains among rival regions, which may complicate its ability to sustain its economic performance or engage in foreign policy adventurism. 94

Most important, the United States is not in free fall. Extrapolating the data into the future, we anticipate the United States will experience a “moderate” decline, losing from 2 to 4 percent of its share of great power GDP in the five years after being surpassed by China sometime in the next decade or two. 95 Given the relatively gradual rate of U.S. decline relative to China, the incentives for either side to run risks by courting conflict are minimal. The United States would still possess upwards of a third of the share of great power GDP, and would have little to gain from provoking a crisis over a peripheral issue. Conversely, China has few incentives to exploit U.S. weakness. 96 Given the importance of the U.S. market to the Chinese economy, in addition to the critical role played by the dollar as a global reserve currency, it is unclear how Beijing could hope to consolidate or expand its increasingly advantageous position through direct confrontation. In short, the United States should be able to reduce its foreign policy commitments in East Asia in the coming decades without inviting Chinese expansionism. Indeed, there is evidence that a policy of retrenchment could reap potential benefits. The drawdown and repositioning of U.S. troops in South Korea, for example, rather than fostering instability, has resulted in an improvement in the occasionally strained relationship between Washington and Seoul. 97 U.S. moderation on Taiwan, rather than encouraging hard-liners in Beijing, resulted in an improvement in cross-strait relations and reassured U.S. allies that Washington would not inadvertently drag them into a Sino-U.S. conflict. 98 Moreover, Washington’s support for the development of multilateral security institutions, rather than harming bilateral alliances, could work to enhance U.S. prestige while embedding China within a more transparent regional order. 99 A policy of gradual retrenchment need not undermine the credibility of U.S. alliance commitments or unleash destabilizing regional security dilemmas. Indeed, even if Beijing harbored revisionist intent, it is unclear that China will have the force projection capabilities necessary to take and hold additional territory. 100 By incrementally shifting burdens to regional allies and multilateral institutions, the United States can strengthen the credibility of its core commitments while accommodating the interests of a rising China. Not least among the benefits of retrenchment is that it helps alleviate an unsustainable financial position. Immense forward deployments will only exacerbate U.S. grand strategic problems and risk unnecessary clashes. 101

#### No risk of U.S.-Russian war – Russia knows the U.S. is infinitely more powerful and that it couldn’t be a threat.

**Bandow 08** (Doug, former senior fellow at the Cato Institute and former columnist with Copley News Service, 3/“Turning China into the Next Big Enemy.” http://www.antiwar.com/bandow/?articleid=12472)

In fact, America remains a military colossus. The Bush administration has proposed spending $515 billion next year on the military; more, adjusted for inflation, than at any time since World War II. The U.S. accounts for roughly half of the world's military outlays. Washington is allied with every major industrialized state except China and Russia. America's avowed enemies are a pitiful few: Burma, Cuba, Syria, Venezuela, Iran, North Korea. The U.S. government could destroy every one of these states with a flick of the president's wrist. Russia has become rather contentious of late, but that hardly makes it an enemy. Moreover, the idea that Moscow could rearm, reconquer the nations that once were part of the Soviet Union or communist satellites, overrun Western Europe, and then attack the U.S. – without anyone in America noticing the threat along the way – is, well, a paranoid fantasy more extreme than the usual science fiction plot. The Leninist Humpty-Dumpty has fallen off the wall and even a bunch of former KGB agents aren't going to be able to put him back together.

**U.S. - Russia nuclear war will be limited   
Oelrich 05** - Vice President for Strategic Security programs @ Federation of American Scientists

[Ivan Oelrich (Former professor of physics @ Technical University of Munich and Former pre-doctoral Research Associate at Lawrence Livermore National Laboratory),“Missions for Nuclear Weapons after the Cold War,” The Federation of American Scientists, Occasional Paper No. 3, January 2005]  
  
What has not happened since the end of the Cold War is a recalibration of our deterrence requirements based on the changes in the stakes.

The Cold War analyses of nuclear wars took little regard of what the war might have been about, implicitly assuming it would be about national survival and world leadership. Today the stakes are, overall, much smaller. Indeed, it is nearly impossible to conjure up even hypothetical areas of conflict between the United States and Russia with stakes remotely comparable to those of the Cold War or even a crisis that could rationally justify nuclear weapons. Where the stakes are high–for example, the ongoing tension between Islamic fundamentalism and the West–the role of nuclear retaliation is limited. Pg. 22-23

## 2NC T

### A2 – C/I – “Financial Incentive”

#### FIRST - permutation – financial incentives must be tied DIRECTLY to an outcome. Allowing anything MORE makes the topic unmanageable.

WEBB 93 lecturer in the Faculty of Law at the University of Ottawa (Kernaghan, “Thumbs, Fingers, and Pushing on String: Legal Accountability in the Use of Federal Financial Incentives”, 31 Alta. L. Rev. 501 (1993) Hein Online) – italics in the original

One of the obstacles to intelligent discussion of this topic is the tremendous potential for confusion about what is meant by several of the key terms involved. In the hopes of contributing to the development of a consistent and precise vocabulary applying to this important but understudied area of regulatory activity, various terms are defined below.

In this paper, "financial incentives" are taken to mean disbursements 18 of public funds or contingent commitments to individuals and organizations, intended to encourage, support or induce certain behaviours in accordance with express public policy objectives. They take the form of grants, contributions, repayable contributions, loans, loan guarantees and insurance, subsidies, procurement contracts and tax expenditures.19 Needless to say, the ability of government to achieve desired behaviour may vary with the type of incentive in use: up-front disbursements of funds (such as with contributions and procurement contracts) may put government in a better position to dictate the terms upon which assistance is provided than contingent disbursements such as loan guarantees and insurance. In some cases, the incentive aspects of the funding come from the conditions attached to use of the monies.20 In others, the mere existence of a program providing financial assistance for a particular activity (eg. low interest loans for a nuclear power plant, or a pulp mill) may be taken as government approval of that activity, and in that sense, an incentive to encourage that type of activity has been created.21 Given the wide variety of incentive types, it will not be possible in a paper of this length to provide anything more than a cursory discussion of some of the main incentives used.22 And, needless to say, the comments made herein concerning accountability apply to differing degrees depending upon the type of incentive under consideration.

By limiting the definition of financial incentives to initiatives where *public funds are either disbursed or contingently committed*, a large number of regulatory programs with incentive *effects* which exist, but in which no money is forthcoming,23 are excluded from direct examination in this paper. Such programs might be referred to as *indirect* incentives. Through elimination of indirect incentives from the scope of discussion, thedefinition of the incentive instrument becomes both more manageable and more particular. Nevertheless, it is possible that much of the approach taken here may be usefully applied to these types of indirect incentives as well.24 Also excluded from discussion here are social assistance programs such as welfare and *ad hoc* industry bailout initiatives because such programs are not designed primarily to *encourage* behaviours in furtherance of specific public policy objectives. In effect, these programs are assistance, but they are not incentives.

#### AND – regardless of form – Financial Incentives are DIRECT – this means that it can’t be tied to other things.

DYSON 03 International Union for Conservation of Nature and Natural Resources [Megan, Flow: The Essentials of Environmental Flows, p. 67-68, http://moderncms.ecosystemmarketplace.com/repository/moderncms\_documents/iucn\_the-essentials-of-environmental-flows.pdf]

Understanding of the term ‘incentives’ varies and economists have produced numerous typologies. A brief characterization of incentives is therefore warranted. First, the term is understood by economists as incorporating both positive and negative aspects, for example a tax that leads a consumer to give up an activity that is an incentive, not a disincentive or negative incentive. Second, although incentives are also construed purely in economic terms, incentives refer to more than just financial rewards and penalties. They are the “positive and negative changes in outcomes that individuals perceive as likely to result from particular actions taken within a set of rules in a particular physical and social context.”80 Third, it is possible to distinguish between direct and indirect incentives, with direct incentives referring to financial or other inducements and indirect incentives referring to both variable and enabling incentives.81 Finally, incentives of any kind may be called ‘perverse’ where they work against their purported aims or have significant adverse side effects.

Direct incentives lead people, groups and organisations to take particular action or inaction. In the case of environmental flows these are the same as the net gains and losses that different stakeholders experience. The key challenge is to ensure that the incentives are consistent with the achievement of environmental flows. This implies the need to compensate those that incur additional costs by providing them with the appropriate payment or other compensation. Thus, farmers asked to give up irrigation water to which they have an established property or use right are likely to require a payment for ceding this right. The question, of course, is how to obtain the financing necessary to cover the costs of developing such transactions and the transaction itself.

Variable incentives are policy instruments that affect the relative costs and benefits of different economic activities. As such, they can be manipulated to affect the behaviour of the producer or consumer. For example, a government subsidy on farm inputs will increase the relative profitability of agricultural products, hence probably increasing the demand for irrigation water. Variable incentives therefore have the ability to greatly increase or reduce the demand for out-of-stream, as well as in-stream, uses of water. The number of these incentives within the realm of economic and fiscal policy is practically limitless.

## 2NC Case

### 2NC Terrorism

#### No loose nuke acquisition --- sequence of events is too difficult --- probability is nonexistent.

Mueller ‘10 (John, Woody Hayes Chair of National Security Studies at the Mershon Center for International Security Studies and a Professor of Political Science at The Ohio State University, A.B. from the University of Chicago, M.A. and Ph.D. @ UCLA, *Atomic Obsession – Nuclear Alarmism from Hiroshima to Al-Qaeda*, Oxford University Press, Accessed @ Emory)

STEALING OR ILLICITLY PURCHASING LOOSE NUKES There has also been great worry about "loose nukes " especially in post-Communist Russia—weapons, "suitcase bombs" in particular, that could be stolen or bought illicitly. In 1997, Russian politician and general Alexander Lebed announced on CBS' 60 Minutes that dozens of suitcase bombs were missing from his country's arsenal. However, he later recanted this testimony, and both Russian nuclear officials and experts on the Russian nuclear programs have adamantly denied that al-Qaeda or any other terrorist group could have bought such weapons. They further point out that the bombs, all built before 1991, are difficult to maintain and have a lifespan of one to three years, after which they become "radioactive scrap metal." Similarly, a careful assessment conducted by the Center for Non-proliferation Studies has concluded that it is unlikely that any of these devices have actually been lost and that, regardless, their effectiveness would be very low or nonexistent, because they (like all nuclear weapons) require continual maintenance. After an extended assessment, fen-kins dismisses the story as a "persistent urban legend," and even some of those most alarmed by the prospect of atomic terrorism have concluded, "It is probably true that there are no 'loose nukes,' transportable nuclear weapons missing from their proper storage locations and available for purchase in some way."13 It might be added that Russia has an intense interest in controlling any weapons on its territory, since it is likely to be a prime target of any illicit use by terrorist groups, particularly Chechen ones, of course, with whom it has been waging a vicious on-and-off war for well over a decade. The government of Pakistan, which has been repeatedly threatened by al-Qaeda, has a similar very strong interest in controlling-its nuclear weapons and material—and scientists. Notes Stephen Younger, former head of nuclear weapons research and development at Los Alamos National Laboratory, "regardless of what is reported in the news, all nuclear nations take the security of their weapons very seriously."14 Even if a finished bomb were somehow lifted somewhere, the loss would soon be noted and a worldwide pursuit launched. And most bombs that could conceivably be stolen use plutonium, which emits more radiation than highly enriched uranium and can therefore be detected somewhat more readily by sensors in the hands of pursuers.15 Moreover, as technology has developed, finished bombs have been out-fitted with devices that will trigger a nonnuclear explosion that will destroy the bomb if it is tampered with. Experts polled by a Washington Post reporter point out that "it would be very difficult for terrorists to figure out on their own how to work a Russian or Pakistan bomb," because even the simplest of these "has some security features that would have to be defeated before it could be used." One of them, Charles Ferguson, stresses: You'd have to run it through a specific sequence of events, including changes in temperature, pressure and environmental conditions before the weapon would allow itself to be armed, for the fuses to fall into place and then for it to allow itself to be fired. You don't get it off the shelf, enter a code and have it go off. And there are other security techniques: bombs can be kept disassembled with the component parts stored in separate high-security vaults, and things can be organized so that two people and multiple codes are required not only to use the bomb but also to store, maintain, and deploy it. If the terrorist’s seek to enlist (or force) the services of someone who already knows how to set off the bomb, they would find, as Younger stresses, that "only few people in the world have the knowledge to cause an unauthorized detonation of a nuclear weapon " Weapons designers know how a weapon works, he explains, but not the multiple types of signals necessary to set it off, and maintenance personnel are trained only in a limited set of functions.16 Despite this array of inconvenient facts, five suitcase bombs did show up one day in 2007 on Fox Television's 24. One of these, sadly, did go off in Valencia, California, at 9:58:07 a.m., destroying several square blocks and instantly killing the 12,000 people who had been concentrated there for dramatic purposed by the scriptwriters. Fortunately, all the others were disarmed or recovered unexploded with the successful and increasingly ingenious application of torture as featured prominently in episodes 1,2,5,6,7,8,12, and 17. Returning closer to reality, there could be dangers in the chaos that would emerge if a nuclear state were utterly to fail, collapsing in full disarray—Pakistan's troubles with the Taliban are frequently brought up in this context. The notion that a few thousand Taliban combatants based in a small, distant, and backward area of Pakistan could terminally disrupt—or even manage to take over and control—the rest of a country with a population of over 150 million that is hostile to them and possessed of a large army does seem to be a considerable stretch. However, even under chaotic conditions, nuclear weapons would likely remain under heavy guard by people who know that a purloined bomb would most likely end up-, going off in their own territory, would still have locks (and, in the case-of Pakistan would be disassembled), and could probably be followed, located, and hunted down by an alarmed international community. The worst-case scenario in this instance requires not only a failed state but a considerable series of additional conditions, including consistent (and perfect) insider complicity and a sequence of hasty, opportunistic decisions or developments that click flawlessly in a manner far more familiar in Hollywood scripts than in real life.17 It is conceivable that stolen bombs, even if no longer viable as weapons, would be useful for the fissile material that could be harvested from them. However, Christoph Wirz and Emmanuel Egger, two senior physicists in charge of nuclear issues at Switzerland's Spiez Laboratory, point out that even if a weapon is not completely destroyed when it is opened, its fissile material yield would not be adequate for a primitive design, and therefore several weapons would have to be stolen and then opened successfully." Moreover, potentially purloinable weapons generally use plutonium, a sub-stance that is not only problematic to transport but far more difficult and dangerous to work with than highly enriched uranium.

Nuclear use is just a theoretical possibility --- terrorists are not interested.

Mueller ‘10 (John, Woody Hayes Chair of National Security Studies at the Mershon Center for International Security Studies and a Professor of Political Science at The Ohio State University, A.B. from the University of Chicago, M.A. and Ph.D. @ UCLA, *Atomic Obsession – Nuclear Alarmism from Hiroshima to Al-Qaeda*, Oxford University Press, Accessed @ Emory)

In this spirit, alarm about the possibility that small groups could fabricate and then set off nuclear weapons have been repeatedly raised at least since 1946, when, as noted in chapter 2, atomic bomb maker J. Robert Oppenheimer contended that if three or four men could smuggle in units for an atomic bomb, they could "destroy New York." Assertions like that proliferated after the 1950s, when the "suitcase bomb" appeared to become a something of a practical possibility. And it has now been well over three decades since a prominent terrorism specialist, Brian Jenkins, published his (not unreasonable) warnings about how "the world's increasing dependence on nuclear power may provide terrorists with weapons of mass destruction " and since a group empowered by the Atomic Energy Commission darkly noted that "terrorist groups have increased their professional skills, intelligence networks, finances, and levels of armaments throughout the world." And because of "the widespread dissemination of instructions for processing special nuclear materials and for making simple nuclear weapons," the group warned, "acquisition of special nuclear material remains the only substantial problem facing groups which desire to have such weapons."2 At around the same time, journalist John McPhee decided that, although only a small proportion of nuclear professionals expressed a "sense of urgency" about the issue, he would devote an entire book to a physicist he was able to find who did (nothing, of course, is as boring as a book about how urgent something isn't). That was Theodore Taylor, who proclaimed the problem to be "immediate" and who explained to McPhee at length "how comparatively easy it would be to steal nuclear material and step by step make it into a bomb." To fabricate a crude atomic bomb, Taylor patiently, if urgently, pointed out, was "simple": all one needed was some plutonium oxide powder, some high explosives, and "a few things that anyone could buy in a hardware store." "Everything is a matter of probabilities," Taylor assured his rapt auditor, and at the time he thought either that it was already too late to "prevent the making of a few bombs, here and there, now and then," or that "in another ten or fifteen years, it will be too late."3 Thirty-five years later, we continue to wait for terrorists to carry out their "simple" task. In the wake of 9/11, concerns about the atomic terrorist surged, even though the terrorist attacks of that day used no special weapons. "Nothing is really new about these perils” notes the New York Times' Bill Keller, but 9/11 turned "a theoretical possibility into a felt danger," giving "our nightmares legs." Jenkins has run an Internet search to discover how often variants of the term al-Qaeda appeared within ten words of nuclear. There were only seven hits in 1999 and eleven in 2000, but this soared to 1,742 in 2001 and to 2,931 in 2002.4 In this spirit, Keller relays the response of then Secretary of Homeland Security Tom Ridge when asked what he worried about most: Ridge "cupped his hands prayerfully and pressed his fingertips to his lips. 'Nuclear/ he said simply." On cue, when the presidential candidates were specifically asked by Jim Lehrer in their first debate in September 2004 to designate the "single most serious threat to the national security of the United States," the candidates had no difficulty agreeing on one. It was, in George W. Bush's words, a nuclear weapon "in the hands of a terrorist enemy." Concluded Lehrer, "So it's correct to say the single most serious threat you believe, both of you believe, is nuclear proliferation?" George W. Bush: "In the hands of a terrorist enemy." John Kerry: "Weapons of mass destruction, nuclear proliferation....There's some 600-plus tons of unsecured material still in the former Soviet Union and Russia.... there are terrorists trying to get their hands on that stuff today." And Defense Secretary Robert Gates contends that every senior leader in the government is kept awake at night by "the thought of a terrorist ending up with a weapon of mass destruction, espe-cially nuclear"5 If there has been a "failure of imagination" over all these decades, however, perhaps it has been in the inability or unwillingness to consider the difficulties confronting the atomic terrorist. Thus far, terrorist groups seem to have exhibited only limited desire and even less progress in going atomic. This may be because, after brief exploration of the possible routes to go atomic, they, unlike generations of alarmed pundits, have discovered that the tremendous effort required is scarcely likely to be successful.

## 1NR Case

### Ext – Anti-Americanism

Putin’s rhetoric may have been intended for campaign purposes only, but the Ulyanovsk debate proves it will limit his ability to cooperate.

Maria **Kuchma**, 3/21/**2012**. “NATO Base in Russia ‘Pragmatic Decision’ – Analysts,” RIA Novosti, http://en.ria.ru/analysis/20120321/172299865.html.

Under a plan announced last week by Russian Foreign Minister Sergei Lavrov, Moscow is preparing to allow NATO to use an airport in Ulyanovsk, the birthplace of Russian revolutionary Vladimir Lenin, to transit soldiers and military cargo to and from Afghanistan. The deal comes as NATO is preparing for a pullout that would end its costly war in Afghanistan, which has continued for more than a decade. Ironically, it is the government of Prime Minister Vladimir Putin, well known for his deep-seated suspicion of the U.S.-led alliance, that has actually been making the case in favor of the deal. "We are helping the coalition... primarily out of our own national interest," Lavrov told Russian lawmakers last week, describing the deal as "a means to assist those who are eradicating the threats of terrorism and drug trafficking in Afghanistan." The Russian authorities insist that the so-called NATO "base" would be nothing more than a transit hub, where cargos from Afghanistan would be reloaded from planes onto trains and then moved to Europe. But Russia’s Communists - the country's second most powerful political party - seem unconvinced. On Tuesday, they issued a statement declaring the deal a “threat” to Russia’s “national security.” “The Communist Party decisively condemns the intention to ensure a permanent foreign military presence in the heart of Russia and demands that the Russian leadership stop the implementation of this idea,” the statement reads, adding: “For the first time in the history of the Russian Empire, the U.S.S.R. and the Russian Federation, a foreign military base would appear on our soil… a base of a military bloc that the majority of our population view as hostile.” 'Common interests' “Hysteria” surrounding the deal is no surprise given the anti-Western public campaign carried out by the Kremlin, Alexander Khramchikhin, chief analyst at the Moscow-based Institute of Political and Military Analysis, said. “**The Kremlin is now facing the consequences of its own propaganda intended exclusively for domestic consumption**,” the analyst said.

**Makes cooperation impossible.**

Trudy **Rubin**, 3/15/**2012**. Foreign affairs columnist for The Philadelphia Inquirer. “Putin’s paranoia and U.S. relations,” Miami Herald, <http://www.miamiherald.com/2012/03/15/2695764/putins-paranoia-and-us-relations.html>.

Can Washington have a working relationship with a Russian leader who thinks Americans are out to destroy him? After a week of listening to official anti-American rhetoric on a visit to Moscow, I find it hard to see how. Vladimir Putin, newly elected to a third presidential term (after an interval as prime minister), has made clear he believes Washington has him in its crosshairs. “Nobody can impose their policy on us,” he proclaimed to a cheering crowd at his victory rally near the Kremlin. “Our people could recognize the provocation from those who want to destroy the country. The Orange scenario will never work here.” Putin was referring to the 2004 Orange Revolution in the Ukraine, where street protests overturned a pro-Russian, antidemocratic president. The Russian leader thinks the United States directed the Orange Revolution. He also thinks that Russians protesting rigged elections are paid by the United States. Some argue that Russian foreign policy won’t change much under Putin 2.0. U.S. officials have received assurances from high-level Russians that, with the election over, U.S.-Russian relations can return to a more normal keel. But it’s hard to imagine cooperation on issues such as Iran and Syria with a man who feels such personal animosity toward the United States. Consider the following: U.S. Ambassador Michael McFaul was met with a barrage of hostility after he arrived in Moscow in January; he was accused on state-controlled TV of being sent to foment a revolution. The unprecedented vitriol directed McFaul’s way indicates the depth of Putin’s suspicions about U.S. intentions. Anti-Americanism was a central feature of the Russian leader’s presidential campaign, playing on the innate suspicions of Russians raised to think the United States was hostile. In the run-up to the election, I heard anti-American rhetoric on state TV talk that was so strident it would have shocked Politburo members in the former Soviet Union. TV stations also aired documentaries describing U.S. “plots” to attack or dismember Russia — and alleged American schemes to make Putin resign. Of course, such agitprop was aimed at boosting the votes for Putin by tarring opposition activists as foreign agents. And it worked: small wonder that a cabbie who voted for Putin asked me, with deep sincerity, “Why does America want to destroy us?” However, Russian political analysts tell me **Putin’s anti-Americanism has much deeper roots than electioneering**. It springs in part from his KGB indoctrination and from his feeling that **Washington rebuffed him in his first term as president**. Smarting from Russia’s lost superpower status, and from NATO’s expansion into Eastern Europe, he was angered at the Bush administration’s assertion of global dominance and its Iraq war. To be fair, Russia’s interests in Syria and Iran do differ from America’s. “Most of those in the Putin entourage think Syrian President Bashar al-Assad can tough it out and he will be extremely grateful to Russia,” says Georgi Mirsky, one of Russia’s leading Middle East experts. And Putin is bitter that his support for humanitarian intervention in Libya led to a NATO military intervention — and regime change in Tripoli. As for Iran, says Mirsky, “the Russian foreign ministry believes Iranian leaders are rational, not fanatics, and not determined to produce a bomb.” If Putin were merely using anti-Americanism to win votes, one still might imagine some U.S.-Russian cooperation on issues where security interests overlap. Those would include stabilizing Afghanistan, or maybe even curbing Iran’s nuclear program by nonmilitary means in order to avoid more Middle East bloodshed. But if anti-Americanism has become Putin’s guiding principle — a very personal and deeply held conviction — **then it’s hard to imagine such cooperation**. Challenged at home, Putin will regard Washington’s continued (and justified) support for Russian civil society as a scheme to remove him. In that case, **cooperation with Washington would seem a sign of weakness**. “If Putin sets the U.S. up as public enemy No. 1, it could have consequences,” says Trenin. It would mean more tensions in the Middle East and Europe. The reset of the “reset” may depend less on rational factors and much more on what is going through Putin’s mind.

### Ext – Bush Era

Russia tried cooperating with us from 2001-2004 and got dicked around. That permanently eroded trust and prevents a boost in relations.

Fyodor **Lukyanov**, 2/29/**2012**. Editor in chief of the journal Russia in Global Affairs (published with Foreign Affairs). “Russia’s Changing Political Climate and Its Impact on Foreign Policy,” CSIS Public Lecture, \*\*this is a summary prepared by the Russia & Eurasia Program and edited by Dr. Andrew Kuchins, full audio transcript is available (http://csis.org/event/end-post-soviet-period-russian-foreign-policy-what-next), <http://csis.org/files/attachments/120229_Lukyanov_Lecture_Summary.pdf>.

Returning to the issue of U.S.-Russia relations, **one of the most important obstacles is Putin’s lingering suspicion of Washington derived from the Bush era**. Putin’s anti-Americanism is not a product of his KGB past, but rather of his experience attempting to cooperate with the United States after 9/11. Putin anticipated a US reciprocation of the measures Russia took during this time, such as closing down military and radar bases in Vietnam and Cuba, cooperating in the war on terrorism, and assisting with the American operations against the Taliban in Central Asia. Instead, in Putin’s view, the U.S. responded with aggressive intervention in the Russian sphere of privileged interests: the Rose Revolution in Georgia, the Orange Revolution in Ukraine and the U.S. role in Kyrgyzstan.

### AT: TB

Vaccines will solve TB

**Landry & Heilman ‘5** (Sarah Landry and Carole Heilman, the associate director of policy and program operations,National Vaccine Program Office, U.S. Department of Health andHuman Services, and director of the Division of Microbiology and Infectious Diseasesat the National Institute of Allergy and Infectious Disease, Future Directions In Vaccines: The Payoffs Of Basic Research, May 2005)

Promise of new technologies. The payoffs from these standard approaches are now beginning to plateau. In fact, most of the "easy" vaccines have been developed, and many challenges lie ahead for new and improved vaccines. New technologies may provide stronger, broader, and more durable immune responses than those induced by some earlier vaccines. New vaccines are also likely to exploit genomics and high-throughput screening approaches that are based on computational methods. These methods will allow for development of rationally based approaches that select potential antigens more effectively and precisely. In addition, future vaccines will use these new tools to get around the challenges of the remaining infectious diseases. [n2] These challenges include the inherent ability of many viruses to change (antigenic variation), as is seen with HIV and influenza; the need to develop vaccines that rely on cell-based immunity for protection for infections such as tuberculosis; and tools for addressing a pathogen's ability to outsmart the immune system--immune evasion strategies, such as seen with hepatitis C. [n3] Impact of new immune concepts. Research on the immune system has helped identify new ways of fighting infections and is helping define the mechanisms needed for successful immunization. Most currently licensed vaccines protect by producing neutralizing antibodies, made by the B cells of the immune system. One of the advantages of stimulating this arm of the immune system is that it can be easily measured. Researchers believe that vaccines against many of the infections that are of highest priority (HIV, TB, and malaria) will need to have the other arm of the immune system--the cellular component, or T cells--pulled into action. [n4] For the first time in sixty years, new TB vaccines are in clinical trials. [n5]

**MDR TB spread is impossible**

**Collins and Fidel ‘7** (Lois M. Collins and Steve Fidel Deseret Morning News June 3, 2007 Sunday)

The frenzy over tuberculosis spawned by a single "extensively drug-resistant" case is capturing headlines. But most people exposed to the airborne bacteria will never develop active disease. The Atlanta attorney's case has health officials concerned because his TB falls into a class of infections that resists two first-line TB drugs and some second-line drugs -- one of only 49 other extensively drug-resistant cases reported in the United States between 1993 and 2006. There's also a class called multidrug-resistant TB, which is easier to treat than cases like this one but more difficult than typical TB. Although it's harder to kill, it's no easier to spread than any other tubercolosis, according to Carrie Taylor, an infection control practice nurse at LDS Hospital. "You have to breathe in air that's coughed." Doctors treat an average of 38 active TB cases each year in Utah, according to the Utah Department of Health. The disease usually settles in the lungs, although it can affect the kidneys, spine, brain and other organs. The disease is caused by Mycobacterium tuberculosis, which spreads person-to-person but only through close contact. Taylor and her colleague Vickie Anderson, also an infection-control practice nurse at LDS Hospital, describe it as passing from one person's lungs directly into another's. It's not like a cold that is easily spread and fairly hardy. In fact, sunlight kills it. Unless the individual has a drug-resistant TB strain -- "not common in Utah," said Taylor -- it's very treatable, although it takes a long time and several medications. Left untreated, it can kill. At least initially, patients are isolated to avoid spread of the disease. Both chicken pox and measles are more contagious, said infectious disease specialist Dr. John Kriesel of University Hospital. As an example, when a Provo High School student was recently diagnosed with tuberculosis and health officials asked 250 of the student's school contacts to be tested for it, Kriesel predicted "not one of them will test positive for TB." People in casual contact are extremely unlikely to get the disease. Just being exposed doesn't mean you could pass it on, Taylor said. Without symptoms, you can't spread it, even if you have a positive skin test. People who live with a patient are at higher risk, but most won't get it, either.

**TB threat level low – existing programs**

**States News Service ‘7** (States News Service GLOBAL TUBERCULOSIS EPIDEMIC LEVELLING OFF: NEW REPORT March 22, 2007 Thursday)

The following information was released by the World Health Organization: The global tuberculosis (TB) epidemic has levelled off for the first time since WHO declared TB a public health emergency in 1993. The Global Tuberculosis Control Report released today by WHO finds that the percentage of the world's population struck by TB peaked in 2004 and then held steady in 2005. "We are currently seeing both the fruits of global action to control TB and the lethal nature of the disease's ongoing burden," said United Nations Secretary-General Ban Ki-moon. "Almost 60 per cent of TB cases worldwide are now detected, and out of those, the vast majority are cured.

SQ Solves – New test for can detect multiple-drug-resistant TB in two days for less than $8

Altman, 2008 [“Officials Praise New Test for Drug-Resistant TB,” July 1st, [LAWRENCE K. ALTMAN](http://topics.nytimes.com/top/reference/timestopics/people/a/lawrence_k_altman/index.html?inline=nyt-per) M.D., is one of the few full-fledged medical doctors working as a full-time daily newspaper reporter. The New York Times <http://www.nytimes.com/2008/07/01/health/01tb.html?hp>]

A new test that can detect multiple-drug-resistant tuberculosis in two days instead of the standard two to three months promises to help significantly improve treatment and prevent the spread of the airborne infection, the World Health Organization said on Monday. Multiple-drug-resistant [TB](http://health.nytimes.com/health/guides/disease/pulmonary-tuberculosis/overview.html?inline=nyt-classifier), or MDR-TB, is a growing public health problem in the world. Five percent of new TB cases are resistant to first-line drugs. That is 450,000 of the nine million new TB cases that are detected each year, the W.H.O. says. In the United States, the prevalence of drug-resistant tuberculosis among foreign-born TB patients has been about 1.5 percent, roughly three times the percentage among American-born patients with TB. “The new test is revolutionary,” said Dr. Mario C. Raviglione, W.H.O.’s director of tuberculosis control, because “it changes completely the way we will be dealing with MDR-TB.” The difficulty in detecting cases rapidly and accurately is a major obstacle in tuberculosis control. In most developing countries, cases cannot be detected easily or at all, leading to lags in starting proper treatment that can lead to a patient’s death and the further spread of resistant strains. The new test was described for reporters by telephone on Monday by officials from the W.H.O. and three other international health groups, the Stop TB Partnership, Unitaid and the Foundation for Innovative New Diagnostics, or FIND. The TB test, called a line probe assay, costs less than $8 and detects mutations in bacterial DNA linked to drug resistance. It is based on the same laboratory methods that scientists have used to determine parentage and detect certain genetic diseases, said Dr. Richard O’Brien, an official of FIND. The test could have been developed five years ago if there had been greater funds and demand. Dr. Raviglione of the W.H.O. said it took widespread publicity about an outbreak in South Africa of XDR-TB, a shorthand for extensively-drug-resistant TB, to demonstrate the urgency and duty to bring sophisticated technology to poor countries. The World Health Organization, a [United Nations](http://topics.nytimes.com/top/reference/timestopics/organizations/u/united_nations/index.html?inline=nyt-org) agency, estimates that only 2 percent of drug-resistant cases worldwide are now being detected and treated appropriately, mainly because of a breakdown in the global program that is supposed to keep the disease, one of the world’s deadliest, under control. Drug-resistant TB, like drug-sensitive TB, can be transmitted by an infected individual in droplets through coughing, [sneezing](http://health.nytimes.com/health/guides/symptoms/sneezing/overview.html?inline=nyt-classifier), singing and other activities. It may require two years of treatment with drugs that are much more costly than the first-line regimen. Technically difficult surgery may also be required. Health officials have sounded alarms because they believe that TB could reach the point where most new cases in some countries are resistant to many drugs without efforts like the new laboratory test to help stop the spread of the disease. A concern is the potential for outbreaks of MDR-TB to evolve into those of the even deadlier XDR-TB. The TB test is performed in a series of steps. Technicians extract DNA from a sputum specimen and then use amplifying techniques to produce large numbers of copies of the DNA.

### AT: US-Russia – No Impact

Russian influence is overstated. We don’t need a boost in relations.

E. Wayne **Merry**, 3/15/**2012**. Former State Department and Pentagon official, is senior fellow for Europe and Eurasia at the American Foreign Policy Council. “Retire the ‘reset’ with Russia,” The Washington Times, http://www.washingtontimes.com/news/2012/mar/15/retire-the-reset-with-russia/.

Russia lacks effective influence in either Iran or North Korea, while its Syria policy shows that Moscow can be very stubborn, even at great cost to its broader interests, in defending one of its remaining foreign clients. Russia is not a major international player in finance, commerce or innovation. Even in energy, [Russia](http://www.washingtontimes.com/topics/russia/) depends as much on its customers as they do on it. Russia can obstruct international initiatives if it feels challenged or disadvantaged, however. This is why [China](http://www.washingtontimes.com/topics/china/), Europe, India and Turkey maintain better relations with [Russia](http://www.washingtontimes.com/topics/russia/) than we do; as Eurasian neighbors, they want to keep the neighborhood civil. They also have more commerce at stake. **An abiding failure of American policy has been to attempt too much with Moscow**, to search for partnership without a shared agenda and not to comprehend that [Russia](http://www.washingtontimes.com/topics/russia/) will not accept junior-partner status. We need to work on building something resembling normal relations with a Russia that is no longer a global or ideological competitor. More trade and investment would help, as will Russian membership in the World Trade Organization. Serious progress in Russian rule of law would do even more. With Mr. Putin back in the Kremlin, we should maintain perspective and recognize that [Russia](http://www.washingtontimes.com/topics/russia/) today is a great regional power like Indonesia, India and Brazil, but no longer a global rival. **Washington does not need a special agenda with Moscow**, but rather balanced and realistic normal relations.

US-Russian relations don’t solve global problems.

E. **Ostapenko**, 7/8/**2009**. Trend Daily News (Azerbaijan), “Normalization in U.S.-Russian relations not to change political situation in world: analyst at French studies institute,” http://www.turkishweekly.net/news/83734/asd.html.

Normalization of relations between the United States and Russia will not assume a global significance and will not change the situation in the world, since today Russia does not play the role it played formerly, Dominic Moisi, analyst on Russian-American relations, said. "There is a country that is essential for the future of the world, it is not Russia, but it is China," Moisi, founder and senior advisor at the French Institute for International Relations (IFRI), told Trend News in a telephone conversation from Paris Speaking of the growing role of China, Moisi said that the Chinese are soon going to be the number two economy in the world. Russian economy can not compete. As another important aspect of the increasing weight of China in the world, Moisi considers the absence of problems with the aging of population, unlike European countries, including Russia.

### Heg d

#### More evidence—

#### Heg doesn’t solve war

Fettweis 10—Professor of national security affairs @ U.S. Naval War College [Christopher J. Fettweis, “Threat and Anxiety in US Foreign Policy,” [*Survival*](http://www.informaworld.com.proxy.library.emory.edu/smpp/title%7Edb=all%7Econtent=t713659919), Volume [52](http://www.informaworld.com.proxy.library.emory.edu/smpp/title%7Edb=all%7Econtent=t713659919%7Etab=issueslist%7Ebranches=52#v52), Issue [2](http://www.informaworld.com.proxy.library.emory.edu/smpp/title%7Edb=all%7Econtent=g920313969) April 2010 , pages 59—82//informaworld]

One potential explanation for the growth of global peace can be dismissed fairly quickly: US actions do not seem to have contributed much. The limited evidence suggests that there is little reason to believe in the stabilising power of the US hegemon, and that there is no relation between the relative level of American activism and international stability. During the 1990s, the United States cut back on its defence spending fairly substantially. By 1998, the United States was spending $100 billion less on defence in real terms than it had in 1990, a 25% reduction.29 To internationalists, defence hawks and other believers in hegemonic stability, this irresponsible 'peace dividend' endangered both national and global security. 'No serious analyst of American military capabilities', argued neo-conservatives William Kristol and Robert Kagan in 1996, 'doubts that the defense budget has been cut much too far to meet America's responsibilities to itself and to world peace'.30 And yet the verdict from the 1990s is fairly plain: the world grew more peaceful while the United States cut its forces. No state seemed to believe that its security was endangered by a less-capable US military, or at least none took any action that would suggest such a belief. No militaries were enhanced to address power vacuums; no security dilemmas drove insecurity or arms races; no regional balancing occurred once the stabilising presence of the US military was diminished. The rest of the world acted as if the threat of international war was not a pressing concern, despite the reduction in US military capabilities. Most of all, the United States was no less safe. The incidence and magnitude of global conflict declined while the United States cut its military spending under President Bill Clinton, and kept declining as the George W. Bush administration ramped the spending back up. Complex statistical analysis is unnecessary to reach the conclusion that world peace and US military expenditure are unrelated.

#### No risk of conflict—discards paranoid threat predictions.

Bandow 11—Doug Bandow, senior fellow at the Cato Institute, former special assistant to Ronald Reagan, author of *Foreign Follies: America's New Global Empire* (Xulon) [January 31, 2011, “Solving the Debt Crisis: A Military Budget for a Republic,” http://www.cato.org/pub\_display.php?pub\_id=12746]

More than two decades after the Cold War dramatically ended, the U.S. maintains a Cold War military. America has a couple score allies, dozens of security commitments, hundreds of overseas bases, and hundreds of thousands of troops overseas. Yet international hegemonic communism has disappeared, the Soviet Union has collapsed, Maoist China has been transformed, and pro-communist Third World dictatorships have been discarded in history's dustbin. The European Union has a larger economy and population than America does. Japan spent decades with the world's second largest economy. South Korea has 40 times the GDP and twice the population of North Korea. As Colin Powell exclaimed in 1991, "I'm running out of demons. I'm running out of enemies. I'm down to Castro and Kim Il-sung." Yet America accounts for roughly half of the globe's military outlays. In real terms the U.S. government spends more on the military today than at any time during the Cold War, Korean War, or Vietnam War. It is difficult for even a paranoid to concoct a traditional threat to the American homeland. Terrorism is no replacement for the threat of nuclear holocaust. Commentator Philip Klein worries about "gutting" the military and argued that military cuts at the end of the Cold War "came back to haunt us when Sept. 11 happened." Yet the reductions, which still left America by far the world's most dominant power, neither allowed the attacks nor prevented Washington from responding with two wars. And responding with two wars turned out to be a catastrophic mistake. Evil terrorism is a threat, but existential threat it is not. Moreover, the best response is not invasions and occupations — as the U.S. has learned at high cost in both Afghanistan and Iraq. Rather, the most effective tools are improved intelligence, Special Forces, international cooperation, and restrained intervention. Attempts at nation-building are perhaps even more misguided than subsidizing wealthy industrialized states. America's record isn't pretty. The U.S. wasn't able to anoint its preferred Somali warlord as leader of that fractured nation. Washington's allies in the still unofficial and unstable nation of Kosovo committed grievous crimes against Serb, Roma, and other minorities. Haiti remains a failed state after constant U.S. intervention. The invasion of Iraq unleashed mass violence, destroyed the indigenous Christian community, and empowered Iran; despite elections, a liberal society remains unlikely. After nine years most Afghans dislike and distrust the corrupt government created by the U.S. and sustained only by allied arms. The last resort of those who want America to do everything everywhere is to claim that the world will collapse into various circles of fiery hell without a ubiquitous and vast U.S. military presence. Yet there is no reason to believe that scores of wars are waiting to break out. And America's prosperous and populous allies are capable of promoting peace and stability in their own regions. Indeed, U.S. security guarantees are profoundly dangerous. Intended to deter by making American involvement automatic, they ensure American participation if deterrence fails. Moreover, Washington's defense promises discourage friendly states from defending themselves while encouraging them to take more provocative positions against their potential adversaries. Yet analysts keep coming up with bizarre new duties for the U.S. government. John Guardiano, for one, thinks it is America's responsibility to prepare "to occupy and rebuild North Korea when it implodes." Actually, that should be South Korea's job.

### Xt election solves Israel

UPI, 1/23/13 [“Israel centrists gain, but Netanyahu squeaks in”. http://www.upi.com/Top\_News/Special/2013/01/23/Israel-centrists-gain-but-Netanyahu-squeaks-in/UPI-63681358975333/?spt=hs&or=tn]

That setback was seen as a vote against Netanyahu's hawkish leadership and one that could breathe life into a peace process with the Palestinians.

It's also possible the perceived nuclear threat from Iran and the possibility of a pre-emptive Israeli strike, a central issue for Netanyahu, will be downgraded as a political-security topic in the changed political landscape.

Netanyahu emerged from Tuesday's polling with the narrowest of victories for his right-wing religious bloc against an upstart centrist party formed in 2012 and led by a political newcomer, former television talk show host Yair Lapid.

Netanyahu's Likud Party and its ally, Yisrael Beiteinu of former Foreign Minister Avgidor Liberman, notched 31 seats in the 120-member Knesset, 11 fewer than they had held.

The centrist Yesh Atid -- "We Have a Future" in Hebrew -- won 19 seats against all predictions in its debut outing, making it the second largest party in the new Parliament.

Labor, once Israel's dominant party and the left's standard bearer, took third place with 15.

Israel's media largely portrayed the result as a pyrrhic victory for Netanyahu, who called the election seeking to consolidate his hold on power in a year he's declared will see Israel and the West confronting Iran over its alleged nuclear arms program.

Despite widespread predictions the right wing, including the far-right nationalist party Jewish Home, would score heavily, it fared badly. Jewish Home won 11 seats, as did the ultra-orthodox Shas.

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### Russia war

Russia are nationalists, not suicidal. Won't escalate border conflicts.

**Bandow, ‘10**  (Doug, Senior Fellow – Cato, Huffington Post, “China: The Next “Necessary” Enemy?” 1-3, http://www.huffingtonpost.com/doug-bandow/china-the-next-necessary\_b\_443349.html)

What else is there? Russia is the enemy du jour for some, but Moscow today is a pale imitation of Moscow during the Cold War. The Soviet Union has been dismantled; its constituent states have seceded and shifted westward in orientation; the European Union alone has more than ten times Russia's GDP and spends more than Moscow on the military. Most important, though Vladimir Putin's Russia has taken a nasty authoritarian turn and exhibits near paranoid concern about the security of its border, world domination is no longer on Moscow's agenda. Even the most nationalistic Russian is not suicidal, and initiating war against America would be suicidal.

Bostrom concludes US/Russia war not cause extinction.

Nick **Bostrom**, **2007** Oxford Future of Humanity Institute, Faculty of Philosophy & James Martin 21st Century School. “The Future of Humanity,” New Waves in Philosophy of Technology, <http://www.nickbostrom.com/>.

Extinction risks constitute an especially severe subset of what could go badly wrong for humanity. There are many possible global catastrophes that would cause immense worldwide damage, maybe even the collapse of modern civilization, yet fall short of terminating the human species. An all-out nuclear war between Russia and the United States might be an example of a global catastrophe that **would be unlikely to result in extinction**. A terrible pandemic with high virulence and 100% mortality rate among infected individuals might be another example: if some groups of humans could successfully quarantine themselves before being exposed, human extinction could be avoided even if, say, 95% or more of the world’s population succumbed. What distinguishes extinction and other existential catastrophes is that a comeback is impossible. A non-existential disaster causing the breakdown of global civilization is, from the perspective of humanity as a whole, a potentially recoverable setback: a giant massacre for man, a small misstep for mankind.

## 1NR DA

### 2NC Meltdown

#### --Its more likely than estimates assume

#### Homeland Security News Wire 12 [“Probability of nuclear reactor core meltdown higher than expected,” 5-23, <http://www.homelandsecuritynewswire.com/dr20120523-probability-of-nuclear-reactor-core-meltdown-higher-than-expected?page=0,0>]

Catastrophic nuclear accidents such as the core meltdowns in Chernobyl and Fukushima are more likely to happen than previously assumed. Based on the operating hours of all civil nuclear reactors and the number of nuclear meltdowns that have occurred, scientists at the [Max Planck Institute for Chemistry](http://www.mpic.de/Home.107.0.html) in Mainz have calculated that such events may occur once every ten to twenty years (based on the current number of reactors) — some 200 times more often than estimated in the past.

A Max-Planck-Gesellschaft release [reports](http://www.mpg.de/5809418/reactor_accidents) that the researchers also determined that, in the event of such a major accident, half of the radioactive caesium-137 would be spread over an area of more than 1,000 kilometers away from the nuclear reactor. Their results show that Western Europe is likely to be contaminated about once in fifty years by more than forty kilobecquerel of caesium-137 per square meter. According to the International Atomic Energy Agency (IAEA), an area is defined as being contaminated with radiation from this amount onwards.

In view of their findings, the researchers call for an in-depth analysis and reassessment of the risks associated with nuclear power plants.

The reactor accident in Fukushima has fuelled the discussion about nuclear energy and triggered Germany’s exit from their nuclear power program. It appears that the global risk of such a catastrophe is higher than previously thought, a result of a study carried out by a research team led by Jos Lelieveld, director of the Max Planck Institute for Chemistry in Mainz: “After Fukushima, the prospect of such an incident occurring again came into question, and whether we can actually calculate the radioactive fallout using our atmospheric models.” According to the results of the study, a nuclear meltdown in one of the reactors in operation worldwide is likely to occur once in ten to twenty years. Currently, there are 440 nuclear reactors in operation, and sixty more are planned.

#### --The risk is linear – every additional nuclear plant that is built massively increases the chances. Its not a one shot impact – the risk exists as long as nuclear power does

**AND Meltdowns risk extinction**

**Earth Island Journal ‘2** (Harvey Wasserman, “Nuclear power and terrorism”, Vol. 17, Iss. 1, Spring, Proquest)

The intense radioactive heat within today's operating reactors is the hottest anywhere on the planet. Because Indian Point has operated so long, its accumulated radioactive burden far exceeds that of Chernobyl. The safety systems are extremely complex and virtually indefensible. One or more could be wiped out with a small aircraft, groundbased weapons, truck bombs or even chemical/biological assaults aimed at the work force. A terrorist assault at Indian Point could yield three infernal fireballs of molten radioactive lava burning through the earth and into the aquifer and the river. Striking water, they would blast gigantic billows of horribly radioactive steam into the atmosphere. Thousands of square miles would be saturated with the most lethal clouds ever created, depositing relentless genetic poisons that would kill forever. Infants and small children would quickly die en masse. Pregnant women would spontaneously abort or give birth to horribly deformed offspring. Ghastly sores, rashes, ulcerations and bums would afflict the skin of millions. Heart attacks, stroke and multiple organ failure would kill thousands on the spot. Emphysema, hair loss, nausea, inability to eat or drink or swallow, diarrhea and incontinence, sterility and impotence, asthma and blindness would afflict hundreds of thousands, if not millions. Then comes the wave of cancers, leukemias, lymphomas, tumors and hellish diseases for which new names will have to be invented. Evacuation would be impossible, but thousands would die trying. Attempts to quench the fires would be futile. More than 800,000 Soviet draftees forced through Chernobyl's seething remains in a futile attempt to clean it up are still dying from their exposure. At Indian Point, the molten cores would burn uncontrolled for days, weeks and years. Who would volunteer for such an American task force? The immediate damage from an Indian Point attack (or a domestic accident) would render all five boroughs of New York City an apocalyptic wasteland. As at Three Mile Island, where thousands of farm and wild animals died in heaps, natural ecosystems would be permanently and irrevocably destroyed. Spiritually, psychologically, financially and ecologically; our nation would never recover. This is what we missed by a mere 40 miles on September 11. Now that we are at war, this is what could be happening as you read this. There are 103 of these potential Bombs of the Apocalypse operating in the US. They generate a mere 8 percent of our total energy. Since its deregulation crisis, California cut its electric consumption by some 15 percent. Within a year, the US could cheaply replace virtually all the reactors with increased efficiency Yet, as the terror escalates, Congress is fast-- tracking the extension of the Price-Anderson Act, a form of legal immunity that protects reactor operators from liability in case of a meltdown or terrorist attack. Do we take this war seriously? Are we committed to the survival of our nation? If so, the ticking reactor bombs that could obliterate the very core of our life and of all future generations must be shut down.

#### Even the best case scenario kills 500,000

#### Coplan 6 [Karl S. Coplan , Associate Professor of Law, Pace University School of Law, Fordham Environmental Law Review, 2006, p. 245]

The consequences of a severe nuclear reactor accident can be hard to predict. However, using the most recent models and making optimistic assumptions about the success of evacuation efforts and evacuation travel times, the Riverkeeper organization has estimated that a reactor meltdown at one of the Indian Point nuclear power units fifty miles north of New York City would result in as many as 44,000 short term fatalities from radiation exposure, 518,000 latent cancer fatalities, $ 2 trillion in property damage, and the relocation of eleven million people.The Nuclear Regulatory Commission's 1982 report estimates the consequences of a severe reactor accident at Indian Point as 46,000 Peak Early Fatalities, 141,000 Peak Early Injuries, and 13,000 Peak Deaths from cancer, along with $ 274 billion (1982 dollars) in property damage.

### U- US

#### Unique link – nuclear power is declining – new incentives for nuclear power for national security undermine nonproliferation credibility

Squassoni, 3/7/13 [Sharon Squassoni is a senior fellow and director of the Proliferation Prevention Program at the Center for Strategic and International Studies. “A US Nuclear Exit? (Part 3) The economics of a US civilian nuclear phase-out”. Bulletin of the Atomic Scientists March/April 2013 vol. 69 no. 2 22-33. <http://www.pennenergy.com/articles/pennenergy/2013/03/a-us-nuclear-exit-part-3.html>. Accessed 3/10/13]

Late in 2012, Dominion Resources, Inc. announced it would shutter the Kewaunee Power Station in Carlton, Wisconsin. Kewaunee had just received a license extension to operate until 2033 (Wald, 2012). “The situation Dominion faces at Kewaunee is the result of circumstances unique to the station and do not reflect the nuclear industry in general,” said Thomas Farrell, Dominion’s chief executive and chairman. “The nation will be hard pressed to meet its energy needs, let alone do so in a secure and affordable manner, without a robust and growing nuclear energy program” (Dominion Resources, 2012).

Actually, Kewaunee may not be unique; it could be the first in a series of early retirements of aging US nuclear power plants. The fact that Dominion, with a $30 billion market capitalization, prefers to pay $281 million in decommissioning fees and other closing costs rather than operate the plant for another 20 years signals a generally grim economic outlook for nuclear energy in the United States.

A nuclear exit for the United States—the first country to commercialize nuclear power, and the country with the most nuclear energy capacity in the world—is almost inconceivable. Or is it? The US government has spent hundreds of millions of dollars in the last decade alone on programs and policies intended to jump-start a next generation of nuclear power plants. But those efforts haven’t resulted in much new construction. Nuclear supporters have given many reasons for the lack of power plant starts: The federal government doesn’t have a comprehensive energy policy or system for putting a price on carbon dioxide emissions. Its loan guarantees and export support are insufficient. Nuclear regulation and licensing are inefficient and costly. And so on. But the real threat to both new and existing plants in the United States has been low natural gas prices coupled with stable or declining electricity demand. General Electric CEO Jeffrey Immelt puts it this way: “It’s just hard to justify nuclear, really hard. Gas is so cheap, and at some point, really, economics rule. So I think some combination of gas and either wind or solar … that’s where we see most countries around the world going” (Clark, 2012).

Is there a reason to guide the invisible hand of the market toward reversing this decline in the US nuclear industry? Supporters of nuclear energy think so. One bipartisan think tank and some industry groups have begun to cite national security broadly—and nonproliferation in particular—as reason to support civilian nuclear energy.1 Their arguments generally emphasize the importance of nuclear energy to the country’s energy security, to the US nuclear Navy, and to America’s ability to influence other countries in nonproliferation matters.

It is not surprising that supporters of nuclear energy have used national security as a rallying cry: After all, the first nuclear power plants connected to the US grid were the Army’s SM-1 and the Navy’s Shippingport reactors. In the United States, nuclear energy has always been tightly entwined with America’s pre-eminent nuclear weapons status, and the military’s programs have supported and contributed to civilian nuclear power. The obverse, however, is not necessarily true. In drawing on national security to advocate for civilian nuclear energy, supporters run the risk of blurring the distinctions that US policy has been careful to draw between civilian and military nuclear uses. This separation has been important in winning domestic public support for nuclear energy. Any association of reactors with nuclear explosive devices tends to feed irrational fears. Supporting civilian nuclear energy for national security reasons when it does not appear to be economically viable will also likely complicate, rather than help achieve, US nonproliferation goals. Instead, the United States needs to support nuclear energy only where it makes economic sense, reducing the prospect that other countries will pursue nuclear energy to enhance their national security with a latent nuclear weapons capability, or to seek regional or national prestige.

It’s declining

Squassoni, 3/7/13 [Sharon Squassoni is a senior fellow and director of the Proliferation Prevention Program at the Center for Strategic and International Studies. “A US Nuclear Exit? (Part 3) The economics of a US civilian nuclear phase-out”. Bulletin of the Atomic Scientists March/April 2013 vol. 69 no. 2 22-33. <http://www.pennenergy.com/articles/pennenergy/2013/03/a-us-nuclear-exit-part-3.html>. Accessed 3/10/13]

There is another kind of nuclear exit, however, that seems at least reasonably likely: a slow slide into irrelevance. In such a situation, a gradual nuclear decline motivated by economics becomes the starting point. Utilities decide to retire some plants early, rather than implement costly post-Fukushima safety regulations, and the number of new nuclear power plants built in the next two decades fails to offset early and scheduled retirements. Demand for new nuclear plants falters overseas, and the scramble for fewer foreign orders increases competition. Other countries sweeten their nuclear construction bids with government subsidies that the US government will not match, leading to further decline in the US nuclear industry.

#### Doing nothing ends nuclear power. Companies are jumping ship.

Bradford, 3/6/13 [former NRC Commissioner Peter A. Bradford. “How to close the US nuclear industry: Do nothing”.Bulletin of the Atomic Scientists March/April 2013 vol. 69 no. 2 12-21

<http://www.pennenergy.com/articles/pennenergy/2013/03/us-nuclear-exit-part-2.html>]

Here’s what the US government must do to bring about a gradual phase-out of almost all US nuclear power plants: absolutely nothing. The United States is more or less on course to exit the commercial nuclear power industry, even if the country awakens to the dangers of climate change and adopts broad-based measures to favor low-carbon energy sources. Only a massive, government-driven infusion of taxpayer or customer dollars, targeted specifically to new nuclear reactors, will produce a different result.

Dominion Resources Inc. recently announced that it will close the Kewaunee Power Station in Carlton, Wisconsin in 2013. The decision, said Dominion CEO Thomas Farrell, “was based purely on economics” (Dominion Resources, 2012). With that announcement, the 30-year struggle between pronuclear prophets and market realities in the United States appears to be entering a new phase, one in which market forces challenge the economic viability even of existing nuclear plants, while making new reactors hopelessly unattractive as investments.

The Kewaunee shutdown is not an anomaly. Duke Energy has announced that it will not restart the Crystal River unit in Florida, closed since 2009 by construction errors. In late 2012, both the Exelon Corporation and Xcel Energy Inc. canceled plans to expand existing nuclear units, citing declining forecasts of demand for electricity and long-term forecasts of low natural gas prices (Meredith and Benedetto, 8012). In January 2013, industry analysts speculated that several other units might also close in the near future for economic reasons (Maloney et al., 2013).

How could this possibly happen to an industry that was trumpeting a “nuclear renaissance” as recently as five years ago? Well, the nuclear renaissance was always ballyhoo; it was based on the number of reactors for which federal or state governments (or both) would conscript the necessary capital from captive taxpayers or customers, not the number that customers needed or that markets would fund. Absent an extremely large injection of government funding or further life extensions, the reactors currently operating are going to end their licensed lifetimes between now and the late 2050s. They will become part of an economics-driven US nuclear phase-out a couple of decades behind the government-led nuclear exit in Germany.

### U-Global

#### Nuclear power is dead now

#### Schneider et al 12 [Mycle, Antony Froggatt, independent consultants, and Julie Hazemann, Director of EnerWebWatch,“The World Nuclear Industry Status Report 2012,” http://www.worldnuclearreport.org/IMG/pdf/2012MSC-WorldNuclearReport-EN-V2-LQ.pdf]

Prior to the March 2011 (3/11) Fukushima disaster, the nuclear industry had made it clear that it could not afford another major accident. Over the past ten years the industry has sold a survival strategy to the world as the nuclear revival or its renaissance. In reality many nuclear companies and utilities were already in great difficulties before the triple disaster hit the Japanese east coast in 2011. Fifteen months after 3/11, it is likely that the decline of the industry will only accelerate. Fukushima continues to have a significant impact on nuclear developments everywhere. Fifteen years ago, nuclear power provided over one third of the electricity in Japan, but as of May 2012 the last operating reactor was closed. The Japanese government is facing massive opposition to nuclear power in the country, thus making the restart of any reactors difficult. The controversy over the restart permission for the Ohi reactors in the Kansai region illustrates the dilemma. Germany shut down half of its nuclear fleet after 3/11. Japan and Germany could be leading a new trend. The German direction is clear with the possibility of Japan following: an electricity system based on highly efficient use and renewable energy technologies, even if many questions remain, including the timescale, local versus centralized, grid transformation and smart system development. It appears increasingly obvious that nuclear systems are not competitive in this world, whether from systemic, economic, environmental or social points of view. The nuclear establishment has a long history of failing to deliver. In 1973-1974, the International Atomic Energy Agency (IAEA) forecasted an installed nuclear capacity of 3,600-5,000 GW in the world by 2000, ten times what it is today. The latest example was from Hans Blix, former Director General of the IAEA, who stated two months after 3/11: “Fukushima is a bump in the road…”. The statement is both crass and far from today’s reality.

#### No new nuclear countries

#### Schneider et al 12 [Mycle, Antony Froggatt, independent consultants, and Julie Hazemann, Director of EnerWebWatch,“The World Nuclear Industry Status Report 2012,” http://www.worldnuclearreport.org/IMG/pdf/2012MSC-WorldNuclearReport-EN-V2-LQ.pdf]

• Newcomer Countries. The analysis of a number of potential newcomer countries 3 shows that few, if any, new members of the nuclear operators club to be expected over the next few years. No financing agreements are in place for any of the cases studied, many of them have to deal with significant public opposition, especially after the Fukushima accident and often they lack a skilled workforce and appropriate legal framework. Some countries have to deal with particularly adverse natural conditions (earthquake and flooding risks, lack of cooling water access, etc.). Finally, nuclear power’s principle competitors, mainly renewables and natural gas on the production side, increasingly are more affordable and much faster to install.

### Link

#### Domestic financial incentives torpedo our ability to object to international nuclear development and fuel-production.

Sokolski 10—Henry David Sokolski, Executive Director of the Nonproliferation Policy Education Center and serves on the U.S. congressional Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism [Jan 12, 2010, “More Nuclear Aid Would Bomb Economics,” Nonproliferation Policy Education Center, http://www.npolicy.org/article.php?aid=194&tid=5]

What does any of this have to do with whether or not we should pile on additional nuclear subsidies to support the construction of new commercial power reactors in the U.S.? Plenty. If, after more than a half century of government subsidies and federal research and development support, nuclear power should finally turn out to be the cheapest, quickest way to produce electricity and to reduce carbon emissions, it would be difficult to prevent its increased use commercially not only here but abroad. Even if other countries might use this technology to illicitly acquire what they need to make nuclear bombs, the lure of export profits would be hard to resist. The nuclear weapons proliferation risks would simply be an additional price we would pay and try somehow (however fecklessly) to limit.

Yet, if nuclear power is so risky investment that no private bank (domestic or foreign) will invest in building new plants, why should our government go out of its way to do so by offering new, additional loan guarantees or other nuclear-specific subsidies? Wouldn't the granting of such largesse only make it even more difficult for the U.S. to discourage the governments of Syria, Saudi Arabia, Algeria, Iran, Egypt, Jordan, Iraq, Libya, and Turkey from making similar nuclear specific investments? All of these states have access to inexpensive, relatively clean burning natural gas that could fuel much cheaper advanced gas-fired plants but, then, arguably, so does the U.S. On what economic grounds might we be able to object to them building an $8 billion nuclear power plant and spending further billions on related infrastructure? And if we could not, why and how could we reasonably object to them making their own nuclear fuel? True, this is even more uneconomical and unprofitable than building the power reactor, but only slightly so: A small, crude reprocessing plant could be built for a fraction of the cost of a single new larger power reactor. Would we tell them that they cannot be trusted with such technology even though chemical reprocessing is less complicated than nuclear power production?

As it is, Adam Smith's "invisible hand" clearly favors nuclear nonproliferation and sound energy policies. Creating a biased competition with more nuclear-specific federal subsidies for commercial power reactor projects, though, does not. Indeed, it is a bad business, which is best not done at all.

### AT: Solve

#### Nonprolif measures only buy time—loopholes are inevitable.

Nassauer 10—Otfried Nassauer is founding Director of the Berlin Information-center for Transatlantic Security (BITS) since 1991. For twenty years he also worked as a free-lance investigative journalist in military and international security affairs. [September 2010, “Nuclear Weapons and Nuclear Energy – Siamese Twins or Double Zero Solution?” Heinrich-Böll-Stiftung, EU, Brussels, http://www.boell.org/downloads/HBS-Nassauer-Sokolski\_web.pdf]

Various studies assume that it is possible to limit proliferation while at the same time continuing to export civilian nuclear technology.91 The policies of the new U.S. government also appear to be motivated by this point of view. However, the political proposals for non-proliferation that have been offered for this purpose are likely to be about as promising and effective as those that were proclaimed in the 1960s and 1970s. They make it possible to buy a little time until gaps and loopholes once again manifest themselves through the first cases of proliferation. When nonstate actors begin to become actively engaged in this field then most parts of the non-proliferation regime – created to prevent proliferation between states – will only have a limited effect or even more loopholes will be seen appearing than before. What is overlooked by those who advocate the export of nuclear technology despite proliferation and security issues, is that they are largely denying the existence of a central problem: it is not possible on the one hand to strive for maximum protection from proliferation, while on the other promoting the economic advantages of the export of civilian nuclear technology. Despite all of the safety precautions, nuclear proliferation will continue to represent a problem for international security in the future.

With all likelihood, it is not an exaggeration to claim that based on the current and foreseeable state of technology it is impossible to make the civilian use of nuclear energy 100% resistant to proliferation. It is certainly possible to increase the hurdles and to limit the problems. However, all measures proposed to date and which could be undertaken with the aim of containing the problem are likely to lose some of their effectiveness over time. Technological advances and a growing level of access to increasingly high quality technologies will at some point make it easier to attempt to circumvent even improved nonproliferation measures.

#### Multilat won’t solve prolif risk—national interests block.

Nassauer 10—Otfried Nassauer is founding Director of the Berlin Information-center for Transatlantic Security (BITS) since 1991. For twenty years he also worked as a free-lance investigative journalist in military and international security affairs. [September 2010, “Nuclear Weapons and Nuclear Energy – Siamese Twins or Double Zero Solution?” Heinrich-Böll-Stiftung, EU, Brussels, http://www.boell.org/downloads/HBS-Nassauer-Sokolski\_web.pdf]

A study from the Stockholm International Peace Research institute as far back as 1979 came to the conclusion, when examining the proliferation risks of nuclear energy, that a fuel cycle based on multilateral enrichment and fuel fabrication facilities would represent probably the most effective security against proliferation.92 The study urged that the two or three decades won by the NPT and other non-proliferation measures should be energetically used to develop such a fuel cycle. Three decades have passed without any significant progress having been made on this proposed path. National economic interests consistently stood in the way. It is only in the last few years – triggered by the debate surrounding Iran – that there has been increased consideration of multilateralism once again.93 However, it is hard to imagine even today that future proliferation risks will be dealt with in a forward-looking way.

# Quarters vs UMW MM

## 1NC

### Politics

#### Obama pushing compromise and working together – key to getting House GOP on board for his agenda – Immigration’s only chance

AFP 3 – 7 – 13 Obama tries new tack -- talking to Republicans, http://www.google.com/hostednews/afp/article/ALeqM5js8Vq2BpvFfWBXu5jLLYKRSN\_sMA?docId=CNG.da8c946c1afca2a51f978806a1ab4ca4.311

President Barack Obama has hit on a novel antidote to Washington's endless cycle of political crises: breaking bread with Republicans

Since his re-election triumph in November, Obama has used his political capital to harangue his foes, holding rallies across the country at which he accused rival Republicans of obstructing legislation and serving the rich.

His strategy worked up to a point -- securing new higher tax rates for the wealthy as he pocketed a political win in December over the fiscal cliff showdown.

But with the glow of his re-election waning, Obama came up short in the sequester clash last week as Republicans refused to bend on raising taxes -- and $85 billion in economy-sapping austerity was set in motion.

Two years of incessant budget melodrama between Obama and his foes on Capitol Hill have poisoned the political well but done little to tackle the debt load endangering America's future prosperity.

Now, Obama and conservative Republicans in the House of Representatives are left staring across a seemingly unbridgeable ideological divide.

Since Obama's ambitious second term agenda must clear a divided Congress, the onus is on the president to plot a way through Washington's dysfunction.

So Obama, who disdains the superficiality of backslapping politics, has embarked on a charm offensive -- and on Wednesday night he bought dinner for a dozen Republican senators out of his own pocket.

At an expensive hotel, Obama supped with senators John McCain, Lindsey Graham and others, vocal foes who have also expressed frustration at being stuck in the political purgatory of a Washington where nothing gets done.

Next week, the president will make a rare foray into enemy territory on Capitol Hill to address Republicans from both the Senate and the House.

For now, Obama appears to have dropped the "outside" game of campaigning to move public opinion against Republicans, instead probing whether there is any space for a deal on key issues.

Steven Smith, a former congressional staffer who is now a professor of political science at Washington University, St Louis, said the president had little choice but to try to change the political climate in Washington.

"If you can't deal with the House Republicans in the current political environment -- see if you can change the political environment," he said.

"What (Obama) is hoping is that Republicans in the Senate can start serving almost as opinion leaders for a new way of tackling these fiscal challenges."

Obama is courting Republican senators who may be willing to deal on issues like the national debt, the deficit and growing costs threatening entitlement programs like health care for the elderly.

"The President is interested in finding the members of the 'caucus of common sense,'" said White House spokesman Jay Carney.

A person familiar with Obama's thinking said the White House believes there may be a window for action since -- after the sequester and fiscal cliff dramas -- Washington is finally not on the cusp of an immediate crisis.

Obama aides also think some Senate Republicans may be ready to compromise -- a feeling bolstered by Graham's recent comment that he would swap $600 billion in new revenues in return for entitlement reform.

It is not the first time that Obama has tried dialogue with Republicans -- he tried unsuccessfully to conclude a grand bargain with House Speaker John Boehner aimed at $4 trillion in deficit reduction during his first term.

Obama says that offer is still on the table, but so frayed are his relations with Boehner that it seems doubtful the two of them share the necessary trust to strike a bargain.

Should he fare better with Senate Republicans, Obama hopes his new dance partners can build pressure on their brethren in the House to compromise, which might also ease the way for other top initiatives, like immigration reform.

Republicans, who have long accused Obama of hectoring them, welcome his change of tone.

"Where this goes, I don't know," said Graham, who recently met Obama along with McCain at the White House.

"I do believe (in) what the president has been doing lately, getting off the campaign trail (and) back into the normal way of doing business up here, of talking to each other."

Moderate Republican Senator Susan Collins agreed.

"The important thing is, for the first time in a very long time, the president appears to be doing some outreach to both Republicans and Democrats, and that's long overdue," she said.

Wednesday's dinner might have been a good start, but such is the philosophical gulf between Obama and Republicans that any deal still seems a long shot.

And with mid-term congressional elections in 2014, the window for bipartisan comity is short.

#### Capital key to high skilled

HIGGINS 2 – 6 – 13 E-Commerce Times Staff [John K. Higgins, Immigration Reform Could Open the Door for IT Talent, <http://www.ecommercetimes.com/story/77241.html>]

A divided Congress may actually unite when it comes to certain immigration reform efforts, and that includes one aspect of importance to the IT industry: paving the way for more highly skilled tech workers to come to the U.S. Proposed legislation could impact the way H-1B visas and green cards are handed out, but the issue may be tied to comprehensive immigration reforms.

The new Congress is now tackling a flurry of general proposals for comprehensive immigration reform, but only one specific, narrowly focused piece of legislation has already been introduced in the Senate: a plan to vastly increase the number of non-citizens who can pursue jobs and education in the U.S. technology sector.

The bill, titled the "Immigration Innovation Act of 2013," quickly drew support from the IT community.

"High-skilled immigration is a critical component in the broad effort to reform the U.S. immigration system, and this legislation effectively establishes a must-do list to enable U.S. companies to attract and retain the best innovators from around the world," said Ken Wasch, president of the Software and Information Industry Association (SIIA).

"Our companies strongly support efforts to improve the U.S. research ecosystem, including efforts to permit foreign Ph. D. and Masters graduates from U.S. universities in science, technology, engineering, and mathematics (STEM) to remain in the United States," said Grant Seiffert, president of the Telecommunications Industry Association (TIA), in a letter to the Senate sponsors of the bill. "In addition, we support your efforts to increase the allotment of H-1B visas and to improve STEM education efforts in the United States."

Visa Reform and High-Tech Funding

The bill, also referred to as "I-Squared," focuses on three areas related to high tech talent: the expansion of "employment based non-immigrant" permits, known as H-1B visas; increased access to temporary residence "green cards" for high-skilled workers, and the utilization of fees from the issuance of visas and green cards to promote American worker retraining and education in STEM-related activities.

A closer look at the bill's sections:

H-1B Visas: The H-1B program allows U.S. employers to temporarily employ foreign workers in specialty occupations for an initial period of three years, extendable to six years. The Immigration Innovation Act would increase the limit for such visas from 65,000 to 115,000. If the pace of applications exceeds the cap within certain specified periods, the allotment will automatically be increased with an eventual hard cap of 300,000. The bill would facilitate the mobility of skilled foreign workers by removing current impediments and costs related to changing employers. It would also authorize employment for dependent spouses of H-1B visa holders.

Green cards: The bill would increase the number of available employment-based green cards by reaching back to include green card allotments that went unused in prior years and exempting certain categories of applicants, such as STEM advanced degree holders, from counting against the annual cap. The act provides green card eligibility to "persons with extraordinary ability," and "outstanding professors and researchers," as well as to dependents of employment-based immigrant visa recipients. Current country of origin allocation limits would be eliminated.

STEM funding: The fees payable to the U.S. government for H-1B and green cards would be increased. Fees vary for the H-1B documents, but the bill sets the basic fee at $2,500 per employee for firms with more than 25 workers. Green card fees would be raised to $1,000 per employee. According to an Intel analysis, the bill raises the current fee structure by 40 percent. Portions of the federal fee revenue would be channeled to a grant program to promote STEM education and worker retraining to be administered by state governments. The revenue could amount to $300 million per year, according to Sen. Amy Klobuchar (D-Minn), a co-sponsor of the bill.

President Obama touched on the high tech employment issue in his second inauguration speech.

"Right now, there are brilliant students from all over the world sitting in classrooms at our top universities. They're earning degrees in the fields of the future, like engineering and computer science. But once they finish school, once they earn that diploma, there's a good chance they'll have to leave our country. Think about that," he said. "If you're a foreign student who wants to pursue a career in science or technology, or a foreign entrepreneur who wants to start a business with the backing of American investors, we should help you do that here."

Costs and Benefits for Tech Sector

Support for the bill by the IT community underscores the need for skilled talent, as well as the readiness of firms to absorb the cost of visa/green card fees and associated legal charges.

The fees could be considered a cost of doing business, or they could be viewed as an investment.

"We view it as both. The fees are not insignificant and so they give reassurance to some that H-1Bs will not be used to provide a 'cheap labor' alternative to U.S. workers," David LeDuc, senior director of public policy at SIIA, told the E-Commerce Times The fees and processing costs are already so high that it usually costs companies significantly more to hire H-1Bs than U.S. workers."

The fees and charges for obtaining skilled workers must also be balanced against the cost for businesses of operating without essential talent.

"When considering H-1B fees, we think it's most important to remember that the current annual limit on the number of H-1B visas, along with the per-country restrictions, mean that companies simply can't hire the workers they need or that hiring is delayed. This imposes significant costs and inefficiencies on business operations, and it's part of why the whole system needs reform," Danielle Coffey, general counsel and vice-president of public policy at TIA, told the E-Commerce Times.

Congressional Hurdles and Outlook

How the bill fares in Congress may depend on how an overall comprehensive package of immigration reforms is handled.

"The Immigration Innovation Act could stand on its own, but in the current political situation it is unlikely that immigration issues will be handled piecemeal," Bob Sakaniwa, associate director of advocacy at the American Immigration Lawyers Association, told the E-Commerce Times. "The better prospect is that it will be included within a comprehensive package and its fate will be tied to what Congress does on the overall immigration reform effort."

The history of congressional immigration debates also indicates that the IT issue should be part of a comprehensive reform effort, LeDuc added. "As much as we might like, or it might seem practical to enact various reform initiatives independently, that's not a political reality at this time."

The momentum now exists for comprehensive immigration reform, and issues related to highly skilled workers have already made their way into bipartisan legislative language.

"We know that the attention of Congress will now be fully focused on achieving comprehensive reform and a complete bill in the next few months," Coffey said. "We're hoping that they succeed, and that's where our focus is."

#### Oil lobbies hate your aff—and it just generates uncertainty

Marex News 11 [January 19, 2011, “Gas-Only Drilling in Offshore Moratorium Areas Suggested,” <http://www.maritime-executive.com/article/2005-10-20gas-only-drilling-in-offshore-moratori>]

Oil and gas industry groups are criticizing a provision in House offshore drilling legislation that would allow the government to offer "natural gas-only" leases in areas that are currently off-limits to new production.

The criticism is included in wider comments by petroleum producers to the Minerals Management Service (MMS), which has begun collecting public comments as it begins preparing an outer continental shelf leasing plan for 2007-2012. MMS asked for comment on the gas-only concept.

Gas-only leasing was included in a bill by House Resources Committee Chairman Richard Pombo (R-CA.) that allows states to "opt-out" of offshore leasing bans. States exercising the option could allow gas-only leasing, or oil and gas leasing.

Senate legislation by Senator Lamar Alexander (R-TN.) -- and supported by chemical companies and other industries that rely on the costly fuel -- also accepts the idea.

However, the American Petroleum Institute (API), in comments this week to MMS, says gas-only and gas-preference leasing would offer the "false promise" of future supplies. The group says the concept would create uncertainties that could dampen investment, since it is impossible to predict with certainty what types of resources will be in an area.

"A company might spend up to $80 million to buy a lease, conduct seismic testing, obtain the necessary permits, and drill a well(s) to determine whether any resources are present in amounts that make the prospect economic," the group says. "A company is unlikely to know if it had met the gas only or gas preference requirement until the capital investment had been made. Companies will be reluctant to spend tens of millions of dollars to explore for and develop a prospect, only to be forced to abandon the resource, stranding substantial investments."

Another set of comments submitted jointly by several groups -- including the Domestic Petroleum Council and the Independent Petroleum Association of America -- also criticizes the idea, calling it unnecessary. "Oil can be produced in a safe manner on the OCS, and industry has clearly done so for over 30 years," the groups say, adding that "since it is not always clear prior to drilling whether a field will yield natural gas, oil, or both, it seems inconsistent with the principle of conservation of the resource to leave recoverable oil deposits behind in order to drill new wells for natural gas elsewhere."

#### Key to relations and economic growth in China and India.

Los Angeles Times, 11/9/2012 (Other countries eagerly await U.S. immigration reform, p. <http://latimesblogs.latimes.com/world_now/2012/11/us-immigration-reform-eagerly-awaited-by-source-countries.html>)

"Comprehensive immigration reform will see expansion of skilled labor visas," predicted B. Lindsay Lowell, director of policy studies for the Institute for the Study of International Migration at Georgetown University. A former research chief for the congressionally appointed Commission on Immigration Reform, Lowell said he expects to see at least a fivefold increase in the number of highly skilled labor visas that would provide "a significant shot in the arm for India and China." There is widespread consensus among economists and academics that skilled migration fosters new trade and business relationships between countries and enhances links to the global economy, Lowell said. "Countries like India and China weigh the opportunities of business abroad from their expats with the possibility of brain drain, and I think they still see the immigration opportunity as a bigger plus than not," he said.

#### US/India relations averts South Asian nuclear war.

**Schaffer**, Spring **2002** (Teresita – Director of the South Asia Program at the Center for Strategic and International Security, Washington Quarterly, p. Lexis)

Washington's increased interest in India since the late 1990s reflects India's economic expansion and position as Asia's newest rising power. New Delhi, for its part, is adjusting to the end of the Cold War. As a result, both giant democracies see that they can benefit by closer cooperation. For Washington, the advantages include a wider network of friends in Asia at a time when the region is changing rapidly, as well as a stronger position from which to help calm possible future nuclear tensions in the region. Enhanced trade and investment benefit both countries and are a prerequisite for improved U.S. relations with India. For India, the country's ambition to assume a stronger leadership role in the world and to maintain an economy that lifts its people out of poverty depends critically on good relations with the United States.

#### China decline causes global war

[**Lee**](http://www.demos.org/ann-lee) **12** - Senior fellow @ Demos [[Ann Lee](http://www.demos.org/ann-lee), “Instability in China Would Be Devastating,” New York Times, May 11, 2012, pg. http://tinyurl.com/b8gstqn

The complexity and fragility of China’s political system is something that is often underappreciated by Western observers.

The scandal and rapid downfall of Bo Xilai, a top Chinese government official of Chongqing who was once widely considered for the Standing Committee, was a rare glimpse of the deep political divisions that exist within the Chinese central government. Although these power struggles have usually been shielded from the public, the political battles within the party are no less fierce than in multiparty systems in democratic societies. And while some China observers believe that the ousting of Bo Xilai is a watershed moment for the reformists to continue their development goals unhindered, the reality is that the Maoists could potentially unite and strike back when everyone least expects such an event to happen.

If they are successful in harnessing the disgruntled farmers and unemployed factory workers in China to rally behind them, it is remote but not impossible for the civil unrest to turn into another civil war. In such a scenario, China’s miraculous growth would grind to a halt.

A halt to China’s growth would spell instant and devastating inflation for the rest of the world. All the major economies -- the United States, Japan and Europe -- have been printing money with abandon because China’s productivity exported deflation to the world. However, if China’s cheap labor force disappears because of civil war, all the cheap goods that they produced and exported would suddenly be scarce.

The manufacturing in China would not be relocated easily anywhere else in the world for lack of a knowledge base and supply chain network that even comes close to matching China’s base. As a result, hyperinflation of the kind that has given the Germans nightmares would come back with a vengeance. The rest that can follow we already know from history.

#### Shortage of skilled workers in cyber fields undermines defense against attacks.

Reuters, 6/13/2012. “Experts warn of shortage of U.S. cyber pros,” http://www.reuters.com/article/2012/06/13/us-media-tech-summit-symantec-idUSBRE85B1E220120613.

Leading cyber experts warned of a shortage of talented computer security experts in the United States, making it difficult to protect corporate and government networks at a time when attacks are on the rise.

Symantec Corp Chief Executive Enrique Salem told the Reuters Media and Technology Summit in New York that his company was working with the U.S. military, other government agencies and universities to help develop new programs to train security professionals.

"We don't have enough security professionals and that's a big issue. What I would tell you is it's going to be a bigger issue from a national security perspective than people realize," he said on Tuesday.

Jeff Moss, a prominent hacking expert who sits on the U.S. Department of Homeland Security Advisory Council, said that it was difficult to persuade talented people with technical skills to enter the field because it can be a thankless task.

"If you really look at security, it's like trying to prove a negative. If you do security well, nobody comes and says 'good job.' You only get called when things go wrong."

The warnings come at a time when the security industry is under fire for failing to detect increasingly sophisticated pieces of malicious [software](http://www.reuters.com/sectors/industries/overview?industryCode=174&lc=int_mb_1001) designed for financial fraud and espionage and failing to prevent the theft of valuable data.

Moss, who goes by the hacker name "Dark Tangent," said that he sees no end to the labor shortage.

"None of the projections look positive," said Moss, who serves as chief security officer for ICANN, a group that helps run some of the Internet's infrastructure. "The numbers I've seen look like shortages in the 20,000s to 40,000s for years to come."

Reuters last month reported that the National Security Agency was setting up a new cyber-ops program at select universities to expand U.S. cyber expertise needed for secret intelligence operations against computer networks of adversaries. The cyber-ops curriculum is geared to providing the basic education for jobs in intelligence, military and law enforcement.

The comments echo those of other technology industry executives who complain U.S. universities do not produce enough math and science graduates.

#### Great power nuke warrrrrr

Jason Fritz, July 2009. Researcher for International Commission on Nuclear Nonproliferation and Disarmament, former Army officer and consultant, and has a master of international relations at Bond University. “Hacking Nuclear Command and Control,” <http://www.icnnd.org/latest/research/Jason_Fritz_Hacking_NC2.pdf>.

This paper will analyse the threat of cyber terrorism in regard to nuclear weapons. Specifically, this research will use open source knowledge to identify the structure of nuclear command and control centres, how those structures might be compromised through computer network operations, and how doing so would fit within established cyber terrorists’ capabilities, strategies, and tactics. If access to command and control centres is obtained, terrorists could fake or actually cause one nuclear-armed state to attack another, thus provoking a nuclear response from another nuclear power. This may be an easier alternative for terrorist groups than building or acquiring a nuclear weapon or dirty bomb themselves. This would also act as a force equaliser, and provide terrorists with the asymmetric benefits of high speed, removal of geographical distance, and a relatively low cost. Continuing difficulties in developing computer tracking technologies which could trace the identity of intruders, and difficulties in establishing an internationally agreed upon legal framework to guide responses to computer network operations, point towards an inherent weakness in using computer networks to manage nuclear weaponry. This is particularly relevant to reducing the hair trigger posture of existing nuclear arsenals. All computers which are connected to the internet are susceptible to infiltration and remote control. Computers which operate on a closed network may also be compromised by various hacker methods, such as privilege escalation, roaming notebooks, wireless access points, embedded exploits in software and hardware, and maintenance entry points. For example, e-mail spoofing targeted at individuals who have access to a closed network, could lead to the installation of a virus on an open network. This virus could then be carelessly transported on removable data storage between the open and closed network. Information found on the internet may also reveal how to access these closed networks directly. Efforts by militaries to place increasing reliance on computer networks, including experimental technology such as autonomous systems, and their desire to have multiple launch options, such as nuclear triad capability, enables multiple entry points for terrorists. For example, if a terrestrial command centre is impenetrable, perhaps isolating one nuclear armed submarine would prove an easier task. There is evidence to suggest multiple attempts have been made by hackers to compromise the extremely low radio frequency once used by the US Navy to send nuclear launch approval to submerged submarines. Additionally, the alleged Soviet system known as Perimetr was designed to automatically launch nuclear weapons if it was unable to establish communications with Soviet leadership. This was intended as a retaliatory response in the event that nuclear weapons had decapitated Soviet leadership; however it did not account for the possibility of cyber terrorists blocking communications through computer network operations in an attempt to engage the system. Should a warhead be launched, damage could be further enhanced through additional computer network operations. By using proxies, multi-layered attacks could be engineered. Terrorists could remotely commandeer computers in China and use them to launch a US nuclear attack against Russia. Thus Russia would believe it was under attack from the US and the US would believe China was responsible. Further, emergency response communications could be disrupted, transportation could be shut down, and disinformation, such as misdirection, could be planted, thereby hindering the disaster relief effort and maximizing destruction. Disruptions in communication and the use of disinformation could also be used to provoke uninformed responses. For example, a nuclear strike between India and Pakistan could be coordinated with Distributed Denial of Service attacks against key networks, so they would have further difficulty in identifying what happened and be forced to respond quickly. Terrorists could also knock out communications between these states so they cannot discuss the situation. Alternatively, amidst the confusion of a traditional large-scale terrorist attack, claims of responsibility and declarations of war could be falsified in an attempt to instigate a hasty military response. These false claims could be posted directly on Presidential, military, and government websites. E-mails could also be sent to the media and foreign governments using the IP addresses and e-mail accounts of government officials. A sophisticated and all encompassing combination of traditional terrorism and cyber terrorism could be enough to launch nuclear weapons on its own, without the need for compromising command and control centres directly.

### EPA

#### Obama commitment to climate is boosting EPA authority

Strassel 1/24/13 [KIMBERLY A. STRASSEL, “The Real Obama Climate Deal,” Wall Street Journal, January 24, 2013, 8:20 p.m. ET, pg. http://tinyurl.com/ag7rmn2

President Obama set off a guessing game this week as to what he intended with his inaugural promise to double down on climate change. There's no need to guess. California Democrat Barbara Boxer, the Senate's climate guru, was happy to fill in the gory details. The president's climate shout-out sent the green community into flurries of ecstasy, with grand hopes of a new push for cap-and-trade in Congress, or of a redoubled U.S. commitment to a global carbon pact. It fell to Mrs. Boxer to tamp down those ambitions, even as she reassured her devotees that there is more than one way to skin the climate cat. "A lot of you press me . . . on: 'Where is the bill on climate change? Where is the bill?' There doesn't have to be a bill," Mrs. Boxer explained in a briefing the day after Mr. Obama's speech. "I'm telling you right now, EPA has the authority in the transportation sector, the electricity sector, and the industrial sector under the Clean Air Act" to do everything that legislation might otherwise do. In other words, with the election over, all pretense is gone. Democrats won't waste political capital on a doomed cap-and-trade bill. Yet they'll get their carbon program all the same, by deputizing the EPA to impose sweeping new rules and using their Senate majority to block any GOP effort to check the agency's power grab. The further upside? Brute regulation is not only certain and efficient, it allows vulnerable Democrats to foist any blame on a lame-duck administration. Mrs. Boxer has spent years on climate, and she wouldn't be surrendering her legislative ambitions without clear assurances the White House has her covered. Her words were a signal that the Obama EPA is about to re-energize the regulatory machine that it put on ice during the election. Republicans who hoped Lisa Jackson's resignation signaled a more humble EPA approach should instead prepare for an agency with a new and turbocharged mission.

#### EPA staffers are sensitive to presidential messaging

**Andreen 07**– Professor of Law @ University of Alabama (Roll Tide) [William L. Andreen, “Motivating Enforcement: Institutional Culture and the Clean Water Act,” 24 Pace Envtl. L. Rev. 67 (2007) pg: <http://digitalcommons.pace.edu/pelr/vol24/iss1/4>

In a recent article, Professor Joel Mintz perceptively observed that one generally unrecognized characteristic of EPA enforcement is "its high sensitivity to staff-level perceptions and concerns." 128

He quotes a former EPA regional official as saying: The people [at the EPA] who work on enforcement are very sensitive to signals about what they are doing. Because enforcement has always been.., controversial and contentious, it is... critical that the people working on it have entirely clear signals that enforcement is important, . . . and that the people who do the work will be supported. Those signals have to come from the top. 129

Ambiguous signals from the top can easily be read by the staff as a kind of coded message expressing reluctance about, perhaps even hostility towards, enforcement. Hence, as a senior EPA enforcement official recently recounted: The current [Bush] administration would typically say[:] "Oh, I want you to enforce, but can you please check in with us before you do any major new cases, e.g., concentrated animal feeding operations (CAFOs)." That was taken by the staff as a directive not to enforce .... [Former EPA Administrator Christine Todd] Whitman also sent her political staffers out to check on particular cases. That also chilled enforcement. 130

The consequence, of course, was a severe downturn in EPA enforcement from 2002 to 2003.131 While one would expect enforcement personnel to scrutinize the language and action of the agency's political appointees, it is a little surprising that it appears so easy at times for the agency's top brass to intentionally or even unintentionally slow down EPA enforcement. Pg. 86

#### Gas drilling contradicts the current message

**Begos 12** [Kevin Begos, “President Barack Obama faces historic natural gas drilling choice,” Associated Press, Posted:11/17/2012 10:52:34 PM MST

PITTSBURGH -- Energy companies, environmental groups, and even Hollywood stars are watching to see what decisions President Barack Obama makes about regulating or promoting natural gas drilling.

The stakes are huge. Business leaders don't want government regulations to slow the flow of hundreds of billions of dollars of clean, cheap domestic energy over the next few decades. Environmental groups see that same tide as a potential threat, not just to air and water, but to renewable energy. And on a strategic level, diplomats envision a future when natural gas helps make the U.S. less beholden to imports.

Some say the unexpected drilling boom presents historic options -- and risks -- for the Obama administration.

"It's a tough choice. The president is in a real bind," said Charles Ebinger, director of the energy security initiative at the Brookings Institution, a Washington, D.C., nonprofit. "I think the question is what does he want his legacy to be?"

Ebinger said that if Obama fully embraced the boom in gas drilling the nation could see "incredible" job gains that could lead to "a re-industrialization of America." Possibilities like that are tempting to any president, and perhaps even more so in the current economy.

"But really embracing this stuff is going to bring him squarely in conflict with some of his environmental supporters. It's not without some possible peril, particularly if he gets to be seen too cozy with the oil and gas folks," Ebinger said.

#### EPA’ climate adaptation strategies protect water supplies

**Goad 2/8/**13 [Ben Goad, “EPA moves forward with climate change protection plan, asks for comments,” The Hill, 02/08/13 10:55 AM ET, pg. http://tinyurl.com/aaz8ual

It is essential that EPA adapt to anticipate and plan for future changes in climate,” according to [the 55-page plan](http://epa.gov/climatechange/pdfs/EPA-climate-change-adaptation-plan-final-for-public-comment-2-7-13.pdf), which carries a 2012 date but was put forth now for public consideration. “It must integrate, or mainstream, considerations of climate change into its programs, policies, rules and operations to ensure they are effective under future climatic conditions.”  
Rising sea levels, loss of snowpack and drought linked to climate change will likely require the agency to take additional steps to protect watersheds, wetlands and water supplies, the report argues.   
Increasing temperatures and more frequent extreme weather events, meanwhile, will demand measures to protect public safety and adapt emergency response plans, it says.  
The report does not propose specific rules but rather sets a framework to support and prioritize future actions. By 2015, the report says, EPA will have integrated “climate change science trend and scenario information” into its rule-making processes.

The agency would also account for future global warming in its grant and loan programs and contract decisions by that year, according to the report.

Earthjustice, a nonprofit environmental advocacy group, lauded the plan.

“We are pleased the EPA is getting its house in order to respond to climate change impacts on its personnel, facilities and programs, said Sarah Saylor, senior legislative representative for the group. "This type of planning can be used to inspire states, regions, localities and individuals to follow suit."

The plan stems from Obama’s 2009 executive order requiring federal agencies to issue annual Strategic Sustainability Performance Plans, which set targets for reducing waste and pollution. For the first time this year, those plans include the climate change adaptation plans, which can be viewed [here](http://sustainability.performance.gov/).

#### The impact is water wars

**Hodges 12** [Dave Hodges, “The Coming Water Wars,” [The Common Sense Show.com](http://www.thecommonsenseshow.com), December 11, 2012, pg. http://www.thecommonsenseshow.com/2012/12/11/the-coming-water-wars/

Very soon, America will be forced into water wars in order to secure the precious asset of water for our people. This will force our people into more wars of occupation in a search for water. Meanwhile, every nation that America conquers, is one less country that the bankers have to worry about taking over. At the end of the day, if America wants water, someday, Americans will have to go to war to obtain water.

As any aware person knows, Agenda 21 is being used as a front for the purpose of increasing the bottom of line of select global corporations. Bolivia is being exploited to this end and is serving as the canary in the mine with regard to what lies ahead for the United States and the coming water wars.

The United States sits upon a fiscal cliff. Economic devastation is in the cards for the US. Many wonder what will happen when the country defaults and cannot pay its bills. The answer is simple, our country will enter receivership. Once receivership is thrust upon our country, the bankers will begin to take control of our assets. Among the prize assets coveted by the globalist bankers will be our water supply.  Soon, very soon, our water supplies will become the most expensive in the world. Obtaining water for many Americans will soon be a life and death struggle.

#### Nuclear escalation

**Hellman 12** – Professor Emeritus of Electrical Engineering @ Stanford University [Dr. [Martin Hellman](http://www-ee.stanford.edu/%7Ehellman/), [War Games and Nuclear Risk](http://nuclearrisk.wordpress.com/2012/11/25/war-games-and-nuclear-risk/),” Defusing the Nuclear Threat, [November 25, 2012](http://nuclearrisk.wordpress.com/2012/11/25/war-games-and-nuclear-risk/), pg. http://nuclearrisk.wordpress.com/2012/11/25/war-games-and-nuclear-risk/

A 2008 RAND [Project Air Force report](http://www.rand.org/content/dam/rand/pubs/monographs/2008/RAND_MG614.pdf) states:

In 2004, Director of Air Force Strategic Planning Major General Ronald J. Bath sponsored a war game in which uncontrolled escalation occurred, surprising players and controllers alike … this experience was just one in a series of escalatory events occurring in major war games over the past several years.

A [2012 report](http://www.ifri.org/downloads/pp40morgan.pdf) by the lead author of the above report, RAND’s Dr. Forrest E. Morgan, added a few more details:

By 2004, strategic planners at Headquarters U.S. Air Force had become concerned that they did not adequately understand escalation risks in the contemporary security environment. … An increasing number of war games … had ended in uncontrolled escalation, games in which the scenarios called for only limited U.S. military intervention against notional adversaries that were clearly outmatched by U.S. forces. … At first game analysts assumed the outcomes were spurious, the result of overly aggressive “red teams” … But the increasing frequency with which the games turned escalatory and the wide range of participants and scenarios suggested that something else was at work, something that Air Force planners did not understand.

While classification prevented more details from being disseminated, Yale Professor Paul Bracken’s excellent, [just-released book](http://www.amazon.com/The-Second-Nuclear-Age-Strategy/dp/080509430X/ref=tmm_hrd_title_0?ie=UTF8&qid=1353829045&sr=8-1), The Second Nuclear Age, reveals significant details of a June 1983 war game, codenamed Proud Prophet (pp. 81-89).\* This war game differed from earlier exercises in that Secretary of Defense Caspar Weinberger and JCS Chairman. General John W. Vessey Jr. played themselves and our actual war-fighting plans were used. According to Bracken:

The result was a catastrophe that made all the wars of the past five hundred years pale in comparison. A half billion human beings were killed in the initial exchanges and at least that many more would have died from radiation and starvation. NATO was gone. So was a good part of Europe, the United States, and the Soviet Union. Major parts of the northern hemisphere would be uninhabitable for decades. (page 88) …

This game went nuclear big time, not because Secretary Weinberger and the chairman of the Joint Chiefs were crazy but because they faithfully implemented the prevailing U.S. strategy. (page 88) …  after Proud Prophet, there was no more over-the-top nuclear rhetoric coming out of the United States. Launch on warning, horizontal escalation, early use of nuclear weapons, tit-for-tat nuclear exchanges – these were banished, conceptually and rhetorically. The Reagan administration switched gears. The chairman of the Joint Chiefs spent the next several years cleaning up U.S. war plans. Nuclear threats were gone. (page 89)

But is the nuclear threat gone today? The 2004 war games, described above, seem to indicate that threat is alive and well, as do recent implied US nuclear threats against both Russia and China – see my blog posts of [November 10](http://nuclearrisk.wordpress.com/2012/11/10/us-creates-nuclear-trip-wire-in-poland/), [September 28](http://nuclearrisk.wordpress.com/2012/09/28/another-early-warning-sign/), and [September 26](http://nuclearrisk.wordpress.com/2012/09/26/poking-the-russian-bear-and-baiting-the-chinese-dragon/) for details. And, as Prof. Bracken’s book ably demonstrates, nuclear proliferation and terrorism have added dangerous new dimensions.

### Waivers

#### The United States federal government should provide a waiver for the implementation of restrictions that prevent leasing of conventional natural gas production in the United States Outer Continental Shelf.

#### It’s competitive- Reductions are permanent and quantifiable

GEP 99 (Georgia Environmental Protection , <http://www.air.dnr.state.ga.us/bank/forms/faqsheet.pdf>)

The reductions must be “permanent;” i.e., they must be assured for the life of the corresponding Emission Reduction Credit through an enforceable mechanism such as a permit condition;

The reductions must be "quantifiable;" i.e., the amount, rate and characteristics of the reduction must be measured or calculated through a reliable method and approved by the Environmental Protection Division;

#### The counterplan solves all the aff—back-end waiver avoid the need to meet restrictions. Insures public engagement in environmental processes- that avoids politics

GLICKSMAN & SHAPIRO 4 a. Robert W. Wagstaff Professor of Law, University of Kansas Member Scholar, Center for Progressive Regulation b. John M. Rounds Professor of Law, University of Kansas Member Scholar, Center for Progressive Regulation; University Distinguished Chair in Law, Wake Forest University School of Law [Robert L. Glicksman, Sidney A. Shapiro, Improving Regulation Through Incremental Adjustment, Kansas Law Review, 52 U. Kan. L. Rev. 1179]

Reform of environmental and other regulation has been a popular topic for academics, think-tanks, and interested parties for the last two decades. Claiming that existing regulation is excessive and irrational, critics have successfully convinced Congress and the White House to implement a plethora of procedural requirements to analyze a proposed regulation before it is promulgated.I In our recent book, Risk Regulation at Risk,2 we argued that the previous initiatives address the possibility of regulatory failure on the wrong end of the regulatory policy implementation process. Current efforts to rationalize environmental and other health and safety regulation at the "front end" of the regulatory process are doomed to fail because of moral, methodological, and informational limitations.3 We suggested that one way of improving regulation would be to rely on incremental adjustments in regulation on the "back end" of the regulatory process.4 One important advantage of proceeding in this manner is that regulatory policy is adjusted in light of its actual impact, as compared to the significant guesswork that is required to use front-end analysis. In this manner, a back-end adjustment process is consistent with the pragmatic approach to public policy that we advocated in the book.5

This article addresses in more detail the potential of two types of back-end processes: (1) deadline extensions and (2) waivers, exceptions, and variances.6 Our analysis proceeds in three steps. Part II describes the almost exclusive focus of regulatory reformers on the front end of the process. Part III offers a close examination of five federal statutes that provide opportunities for the two types of adjustments we are studying. The results confirm our earlier assertion that Congress has authorized agencies such as the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the Interior Department to make these types of back-end adjustments available in a variety of contexts and for a variety of reasons.? Our analysis reveals that Congress has established six different grounds for back-end adjustment, and we assess the potential for each of these grounds to improve regulatory policy. Although we recommend the imposition of conditions on the issuance of some of these back-end adjustments, we find that these adjustments are generally consistent with the precautionary tilt of the statutes in which they are located because they still require the regulated entity to do the best it can to protect people and the environment. Where such protective mechanisms are absent, we urge that the statutes be amended to include them.

Part IV analyzes the procedures by which requests for back-end adjustments are currently processed. We find that agencies consider most applications for back-end adjustments using informal procedures that include public notice and solicitation of public comments, although in a few instances, more formal procedures apply. We favor the informal approach because it is an efficient way for agencies to respond to the issues raised by requests for back-end adjustments and because more elaborate procedures are not necessary to promote rational decisionmaking, given the nature of the issues likely to be raised in back-end adjustment proceedings. We are concerned, however, about the extent to which effective public participation will occur under these procedures. We therefore endorse two steps to enhance the transparency of back-end adjustment decision-making: the establishment of electronic reading rooms and the issuance by agencies of annual reports on back-end ad- justments.8 We argue that these two mechanisms will facilitate involvement by public interest groups and interested citizens by allowing them to prioritize the adjustment proceedings in which they wish to become involved. The result is likely to be enhanced agency accountability and reduced opportunities for agency abuse of the back-end adjustment process.

### Arctic DA

#### Cooperation high in the Arctic

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Prospects for cooperation

Against the background of the changes in the Arctic, this region is occasionally identified as a potential area of future conflict. However, it is important first to point out that there is much scope for cooperation. This is particularly apparent when considering “soft” security concerns such as environmental pollution resulting from the extraction of raw materials. The threats that arise for humans from the exceptional climatic situations are pushing actors towards cooperative approaches, too. Many of these issues are taken on by the Arctic Council. Founded in 1996, the Council is a forum to promote coordination among the eight Arctic countries. Representatives of indigenous peoples have a consultative role. One concrete result of the Arctic Council is a binding agreement on maritime search and rescue activities. For 2013, an agreement on standards for oil spill preparedness and response is expected, which will reinforce the current non-binding offshore oil and gas guidelines. Cooperation among the littoral states is also advancing in the sensitive area of national sovereign rights. The 2010 border treaty between Russia and Norway indicates that bilateral agreements are possible – even though the power asymmetry between the two countries is reflected in a deal advantageous to Russia. International maritime law and the pressure of non-Arctic countries are also fostering multilateral cooperation, at least in areas where all parties can still gain further sovereign rights. The United Nations Convention on the Law of the Sea (UNCLOS) allows for the extension of the continental shelf towards the North Pole, which would extend the mining privileges of the coastal states at the expense of the interests of non-Arctic states. The water column and the animals living in it, by contrast, would continue to enjoy international status. In the Ilulissat Declaration adopted in 2008, the coastal states declared their intention to settle any territorial conflicts within the framework of UNCLOS. By signing the declaration, the US – which has not ratified UNCLO S – has signalled its willingness to observe it within the Arctic. What is more, the coastal states have been collaborating for a long time in the exploration of the sea bed. Provided that there are no major conflicts among these countries, non- Arctic players will hardly be able to assert themselves in this context. Potential for conflict The scope of sovereign rights in the maritime area around the Svalbard archipelago, believed to be rich in oil and gas, is a question that is not easy to resolve. On the one hand, the archipelago and the surrounding 200-mile zone are an undisputed part of Norwegian territory. On the other hand, Norwegian sovereignty over the archipelago is substantially limited by the Svalbard Treaty of 1920. All 40 signatory countries have the right to exploit natural resources and to conduct research. The treaty also states that the archipelago must not be used for offensive military purposes. Likewise, the right to levy taxes is limited to the administrative requirements of Svalbard. It was only later under UNCLO S that the EEZ emerged as an institution. Hence, it remains unclear whether the Svalbard Treaty also applies to this zone. Countries such as Russia, Iceland, and the UK assume this to be the case. Norway takes the opposite view. Nevertheless, Oslo has not declared a full EEZ in this area, but established a fisheries protection zone instead. It concedes fishing privileges to Russia, Iceland, and other nations. This has never been explicitly acknowledged by these countries, but is usually accepted in practice. The modus vivendi has so far provided stability as it has served Russian interests too, with the fisheries protection zone granting privileges to Russian fishing interests over other signatory states. Moreover, Russia has sufficient oil and gas reserves at its disposal on its own territory. Norway, by contrast, has a strong interest in opening up the area for oil and gas exploration. Such an opening, however, would undermine the current fragile balance and encourage other signatory states to question openly the scope of the Treaty. Even if Norway were to take no action, other nations could try to push for an opening of the area for exploration with reference to the Treaty. Due to the variety of the players concerned and the absence of international rules, the issue can ultimately only be resolved at a political level. Interests and positions diverge concerning the issue of sovereignty over the new sea routes as well. Again, even the Arctic coastal states do not agree on the legal status: Russia and Canada regard the routes as internal waterways in what is a very broad interpretation of UNCLO S. This implies that ships flying foreign flags must request permission for transit. Other coastal nations, such as the US, and non-Arctic players like the EU and presumably China, however, consider these to be international waterways for which no authorisation for transit is necessary. For the time being, no escalation of this conflict is to be expected, since the commercial navigation routes are competing with non-Arctic sea routes and the use of these routes will correlate with the extent of their opening and the stability of the agreed arrangements. In addition, Russia and Canada depend on the cooperation of foreign non-state and state-owned players in order to attract investments in their inadequate coastal infrastructures. Also, the International Maritime Organisation is working on a binding Polar Code, which will establish clear rules for polar navigation. This will weaken the case for additional national regulations and approval procedures. Defensive and offensive military capabilities Following the disarmament of the 1990s, new military capabilities are again being deployed in the Arctic. In many instances, these capabilities are defensive in nature and linked to intensified activities concerning either the extraction of raw materials or new “soft” security issues. Due to the weather conditions, only military or coast guard assets tend to be able to safely operate under Arctic conditions. In light of the new possibilities, there is also a growing awareness of the lack of surveillance capabilities for the territory and the enforcement of sovereignty. Particularly for countries like Canada and Denmark, building up policing and military capabilities serves to avoid the impression that the Arctic is of little national interest. However, offensive capabilities are also being built up in the Arctic, reflecting global ambitions rather than changing regional dynamics. Since the Arctic Ocean provides Russia’s best access to the world’s main oceans, two thirds of its navy are already stationed in the Arctic. Instead of upgrading border protection capabilities, Moscow so far has focused on modernising its offensive capabilities for the purpose of power projection. What is more, Russia has resumed patrol flights over the Arctic and submarine patrols previously carried out during the Cold War, albeit at a lower frequency. This testifies to the persistence of a rather traditional Russian threat perception. Today, the Arctic is characterised by a mixture of cooperation, competition, and conflicts of interest. There are indications that the growing presence of non-Arctic players prompts more cooperation among the coastal states. Open conflicts are unlikely to break out in the foreseeable future: While existing mechanisms for cooperation may be too weak to resolve some conflicts of interest, the costs of military conflict will likely be considered too high in light of uncertain gains. If conflicts were to occur, they would probably be limited in both time and space, aiming at the enforcement of interpretations of international law. Having said that, as the involvement of all key political players increases, the Arctic is also the scene of overarching geo-strategic competition and conflict. The extent to which the thawing of the Arctic means conflict or rapprochement and cooperation will therefore also depend on the shape of the future world order and the relationships between the different power centres.

#### Drilling risks US militarization to protect economic interests

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Because no entity, other than perhaps the Russian government, has the military bases and means to accommodate area-wide protection and enforcement needs, the United States will necessarily have to maintain strong cooperative arrangements with nations and corporations for the coordinated, safe, and secure use of Arctic resources. Although the Arctic nations themselves may strive for cooperation, **entanglement with corporations** and other foreign entities will assuredly produce tensions that are outside the domain of the US Coast Guard.

Right now, the US military position in the Arctic is problematic. Both the Northern Command and the European Command have responsibility for what, in a cooperative multinational environment, is a single area ([Carafano et al., 2011](http://bos.sagepub.com.proxy.library.emory.edu/content/68/4/9.full#ref-7); [Carmen et al., 2010](http://bos.sagepub.com.proxy.library.emory.edu/content/68/4/9.full#ref-8)). Some analysts argue that NATO should play the coordinating role in the Arctic ([Conley, 2012](http://bos.sagepub.com.proxy.library.emory.edu/content/68/4/9.full#ref-9)), but such a path would create new tensions among the national players, and it does not resolve the specific position of the United States in the Arctic ([Wezeman, 2012](http://bos.sagepub.com.proxy.library.emory.edu/content/68/4/9.full#ref-28)).

The United States asserts that it has power projection and strategic deterrence capabilities in the Arctic because of its submarine, missile, and airborne assets ([Defense Department, 2011](http://bos.sagepub.com.proxy.library.emory.edu/content/68/4/9.full#ref-10)). But security events in the Arctic may be largely associated with expensive commercial assets populated by civilians and monitored or escorted by foreign government representatives. Fighter jets and torpedoes have no role to play in such confrontations. A naval presence is required, with personnel who can board and secure the facility, as necessary. In general, the US Defense Department lacks the naval resources to maintain sea control for these situations. If non-Arctic countries set a precedent—even simply through prospecting surveys or shipping activity—their case for limiting the unresolved sovereignty rights of the Arctic nations is strengthened. Corporations necessarily engage in such activities, and it is natural for commercial ventures to test the boundaries of their franchises. But in a more negative sense, there is also the fear that access to a relatively unmonitored Arctic may offer an alternative location for companies to dispose of toxic waste.

In assessing US security needs in the Arctic, the question to ask is not “What are the security risks when the Arctic opens?” but rather “How will security risks evolve as the geopolitical and economic expansion play out?” The physical speed with which the Arctic changes will determine the gap between reality and expectations. For example, the more Russia, China, or South Korea experience significant benefit from Arctic activities—to the point where they expect and depend on the growth from those activities—the more likely that a period where the Arctic again becomes environmentally inhospitable, or that the rules of sovereignty change to **limit access**, or that commercialization of the region will cause **political strains** from lost revenue or prestige.

Abrupt changes in expectations and in a nation’s ability to cope with changing circumstances appear to be factors that can trigger conflict ([Agency for International Development, 2009](http://bos.sagepub.com.proxy.library.emory.edu/content/68/4/9.full#ref-1)). If the early international relations dynamics in the Arctic move fairly slowly, all parties could co-evolve toward balanced positions with relatively little conflict. Rapid dynamics could raise tensions. If all nations sustain approximately equal positive or negative repercussions from changes in Arctic regulations or climatic conditions, or they all believe they could limit the pace and extent of negative impacts through negotiation, routine diplomatic processes could mollify tensions. Climate change will, however, produce an ever-shifting playing field that heightens tensions among countries more concerned with relative rather than absolute advantage in the area.

Will events in the Arctic require US military responses before 2030? The consideration of uncertainty is part of climate and economic forecasting ([Hendry and Ericsson, 2001](http://bos.sagepub.com.proxy.library.emory.edu/content/68/4/9.full#ref-12); [Meehl et al., 2007](http://bos.sagepub.com.proxy.library.emory.edu/content/68/4/9.full#ref-18)), and uncertainty is a mainstay of military planning: The adversary seldom announces battle plans prior to engagement. Military preparedness hinges not on best estimates, but on uncertainties that reflect risks the nation wants managed. From the vantage point of the present, the best estimate is that the Arctic of the near future will be free of military conflict. Risk, however, is the combination of probability (uncertainty) and consequence. Lower-probability, high-consequence events generally contribute more to risk than the best estimate. They are consequently much more relevant to national security planning than high-probability, routine-consequence conditions.

Perceived economic accessibility to the Arctic and commercial success in the Arctic change the conditional probabilities; they increase the odds that a sequence of events that leads to conflict will materialize. It would be foolhardy to disregard the risks that low-probability, high-consequence events imply. An unexpected confluence of vessels and aircraft being in the wrong place, when Arctic weather conditions prevent adequate communications, could lead to tense situations, unless national security forces have the ability to readily manage the situation.

#### Capabilities will include ballistic missile defense and increase the risk of conflict escalation

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In 2009, The United States Navy released a roadmap for the Artic in which they report “Opening of the Arctic may lead to increased resource development, research, tourism and could reshape the global transportation system. These developments offer opportunities for growth, but also are potential sources of competition and conflict for access and natural resources”**[Error! Hyperlink reference not valid.](file:///C:%5CUsers%5CUser%5CDesktop%5CArctic%20Paper%20Series.docx#_ftn11)** The report continues to add that “ While the US has stable relationships with other Arctic nations, the changing environment and competition for resources may contribute to increasing tension, or, conversely, provide opportunities for cooperative solutions.” The United States Navy, the biggest actor for US policy in the area, hence realizes the delicacy of the area and the potential for security escalation while at the same time understands the potential for cooperation. It is with this mentality that the report states that “The Navy’s arctic experience and current operational capabilities and limitations provide the point of departure for this roadmap”**[Error! Hyperlink reference not valid.](file:///C:%5CUsers%5CUser%5CDesktop%5CArctic%20Paper%20Series.docx#_ftn13)** Tt goes on to add “While the Arctic is not unfamiliar for the Navy, expanded capabilities and capacity may be required for the Navy to increase its engagement in this region.”

Compared to Russia; The navy roadmap indicated the U.S is dragging behind, especially in terms of Icebreakers, which The U.S Coast guard only possess three (2010 estimate), in comparison to Russia’s military fleet of 18 icebreakers, and their seven modern multi-mission capable fleet (2010 estimate) powered by nuclear reactors that are capable of cutting through ice twice as thick as the other icebreakers; the report highlighted the need for vast modernization and development of the U.S. Capabilities “A more robust operational icebreaker fleet is essential for supporting U.S. military operations, maintaining U.S. presence, and preserving U.S. economic and other interests throughout the region”.  In January of 2009, the U.S. government released the National Security Presidential Directive 66/Homeland Security Presidential Directive 25, which included a new policy for the U.S in the Arctic Ocean; it highlights the same concerns raised by the Navy Roadmap report: “the United States to assert a more active and influential national presence to protect its Arctic interests and to project sea power throughout the region “. The navy roadmap reports emphasized the need for the United States to work on filling the gaps in its military capacity, the roadmap recommended that the U.S.: “the United States to Strengthen ballistic and cruise-missile defensive systems, asserting that the navy needs to reestablish itself in antisubmarine warfare and in littoral dominance in order t-o assure sea control.” The United States recognizing it’s lacking behind other countries such as Russia and Canada planned on stationing in Anchorage, Alaska, 36 F-22 Raptor stealth fighter jets; a number which equaled up to 20% of the U.S total fleet of F-22 fighter planes (2010est), highlighting the seriousness from which the United States is viewing the Arctic. The United States of America along with Canada worked to renew and hence Canada ratified the North American Aerospace Defense Command (NORAD) “a bi-national U.S.-Canada command charged with aerospace and maritime warning for North America.” The United States has taken the most diplomatic initiatives and steps to ensure the Arctic Stability which is highlighted by the statement made by NORAD describing their operation in Alaska as “positive interaction with Russian military counterparts during the reset of relationships between our nations” The 2010 Quadrennial Defense Review Report noted “we will seek opportunities to work with Moscow on emerging issues, such as the future of the Arctic”**[Error! Hyperlink reference not valid.](file:///C:%5CUsers%5CUser%5CDesktop%5CArctic%20Paper%20Series.docx" \l "_ftn21" \o ")** and adds that “will also enhance defense relationships and continue to work with Canada in the context of regional security [and] increased interaction in the Arctic.”.

#### That risks war

Blunden Professor of IR 09 – Professor of International Affairs @ University of Westminster [Margaret Blunden, “The New Problem of Arctic Stability,” Survival | vol. 51 no. 5 | Oct–Nov 2009 | pp. 121–142

The Arctic region remains stable for the moment but there is a risk that it could be sucked into a vicious spiral. New and upgraded military infrastructure, increased¶ military activity and the expanding tentacles of NATO are increasing Russia’s sense of strategic isolation. Moscow is concerned with questions of equality among¶ the Arctic states and has repeatedly asked that dividing lines should not be created.40 Although immediate national interests may conflict among the NATO Arctic states, and bilateral deals spanning¶ Alliance boundaries cannot be ruled out, there does appear to be growing anti-Russian solidarity in the region. This could jeopardise détente and the wide-ranging collaboration put in place in the region since the end of the Cold War. From vicious to virtuous circle The overriding concern in the Arctic must be to resist a slide back into confrontation at the expense of cooperation. Focusing on security is bound to increase because of the economic stakes. The defence and security strategies of all the Arctic powers have also to take into account that armed aggression in the High North could result from a major crisis elsewhere.41 Active measures to improve defences, and defence coordination among the Western states should, however, be set in the context of the strategic objective of maintaining stability in the region. Deployment of new defence systems, and upgrading or expanding existing ones, needs to be evaluated in this context. Policymakers need to pay explicit attention to the incidental impact of security measures directed elsewhere, as in the case of missile-defence plans, currently under review in Washington, or of NATO expansion. The identification of common interests and common challenges with Russia, and agreement on a desired end state (necessary for cooperation to take root in any relationship42) are particular imperatives in the shifting climatic, economic and security circumstances of the Arctic. Deterrence needs to be balanced with reassurance and engagement. A search for opportunities for security collaboration, confidence building and the development of common procedures needs to go hand in hand with the avoidance of alarmist or provocative rhetoric, and robust resistance to self-interested domestic¶ constituencies. Inclusive institutions and multilateral, bilateral and regional collaboration need radical strengthening to help maintain the Arctic as a zone of harmony and cooperation, an objective espoused in Russia’s own Arctic strategy. Russian officials insist that, despite plans to reinforce the security of the northern border, its preferred policy is to pursue closer cooperation in a region it describes as a ‘zone of peace’.43A number of the issues identified after 2002 by the NATO–Russia Council as suitable to be addressed jointly, with the help of specialist committees and expert groups, are particularly relevant to the Arctic. These include the struggle against terrorism, counter-narcotics, airspace management, military-to-military cooperation, submarine-crew search and rescue, crisis management, logistics and civil emergencies. Although the achievements of the NATO–Russia Council have been disappointing, the resumption of its activities following the interruption caused by the Georgia crisis in 2008 offers a new opportunity for progress.

### Fees CP

#### Text: The Secretary of the Department of the Interior should mandate that companies who lease federal lands for conventional natural gas production submit plans to diligently develop federal land and water and levy an extra 4 dollar fee per year on acres of federal land or water that go unused.

#### Ramps up production quickly and raises revenue

#### Menedez Senator from New Jersey 12 [Bob, , “Menendez Renews Call for Oil Companies to "Use It or Lose It" In Wake of DOI Report that Nearly 2/3 of Fed Lease Areas Undeveloped,” 5-15 <http://votesmart.org/public-statement/693343/menendez-renews-call-for-oil-companies-to-use-it-or-lose-it-in-wake-of-doi-report-that-nearly-23-of-fed-lease-areas-undeveloped>]

In the wake of a new report by the U.S. Department of Interior (DOI) which shows that nearly two-thirds of federal lands and waters leased by Big Oil remain unexplored, U.S. Senator Robert Menendez today renewed his call for Congress to require these companies to pass his "Use It Or Lose It" legislation, S.600.

"Today's report should be a wake-up call that Big Oil is sitting on taxpayer land, boosting their stock prices, and sticking it to middle class families struggling with sky-high gasoline prices," said Menendez. "This land and these waters belong to the American taxpayer and it's past time we stood up and told these companies: Use It or Lose It."

According to the report, more than 70 percent of the tens of millions of offshore acres currently under lease are inactive, neither producing nor currently subject to approved or pending exploration or development plans. Out of nearly 36 million acres leased offshore, only about 10 million acres are active -- leaving nearly 72 percent of the offshore leased area idle.

In the lower 48 states, an additional 20.8 million acres, or 56 percent of onshore leased acres, remain idle. Furthermore, there are approximately 7,000 approved permits for drilling on federal and Indian lands that have not yet been drilled by companies.

Under current law, oil companies can lease possible oil reserves on Federal land regardless of whether they are producing oil on that land or even have plans to produce oil there. Some have accused oil companies of leasing -- but failing to develop -- federal land in order to book more reserves on their balance sheets and inflate their stock price. Others allege oil companies are attempting to prevent competitors from producing on those acres.

Menendez introduced "Use It Or Lose It" legislation to require companies to report if, when and how they intend to actually develop federal land as well as report their investments in oil development. The aim of the legislation is to spur production by requiring clear development plans and imposing a modest fee for acres not in production the aim is to spur production.

KEY COMPONENTS OF THE "USE IT OR LOSE IT" LEGISLATION

\* Mandates that oil companies submit plans to diligently develop Federal land and water leased by oil companies   
\* Levies an extra 4 dollar fee per year on acres of federal land or water that go unused

#### Doesn’t link to politics

#### The Center for Public Integrity 11 [“In election year, Interior Department may take on a popular target: Big Oil,” 6-17, http://www.publicintegrity.org/2011/06/17/4926/obama-administration-signals-higher-gas-royalties-public-lands-and-anticipated]

The Interior Department does not need congressional consent to make changes such as raising royalty rates.

### Solvency 1nc

#### Shale sustainable --- peer reviewed, thorough, comprehensive and contains control variables

UT 2-28 ["New, Rigorous Assessment of Shale Gas Reserves Forecasts Reliable Supply from Barnett Shale Through 2030," 2-28, http://www.utexas.edu/news/2013/02/28/new-rigorous-assessment-of-shale-gas-reserves-forecasts-reliable-supply-from-barnett-shale-through-2030/]

AUSTIN, Texas — A new study, believed to be the most thorough assessment yet of the natural gas production potential of the Barnett Shale, foresees slowly declining production through the year 2030 and beyond and total recovery at greater than three times cumulative production to date. This forecast has broad implications for the future of U.S energy production and policy. The study, conducted by the Bureau of Economic Geology (BEG) at The University of Texas at Austin and funded by the Alfred P. Sloan Foundation, integrates engineering, geology and economics in a numerical model that allows for scenario testing based on many input parameters. In the base case, the study forecasts a cumulative 44 trillion cubic feet (TCF) of recoverable reserves from the Barnett, with annual production declining in a predictable curve from the current peak of 2 TCF per year to about 900 billion cubic feet (BCF) per year by 2030. This forecast falls in between some of the more optimistic and pessimistic predictions of production from the Barnett and suggests that the formation will continue to be a major contributor to U.S. natural gas production through 2030. The Bureau of Economic Geology will be completing similar studies of three other major U.S. shale gas basins by the end of this year. The BEG study examines actual production data from more than 16,000 individual wells drilled in the Barnett play through mid-2011. Other assessments of the Barnett have relied on aggregate views of average production, offering a “top down” view of production, says Scott Tinker, director of the BEG and co-principal investigator for the study. The BEG study, in contrast, takes a “bottom up” approach, starting with the production history of every well and then determining what areas remain to be drilled. The result is a more accurate and comprehensive view of the basin. The BEG team enhanced the view by identifying and assessing the potential in 10 production quality tiers and then using those tiers to more accurately forecast future production. The economic feasibility of production varies tremendously across the basin depending upon production quality tier. The study’s model centers around a base case assuming average natural gas prices of $4 for a thousand cubic feet but allows for variations in price, volume drained by each well, economic limit of a well, advances in technology, gas plant processing incentives and many other factors to determine how much natural gas operators will be able to extract economically. “We have created a very dynamic and granular model that accounts for the key geologic, engineering and economic parameters, and this adds significant rigor to the forecasts,” said Svetlana Ikonnikova, energy economist at the BEG and co-principal investigator of the project. Whereas thickness and porosity affect the reserves greatly, price is a dominant factor affecting production. While the BEG model shows the correlation between price and production, it suggests that price sensitivity is not overly dramatic, at least in the early phase of a formation’s development. This is because there are still many locations to drill in the better rock, explains Tinker, which is cost effective even at lower prices. “Drilling in the better rock won’t last forever,” says Tinker, “but there are still a few more years of development remaining in the better rock quality areas.” The data in the model stop at the end of 2010, after approximately 15,000 wells were drilled in the field. In the base case, the assessment forecasts another 13,000 wells would be drilled through 2030. In 2011 and 2012 more than 2900 wells were actually drilled, in line with the forecast, leaving just over 10,000 wells remaining to be drilled through 2030 in the base case. Wells range widely in their ultimate recovery of natural gas, a factor the study takes into account. A new method of estimating production for each well, based on the physics of the system, was integral to the project and should offer a more accurate method of forecasting production declines in shale gas wells. This method, along with several other components in the work flow, has been submitted in several manuscripts to peer-reviewed journals. The papers have already undergone a form of professional peer review built into the BEG research process. Before submitting the papers to journals, the BEG team invited an independent review panel with members from government, industry and academia to critique their research. At an open day for academics and industry scientists, 100 attendees were invited to offer additional feedback. Scientists and engineers from two of the larger producers in the Barnett — Devon Energy and ExxonMobil — offered critical feedback on the methodology during two in-house corporate review days. Finally, the BEG hired a private consulting firm to individually critique the draft manuscripts and offer suggestions for improvement of the work. Overall, the rigorous assessment of the country’s second most productive shale gas formation reaffirms the transformative, long-term impact of shale and other unconventional reservoirs of oil and gas on U.S. energy markets. Tinker compares the expansion of hydrocarbon reserves from shale gas to the expansion of global oil reserves from deep-water exploration that has happened in the past several decades. “Drilling into unconventional reserves is potentially analogous to offshore oil in terms of impact,” Tinker says.

#### No state regulations

**Hopey 3/10**/13 – Staff Writer [Don Hopey, “Fracking's 'revolving door' draws a warning,” Pittsburgh Post-Gazette, March 10, 2013 4:28 pm, pg. <http://www.post-gazette.com/stories/local/state/frackings-revolving-door-draws-a-warning-678701/#ixzz2NAriPURL>

Many of Pennsylvania's policymakers, regulators and enforcement workers have come from the oil and gas industry they oversee, or they leave state jobs for industry jobs, according to a recent report that questions the impacts of such a "revolving door" on public policy decisions.

A report titled "Fracking and the Revolving Door in Pennsylvania" identified 45 current or former state officials who have links to the energy industry and gas drilling and fracking regulation, including 28 who have left to take industry jobs.

The 30-page report, released two weeks ago by the Public Accountability Initiative ([public-accountability.org](http://public-accountability.org/2013/02/fracking-and-the-revolving-door-in-pennsylvania/)), a Buffalo, N.Y.-based nonprofit, nonpartisan research organization focused on corporate and government accountability, said that attrition from government jobs to positions in the regulated industry calls into question the commitment of those employees to enforce regulations on companies they could soon work for.

Enforcement could also be hurt, the report said, when industry executives move into regulatory positions in government.

According to the report, the last four governors, including Tom Corbett, have "strong ties to the natural gas industry," as do a number of administrators from previous governors' offices, and 20 DEP administrators and employees, Democrats and Republicans alike, including all five DEP secretaries since the department was created in 1995.

That group includes DEP Secretary Michael Krancer, who was a judge on the state Environmental Hearing Board before his appointment as secretary. But prior to that, the report said, he was a general counsel at a utility, Exelon, that relies on natural gas, and once worked as a litigation partner at Blank Rome LLP, a law firm and lobbying group that represents natural gas interests and is an associate member of the Marcellus Shale Coalition.

"The revolving door data in this report raises troubling questions about the incentives that may be guiding public officials' oversight of fracking in Pennsylvania, from governors to DEP secretaries to well inspectors." Robert Galbraith, a research analyst at Public Accountability Initiative, said in the report he authored.

#### Low prices kill offshore investment

Schaefer **editor of the Oil & Gas Investments** 12 [Keith, editor and publisher of the Oil & Gas Investments Bulletin, "Investing in Offshore Drilling & Deepwater Exploration," 3-14, http://oilandgas-investments.com/2012/investing/offshore-drilling-exploration-investing/]

Offshore drilling is the most complex and expensive way of accessing oil and gas reserves, particularly when it comes to deep water and ultra-deep water exploration activities. While presenting the industry with its biggest challenges, deep water exploration and development yields the greatest potential rewards and healthy profit margins to the oil service companies involved. The rising complexity and costs of such endeavours demands huge capital investments, long term commitments, higher efficiencies and a growing reliance on technology in order to reduce uncertainties. The market fundamentals for oil service companies remain solid, oil prices are stubbornly holding their ground above $100 per barrel in a tough macroeconomic environment. The resiliency of high oil prices is fuelling increasing exploration and production spending by operators as the industry pushes further offshore into ever-deeper water. By 2020, offshore oil production is expected to account for 34% of the global output up from 25% in 1990. Offshore drilling companies are seeing a significant increase in tenders and requests from customers, particularly for the ultra-deep water rigs which are commanding higher daily rates for its units. The brightening outlook mirrored by record backlog orders and rising rates encouraged the industry to focus on adding new equipment in all market segments in a bid to provide the most versatile fleets of mobile offshore drilling units. Jack-up rigs are mobile, self-elevating drilling platforms that are towed by tugboats to the drill site with water depth of up to 400 feet. Jack-Ups are equipped with tubular structure legs that are lowered to the sea floor where jacking elevates the hull above the water surface before drilling operations begin. Semi-submersible rigs operate in a semi-submerged position with the lower hull ballasted down below the waterline. The rig consists of a deck which contains working areas, equipment and living quarters that is able to carry drilling operations in deep and ultra-deep waters of up to 10,000 feet in water depth. Drill Ships are self-propelled ships equipped for drilling in water depths in which jack-up rigs are incapable of working. They can drill in deep and ultra-deep waters in up to 12,000 feet of water depth. Rising oil prices have also spurred a construction boom in drilling rigs; the cost for a drilling ship easily surpasses $600M per unit where it is leased at $500k/day or more on 2 or 3 year contracts. The Jack-up market is seeing increased demand in Mexico, the North Sea, the Middle East and Asia while the floaters market which includes ultra-deep water rigs has been improving markedly in Brazil, Africa and the Gulf of Mexico. “There’s always a bull market somewhere.” There is more truth to this than most investors realize. And right now one of the biggest — if not THE biggest — bull markets in the entire Energy Patch is quietly taking shape. I’m referring to the technological revolution in oil & gas — the technologies, for example, that can increase yields by 4 to 7 times… launch huge new “discovery” fields… or even “extend the lives” of older fields. It is exactly these kinds of innovations that are creating triple-digit profit opportunities in the Oil & Gas Investments Bulletin portfolio. To learn more about what’s driving these opportunities in my OGIB personal portfolio — and how it all works, keep reading here. ————————————– The New Sweet Spot in North America’s Oil Patch It’s one of the hottest picks in the OGIB portfolio… A company operating in the heart of one of North America’s fastest-growing shale oil plays — with major short-term gain potential. And in my newest research, I explain how recent drill success could see this company’s production more than double AND “slingshot” its valuation. Follow this link to get it. ————————————– On top of strong oil prices, successful exploration drilling results continue to be reported. Last year, 23 discoveries were announced in 12 different countries in an average water depth of 6,200 feet representing the sixth consecutive year of 20+ announced discoveries. Successful exploration results pave the way for development drilling over the coming years which is another factor in driving future demand. For instance, Petrobras (a Brazilian semi-public multinational energy company) will be renting 26 rigs for the next 15 years in order to develop its deep water oil field discovered back in 2006. The oildfield known as Tupi holds an estimated 8 billion barrels of light sweet oil. In contrast to Brazil’s newly discovered deep water prospects, the Gulf of Mexico is an established deepwater region which is also seeing rising activity levels. The industry expects drilling activity to reach and surpass the pre-Macondo level of about 30 wells by early 2013. Ultra-deepwater rig demand is expected to increase dramatically through 2016 as exploration activity drives future development demand growth. Even with the construction boom, the ultra-deepwater utilization is expected to remain tight in the coming years. Not surprisingly, deep water’s contribution to global oil output is expected to reach 13% by 2020 up from 0% in 1990. Declining production from large onshore oilfields has to be replaced somehow and the era of easy to extract cheap oil is behind us. The following offshore drilling companies provide you with a strong exposure to the offshore oil services sector and a broad geographic reach since the world is their playground: Company Name Ticker & Price Dividend 2012E Yield Atwood Oceanics ATW 45.61 [+0.74] Diamond DO 68.51 [+0.57] $0.50 0.70% Ensco ESV 56.24 [+1.63] $1.40 2.40% Noble NE 38.77 [+0.57] $0.57 1.50% Ocean Rig ORIG 16.80 [+0.25] Pacific Drilling S.A. PACD 10.32 [+0.41] Rowan RDC 35.53 [+0.67] Seadrill Limited SDRL 38.70 [+0.89] $3.00 7.50% Transocean RIG 53.095 [+1.655] $3.16 6.20% Vantage Drilling Company VTG 1.41 [+0.11] Finally, there’s no free lunch as investing in any sector carries its risks. For offshore drilling companies, you’ll want to keep in mind every operator faces risks ranging from storm damage to volatile commodity prices. Offshore drilling accidents, while rare, may result in significant damage or a total loss of a rig. Capital budgets set by E&P companies are dependent on commodity prices; a sharp drop in oil prices will result in an oversupply of drill rigs on the market as capital budgets are scaled down. These companies usually borrow in order to finance construction of new rigs – What happens if prices collapse and contracts are renewed at much lower day rates? Can the company afford to service its debt? For dividend paying companies, future dividends depend on 3 variables of paramount importance: the business outlook, the debt leverage and the contract coverage.

#### Natural gas prices rising slowly --- won't spike

EIA 2-12 [most recent report, "SHORT-TERM ENERGY OUTLOOK," http://www.eia.gov/forecasts/steo/report/natgas.cfm]

Natural gas spot prices averaged $3.33 per MMBtu at the Henry Hub in January 2013, relatively unchanged from December, despite colder weather in January. EIA expects the Henry Hub price will average $3.53 per MMBtu in 2013 (compared with $2.75 per MMBtu in 2012) and $3.84 per MMBtu in 2014. Natural gas futures prices for May 2013 delivery (for the five-day period ending February 7, 2013) averaged $3.46 per MMBtu. Current options and futures prices imply that market participants place the lower and upper bounds for the 95-percent confidence interval for May 2013 contracts at $2.61 per MMBtu and $4.58 per MMBtu, respectively. At this time a year ago, the natural gas futures contract for May 2012 averaged $2.81 per MMBtu and the corresponding lower and upper limits of the 95-percent confidence interval were $1.83 per MMBtu and $4.31 per MMBtu.

#### No investment in natural gas only leases

**MarEx 11** (Maritime Executive , “Gas-Only Drilling in Offshore Moratorium Areas Suggested”, 1/19, http://www.maritime-executive.com/article/2005-10-20gas-only-drilling-in-offshore-moratori)

Oil and gas industry groups are criticizing a provision in House offshore drilling legislation that would allow the government to offer "natural gas-only" leases in areas that are currently off-limits to new production. The criticism is included in wider comments by petroleum producers to the Minerals Management Service (MMS), which has begun collecting public comments as it begins preparing an outer continental shelf leasing plan for 2007-2012. MMS asked for comment on the gas-only concept. Gas-only leasing was included in a bill by House Resources Committee Chairman Richard Pombo (R-CA.) that allows states to "opt-out" of offshore leasing bans. States exercising the option could allow gas-only leasing, or oil and gas leasing. Senate legislation by Senator Lamar Alexander (R-TN.) -- and supported by chemical companies and other industries that rely on the costly fuel -- also accepts the idea. However, the American Petroleum Institute (API), in comments this week to MMS, says gas-only and gas-preference leasing would offer the "false promise" of future supplies. The group says the concept would create uncertainties that could dampen investment, since it is impossible to predict with certainty what types of resources will be in an area. "A company might spend up to $80 million to buy a lease, conduct seismic testing, obtain the necessary permits, and drill a well(s) to determine whether any resources are present in amounts that make the prospect economic," the group says. "A company is unlikely to know if it had met the gas only or gas preference requirement until the capital investment had been made. Companies will be reluctant to spend tens of millions of dollars to explore for and develop a prospect, only to be forced to abandon the resource, stranding substantial investments."

#### Gas prices are always volatile --- no matter the source

Thomas W. **Overton** **editor of Power** **3/4**/2013. POWER’s gas technology editor. “Why We Need to Be Cautious in the Shift to Gas,” Power Magazine, http://www.powermag.com/gas/gas\_power\_direct/Why-We-Need-to-Be-Cautious-in-the-Shift-to-Gas\_5413.html.

U.S. natural gas production is remaining stubbornly high, and the Energy Information Administration (EIA) is projecting [flat to modest growth over the next two years](http://www.eia.gov/naturalgas/weekly/archive/2013/02_14/index.cfm). This, despite a better than 40% drop in the gas rig count over the past 12 months.  
Major utilities like MidAmerican and Duke Energy are replacing old, inefficient coal plants with new combined cycle gas turbines plants [even faster than they expected to](http://www.powermag.com/news/Low-Gas-Prices-Prompt-Duke-to-Retire-Coal-Units-Two-Years-Early_5354.html). Coal is mired in the doldrums of regulatory uncertainty, while the poster children for nuclear this past month were the crippled Crystal River plant, which [Duke formally gave up trying to fix](http://www.powermag.com/news/Progress-Energy-to-Scrap-Crystal-River-Nuclear-Plant_5368.html) on Feb. 5, and seemly cursed San Onofre, which got more bad news from the Nuclear Regulatory Commission in the form of an [apparent thumbs-down on Southern California Edison’s plan to conduct a limited-power restart test this year](http://www.utsandiego.com/news/2013/feb/12/full-power-only/).  
So, good times for gas power? Well, maybe.  
The cause of the enthusiasm can be seen in Figure 1, which charts EIA data for gross production and the average price of gas for electric power since 2008. If you’ve paid the least bit of attention to the gas business over the past few years, nothing here is new: Rising production, falling prices.

But a considerably different picture is painted by Figure 2, which extends the data back to 2002. Here, the steady increase in production is still apparent, but the price, not to put too fine a point on it, is all over the map.

We’ve been here before, of course. As contributor Steve Slocumb explains this month, a similar glut of cheap gas in the late 1990s [led to a similar gas power building boom](http://www.powermag.com/gas/gas_power_direct/The-Effect-of-Shale-Gas-on-Power-Generation-in-New-England_5415.html), producing a fleet of plants that went largely unused after the price of gas jumped up in the 2000s. It’s taken a decade, and more moderate prices, to get those plants a meaningful role in the generation mix.   
The difference in 2003, when gas prices began spiking upward, was plenty of excess coal and nuclear capacity that could fill the gap those gas plants were intended to occupy.  In 2013, we may be facing a different situation.   
Between 2003 and 2011 (the last year for which the EIA has complete data), total net generation increased about 217 GWh. Over that time, the U.S. added 74 GW of net gas capacity but a mere 9 GW of coal and only 2 GW of nuclear (all uprates). Total net generation for coal fell 240 GWh, while gas increased 363 GWh and nuclear was up 9 GWh. (Other resources—mainly wind and hydro—make up the differences here.)  
Clearly, gas has taken a big chunk of the generation pie from coal. But much of that coal capacity is not just idled—it’s bowing out of the mix. Since the end of 2011, at least 10 GW has been retired, and depending on whom you listen to, anywhere from 50 GW to 75 GW more is due to retire by 2016. Very little new capacity is expected to replace it—virtually all of the capacity growth through 2035 is expected to be in gas and renewables. So, roughly speaking, we could be looking as little as 275 GW of coal capacity by the end of 2016.   
The nation’s nuclear fleet is already running at better than 90% average capacity, and the room for additional uprates is about gone. And the same economic pressures are hitting nuclear as well. In addition to the 860-MW Crystal River plant, Dominion opted to [retire the 556-MW Kewaunee plant in Wisconsin](http://www.powermag.com/nuclear/5066.html) later this year. A number of other older plants, such as Entergy’s Vermont Yankee and Exelon’s Clinton plant are also considered ripe for retirement. And this assumes troubled plants like San Onofre and Fort Calhoun in Nebraska—the latter shut down since early 2011—are able to eventually return to service. New plants under construction at Vogtle in Georgia and Summer in South Carolina would replace this lost capacity—but only just.  
All of that’s going to tilt the playing field even more heavily toward gas. The EIA projects modest but continued growth in electricity demand in the near future—a bit less than 1% per year—reaching 4.716 TWh in 2035.   
So here’s the question few people seem to be asking: What happens if there is another spike in gas prices such as we saw several times in the 2000s? Because despite recent moderate prices and limited fluctuation, the history of gas is one of volatility. And we aren’t leaving ourselves a lot of margin for error.  
In general, two things induce price spikes: Supply shocks and demand shocks. (We’ll leave out speculation, since that’s usually driven by perceptions of the other two.) A supply shock doesn’t seem that likely given pretty solid evidence of long-term production growth.  
But demand shocks? That’s a whole different story. Consider just a few possible scenarios:

The price of compressed natural gas (CNG) is projected to remain where it’s been for several years, at about half the price of gasoline. Infrastructure challenges have limited the growth of CNG vehicles so far, but some major changes may be just over the horizon. The biggest roadblock for CNG is the need for traditional fueling stations—but what if you didn’t need one? What if you could top off your CNG vehicle every night from the gas line in your garage [using a miniature compressor that cost only a few hundred dollars](http://www.brcfuelmaker.it/eng/casa/phill.asp)? CNG demand for vehicle use is likely to build slowly, but dependent as it is on fickle consumer preferences, it's the sort of thing that could also take off without warning.

The demand for LNG in Asia is expected to grow strongly. China alone is in the process of boosting its LNG import capacity from a modest 11 mpta in 2011 to a whopping 87 mpta by 2020. And that’s just with the import terminals that are currently under construction or in advanced planning. Most analysts expect a big chunk of China’s gas demand to be met by developing its domestic shale reserves, but as I discuss in the lead article in this issue, there are a number of reasons to expect that [China’s shale production may be less than spectacular , while its need for gas-fired power may be dire](http://www.powermag.com/gas/gas_power_direct/Gas-Power-Fights-Uphill-Battle-in-China_5414.html). If shale gas in China goes bust, the nation could become a virtual black hole of demand in the international gas market.

Since his reelection, President Obama has shown a sudden willingness to tackle climate change. In addition to his remarks on gas, he also called on Congress to pursue a “market-based solution.” But with that call was a threat: If Congress doesn't act, he will, via executive orders “to reduce pollution, prepare our communities for the consequences of climate change, and speed the transition to more sustainable sources of energy.” Although Senators Barbara Boxer (D-Calif.) and Bernie Sanders (I-Vt.) [responded swiftly with a new carbon tax bill](http://blogs.wsj.com/washwire/2013/02/14/climate-change-battle-heats-up-again/), the current gridlock in Congress makes executive action seem far more likely than bipartisan legislation. Consider what would happen to gas demand if the president’s actions end up forcing even more coal plants into retirement than current projections estimate.

#### Decades until production

#### News Observer 12 ["Opening Atlantic Ocean to offshore drilling likely," 10-2, http://www.newsobserver.com/2012/10/02/2384560/opening-atlantic-ocean-to-offshore.html#storylink=cpy]

But even if the Atlantic Ocean is opened to energy companies, oil and gas production would likely not get underway for at least a decade. The energy exploration cycle is heavily regulated and requires seismic testing, environmental assessments, oceanographic mapping, military reviews and other regulatory hurdles before any oil and gas can start flowing. “There’s no way to speed this up,” said Athan Manuel, director of the Sierra Club’s lands protection program. The latest federal estimates from the U.S. Bureau of Ocean Energy Management for the entire Atlantic coast is between 11 trillion cubic feet and 54 trillion cubic feet of natural gas – well below the 84.2 trillion cubic feet found in the Marcellus Shale that spans New York and Pennsylvania. The amount of oil is likely between 1.3 billion barrels and 5.58 billion barrels, less than a year’s supply. With the market price of gas hovering near all-time lows, the Energy Information Administration, a division within the U.S. Department of Energy, has estimated that no oil or gas will be produced in the Atlantic or outer continental shelf before 2035. Drilling offshore could begin 3 miles beyond the coast, the point at which federal waters begin, extending as far as 200 miles in the ocean. Each mile away from land increases the cost of pipelines, land-to-rig travel and drilling in ever-deeper waters. $66M to $400M a year Beyond the engineering and technical challenges, offshore drilling would mobilize state governments to press Congress to change federal law to allow states to collect royalties on the lease fees, as is done for Gulf Coast states. North Carolina could collect $66 million to $400 million a year for the life of the reserves, according to a 145-page report issued September 2011 by a scientific advisory panel created by Gov. Perdue. The revenue amount, at the top end, could approach 2 percent of the state’s $20.2 billion annual budget. “You could scatter that money around all over state government,” said Weatherspoon of the N.C. Petroleum Council. He said the money could bolster programs such as environmental regulation, mental health services, community colleges and others that have been hard-hit by budget cuts. Weatherspoon said that offshore exploration would pit neighboring states against each other to host shore bases that would supply and support the offshore rigs. Such bases could involve hundreds of jobs in metallurgy, food preparation, transportation and related work. A 2009 report from the Southeast Energy Alliance, an industry trade group, estimated that offshore drilling could create 6,700 new jobs in North Carolina. Bill Holman, director of the State Policy Program at Duke University’s Nicholas Institute for Environmental Policy Solutions, said chances are slim that North Carolina could compete with larger ports in South Carolina and Virginia. Holman based his assessment on his tenure as a member of another offshore study panel, the Legislative Research Commission’s Advisory Subcommittee on Offshore Energy Exploration, which prepared a report in 2010. He said little research has been done on offshore resources, and noted that projected natural gas prices suggest that little will change in this regard in the near future. “We’re at the same state of knowledge on these issues as we were 20 years ago,” Holman said. “Until the price of natural gas goes way up, I’d be surprised if there would be very much interest, given the cost of developing those offshore resources versus the cost of developing the known resources.”

#### Drilling will destroy numerous biological hotspots

Gravitz Environment America 9—Oceans Advocate for Environment America [Michael Gravitz, Statement at the Department of Interior Hearing On Offshore Ocean Energy Development in Atlantic City, New Jersey, April 6, 2009, pg. http://tinyurl.com/cxkzanz]

3. When deciding whether to approve seismic testing or exploration and production off the east coast, your department needs to balance the safety of those special areas against the potential for damage from oil drilling. The only way to adequately assess the balance would be for your department (with the participation of NOAA and possibly the National Academy of Science) to do a comprehensive census of those special places and analyze possible impacts on them from drilling.

1. The Ocean: More Like A Diverse Forest Than A Desert

Many people look at the ocean and see it as a pretty, shiny surface. They may imagine a few fish swimming below the surface and a plain featureless bottom. This is not an accurate picture of the ocean in most places. Unless the bottom is sandy and continually disturbed by wind, wave or current the bottom of the ocean is filled with communities of diverse creatures. Depending on depth, penetration of light, type of bottom (i.e., muddy, sandy, pebbles, boulders) and other factors, the ocean’s floor is teaming with diverse communities of plants, invertebrates, shellfish, crustaceans and fish. Numerous kinds of fish live on the bottom. Other fish swim above the bottom in the water column at different levels. Thousands of types of phytoplankton, zooplankton and larvae at the base of most food chains ‘float’ around. Marine mammals, sea turtles and sea birds spend most of their time at or near the surface of the ocean.

All of these creatures are sensitive to the impacts of oil and pollution from oil and gas drilling; some are more sensitive than others. But none are immune to the short or long term effects of oil.

With this as background, it is important to recognize the special places in the ocean that are unique, especially sensitive to pollution or those that are especially productive. These include: submarine canyons cutting across the continental shelf; deep water coral gardens; plateaus where the floor of the ocean rises and becomes unusually productive because deeper nutrient rich waters come closer to the warmer temperatures and light of the surface; migratory pathways for marine mammals and sea turtles; and areas where fish aggregate to spawn or where larval stages of animals are concentrated. Finally, the margins of the ocean: beaches, bays and marshes are often unusually sensitive to oil pollution.

2. Special Places in the Atlantic Ocean Deserving of Protection

Based on the Environmental Sensitivity Index (ESI) and a crude measure of marine productivity that your own department uses, the New England, Mid Atlantic and South Atlantic planning areas are all very environmentally sensitive and highly productive. The South Atlantic planning area and Mid Atlantic have the first and third most environmentally sensitive coastlines, respectively, of all 22 MMS planning areas. New England comes in at #11. The South Atlantic and Mid Atlantic are ranked first and second respectively in terms of primary productivity among all the planning areas with North Atlantic being #12.

There are 14 submarine canyons between Massachusetts and Virginia that slice through the continental shelf (See attached list). Submarine canyons, some with a mouth as wide as eight to ten miles and 30-40 miles long, are important because they shelter unusual species, provide hard bottoms and sidewalls for creatures to attach to or burrow in, provide nursery areas for many commercially important fish and bring nutrients from the deep ocean up to more shallow waters. Sea life in these canyons is unusually diverse which is why drilling in or near submarine canyons with their risk from spills and chronic pollution from production would be a very bad idea.

There are a number of important underwater plateaus and reefs off the eastern seaboard which serve as fish baskets, places of unusual marine productivity where very high populations of fish reproduce and grow. Often these are called ‘banks’ or ‘reefs’ with names like Georges Bank, Stellwagen Bank, Gray’s Reef or Occulina Bank. Some of these areas of the ocean are shallow enough to allow sunlight to penetrate to the seafloor and nutrients from the deeper ocean feed a richer abundance of life. These banks and reefs sometimes offer the only hard substrate for creatures to attach in a wide area. . Drilling in biological hot spots like these and jeopardizing productive commercial and recreational fisheries would make no sense.

Like on land, certain areas of the ocean support migration corridors for fish, marine mammals, sea turtles and sea birds. For much of the Mid Atlantic there is a coastal corridor extending out 20 miles from shore in which endangered marine mammals like the northern right whale, various sea turtles and migratory fish travel. For example, the last 350 northern right whales on earth travel each year from the Georgia-Florida border where they give birth and nurse their calves to an area off Cape Cod where they spend the summer feeding. Loggerheads, leatherback and Kemp’s ridley turtles all use this corridor at various times of the year.

Another corridor, farther offshore at the edge of the continental shelf break and slope provides food for various endangered sea turtles and other kinds of whales and dolphins. Whales and dolphins are typically migratory and each is only seasonally present but taken together the area is important year round to these marine mammals.

There are four more hotspots of marine diversity and unusual productivity off the Mid Atlantic caused by ocean currents, type of bottom, [and] submarine canyons and other special characteristics. These include: the coastal waters off North Carolina near and south of Cape Hatteras, the mouth of the Chesapeake and Delaware Bays and off New York harbor. Coastal waters and sandy bottoms off New Jersey support a large and economically important clam and scallop industry.

#### Human survival is at risk

Nautiyal **Centre for Ecological Economics** 10—Centre for Ecological Economics and Natural Resources @ Institute for Social and Economic Change & Department of Earth and Space Sciences @ Indian Institute of Space Science and Technology [SUNIL NAUTIYAL1 & RAMA RAO NIDAMANURI “Conserving Biodiversity in Protected Area of Biodiversity Hotspot in India: A Case Study,” International Journal of Ecology and Environmental Sciences 36 (2-3): 195-200, 2010

The hotspots are the world’s most biologically rich areas hence recognized as important ecosystems not important¶ only for the rich biodiversity but equally important for the human survival as these are the homes for more than¶ 20% of the world’s population. India got recognition of one of the mega-diversity countries of world as the country¶ is home of the two important biodiversity hotspots: the Himalaya in north and the Western Ghats in the southern¶ peninsula. Policy makers and decision takers have recognized the importance of biodiversity (flora and fauna) and¶ this has resulted to segregate (in the form of protected areas) the rich and diverse landscape for biodiversity¶ conservation. An approach which leads towards conservation of biological diversity is good efforts but such¶ approaches should deal with humans equally who are residing in biodiversity hotspots since time immemorial. In¶ this endeavor, a study was conducted in Nagarahole National Park of Nilgiri Biosphere Reserve, in Karnataka. Our¶ empirical studies reveal that banning all the human activities in this ecosystem including agriculture, animal¶ husbandry has produced the results opposite to the approach ‘multiple values’ of national park. To monitor the¶ impact, existing policies have been tested from an economic and ecological view-point. Unfortunately, the local¶ livelihoods (most of them belongs to indigenous tribes) in the area have received setbacks due to the¶ implementation of the policies, though unintentionally. However, the ecological perspective is also not showing¶ support for the approach and framework of the current policies in the hotspots. Satellite data showed that the¶ temporal pattern of ecosystem processes has been changing. An integrated approach for ecosystem conservation and¶ strengthening local institutions for sustainable ecosystem management in such areas is therefore supported by this¶ study.

### Exports 1nc

#### Exports risk greater conflict in the SCS --- they are concerned with protecting supply lines

Clement editor at Dezan Shira Law Firm 12—Nicholas Clement, editor at Dezan Shira Law Firm (China) [May 25, 2012, “China and India Vie for Energy Security,” http://www.2point6billion.com/news/2012/05/25/china-and-india-vie-for-energy-security-11177.html]

Energy security is of utmost strategic importance to China and India if they hope to continue to expand their economies. Rapid growth rates in both countries have grown in tandem with increased demand for energy. By 2020, it is estimated that China and India combined will account for roughly one-third of the world’s GDP and, as such, will require vast amounts of energy to fuel their economies. As such, the competition for energy resources such as oil and natural gas will only become fiercer. An important aspect of energy security is maritime control in the Asia-Pacific oceans. The sea lines of communication that run through Asia effectively act as the vital arteries for both countries. Maritime security is thus of major national interest for both China and India, and is directly linked to their energy security. Recent military modernization within China has been focused towards upgrading its naval capabilities, and ultimately moving towards creating a strong and powerful blue-water navy. India’s drive for maritime dominance has resulted in its naval budget increasing from US$1.3 billion in 2001 to US$3.5 billion in 2006, with plans to further increase naval spending 40 percent by 2014. China’s thirst for oil has doubled over the last decade, and is only predicted to rise. Similarly, India relies on the energy shipped through maritime regions to fund its own industrialization. India continues to state its maritime goals in pure geopolitical terms, even explicitly acknowledging in their 2004 Maritime Doctrine that “control of the choke points would be useful as a bargaining chip in the international power game, where the currency of military power remains a stark reality.” Thus it is clear that energy security has been directly translated into a national security issue, which has both political and military implications.

#### No exports --- too expensive, spread of shale boom and local opposition

#### NYT 13 [Clifford, reporter for the NYT, "Exports of American Natural Gas May Fall Short of High Hopes," 1-5, http://www.nytimes.com/2013/01/05/business/energy-environment/exports-of-us-gas-may-fall-short-of-high-hopes.html?pagewanted=all&\_r=0]

Countries around the world are importing drilling expertise and equipment in hopes of cracking open their own gas reserves through the same techniques of hydraulic fracturing and horizontal drilling that unleashed shale gas production in the United States. Demand for American gas — which would be shipped in a condensed form called liquefied natural gas, or L.N.G. — could easily taper off by the time the new export terminals really get going, some energy specialists say. “It will be easier to export the technology for extracting shale gas than exporting actual gas**,”** said Jay Hakes, former administrator of the Energy Department’s Energy Information Administration. “I know the pitch about our price differentials will justify the high costs of L.N.G. We will see. Gas by pipeline is a good deal. L.N.G.? Not so clear.” Even the terminal operators acknowledge that probably only a lucky few companies will export gas because it can cost $7 billionor moreto build a terminal, and then only after a rigorous federal regulatory permitting process. The exploratory process to find a suitable site for a new terminal alone can take a year and cost $100 million**,** operators say, and financing can be secured only once long-term purchase agreements — 20 years or more — are reached with foreign buyers.“It’s a monumental effort to put a deal together like this, and you need well-heeled partners,” said Mark A. Snell, president of [Sempra Energy](http://topics.nytimes.com/top/news/business/companies/sempra_energy/index.html?inline=nyt-org), which is based in San Diego and is applying for permits to turn around a Hackberry, La., import terminal for export. “There are only a handful of people who can do this kind of thing.” At least 15 proposed terminal projects have filed regulatory applications to export gas, and if all were approved, they could export more than 25 billion cubic feet a day, equivalent to more than a third of domestically consumed natural gas. Environmental advocates say that kind of surge in demand would produce a frenzy of shale drilling dependent on hydraulic fracturing of hard rocks, an industrial method they say endangers local water supplies and pollutes the air. [Dow Chemical](http://topics.nytimes.com/top/news/business/companies/dow_chemical_company/index.html?inline=nyt-org), a big user of natural gas, and some other manufacturers express concerns that an export boom could threaten to raise natural gas prices for factories and consumers and, ultimately, kill jobs. Opponents are already lobbying the Obama administration to reject most of the planned terminals, and protests have already occurred. Sempra, [Exxon Mobil](http://topics.nytimes.com/top/news/business/companies/exxon_mobil_corporation/index.html?inline=nyt-org), [Cheniere Energy](http://topics.nytimes.com/top/news/business/companies/cheniere-energy-inc/index.html?inline=nyt-org)and others have already built import terminals on the Gulf of Mexico. With docking facilities and giant gas tanks already built on land they had acquired and received permits for, they have a huge advantage over companies that have not yet built terminals. Cheniere, the only company to secure an export license, already has entered long-term purchase agreements for its L.N.G., and several other companies are only a few steps behind. Dominion Power, which operates a nearly idle import terminal near Cove Point on Chesapeake Bay in Maryland, is also expected to proceed with a conversion to exports, since it is strategically located near the mid-Atlantic gas fields of the Marcellus Shale. “You have got to be able to change, adapt as changes take place in the world,” said Michael E. Gardner, manager of the Cove Point plant. The companies with import terminals now wanting to export won a victory in December when an Energy Department report said exports of L.N.G. could produce $30 billion a year in export earnings without driving up domestic gas prices significantly. Many energy specialists expect the Obama administration to approve several export license applications in the next couple of years, and exports could begin as soon as 2015. The plans for a gas export boom are based on the theory that cheap American gas will remain cheap for decades while Asian and European gas supplies remain tight and expensive. Global demand for natural gas is expected to expand for decades as nations seek a replacement for coal, [nuclear energy](http://topics.nytimes.com/top/news/business/energy-environment/atomic-energy/index.html?inline=nyt-classifier) and increasingly expensive [oil](http://topics.nytimes.com/top/news/business/energy-environment/oil-petroleum-and-gasoline/index.html?inline=nyt-classifier), energy specialists say. If the American terminals could be built tomorrow, they would have a perfect market opportunity. The production glut in the United States has reduced natural gas prices in this country by more than two-thirds since 2008. Gas prices in most other places around the world are much higher because they are linked to oil, which has remained comparatively expensive. Gas prices in the United States are around $3.30 per thousand cubic feet, compared with $10 to $11 in Europe and over $15 in Asia. But analysts say that the price spread could quickly shrink as a host of factors converge. Gas prices in the United States will face upward pressure as exports rise, electric utilities switch to gas-fired plants from coal, and companies use more natural gas in manufacturing and for fleet vehicles. “With rising U.S. gas prices, U.S. L.N.G. could be priced out of the market,” said Noel Tomnay, head of global gas research at the consultancy Wood Mackenzie. “Even without L.N.G. exports, the price of gas will go up.” The indexing of Asian and European gas to oil prices is beginning to erode. At the same time, huge natural gas pipelines are being built around Asia to supply China, while new gas finds around Australia, East Africa and the eastern Mediterranean are likely to flood the markets with more L.N.G. Russia, a major global gas producer, is also moving aggressively to protect its markets. And the cost of shipping and processing liquefied gas will cut into American suppliers’ competitiveness. Nikos Tsafos, a gas analyst at PFC Energy, said if the current gas price of slightly less than $3.30 per thousand cubic feet rose to $6, “by the time it gets to Asia, it’s double that price and that means there is no arbitrage.” The biggest threat, over the long term, is the spread of the American shale boom overseas. The United States has a big lead; shale drilling has been slow to get started in Europe, South Africa and South America because of environmental concerns, water shortages and political obstacles. But China, which potentially has more shale resources than the United States, is poised for development. And Poland, Britain and Argentina are moving forward with more shale drilling. Resistance from environmental groups like the Sierra Club could help stop some export projects, especially outside the Gulf of Mexico region, which has long been comfortable with the oil and gas industry. And manufacturers like Dow Chemical are campaigning against unfettered exports to keep their costs down. Over all, these factors will make it challenging for export projects to raise enough financing. L.N.G. terminal developers note that more than 20 import terminals proposed a decade ago were never built because of local opposition or lack of government permits and financing.

#### Natural gas not the lynchpin of energy security

#### Paik, senior research fellow at OIES, 13 [Keun-Wook, senior research fellow at the Oxford Institute for Energy Studies (OIES) and associate fellow, Energy, Environment and Resource Program at Chatham House, "Sino-Russian gas cooperation: the reality and implications," 1-19, http://www.eastasiaforum.org/2013/01/19/sino-russian-gas-cooperation-the-reality-and-implications/]

Further complicating the Altai-to-west-China pipeline development is that Beijing’s need for Russian gas is not as desperate as its need for Russian oil. Natural gas is still considered the most expensive fuel source for power generation, accounting for only around 15 per cent of total gas consumption in China. It also tends to be treated as a peak load energy source, not a base load source. Though Beijing claims that more natural gas will be used in the gas-for-power sector in the future, this would be prohibitively expensive without reform of the distorted electricity, gas and coal pricing system.

#### Downs evidence is about Chinese domestic shale gas --- not exports from the US

#### Multiple factors check escalation

**Jakarta Post 12** [reporter for the Jakarta Post, "Three possible scenarios in South China Sea," 12-31, http://www2.thejakartapost.com/news/2012/12/31/three-possible-scenarios-south-china-sea.html]

In the status-quo scenario, which is the most likely scenario for the next 10 years, the claimants adopt half-hearted attitudes to resolving the territorial claims and maintaining stability. The current information suggests that a major conflict will not take place. Military analysts at IHS Jane’s say that Southeast Asian countries, including the claimants, together increased defense spending by 13.5 percent last year, to US$24.5 billion. The figure is projected to rise to $40 billion by 2016. This will prevent China from forcefully pressuring other claimants or occupying the territory that it claims. The other stabilizing factor is the US. The US pivot to Asia Pacific since 2009 includes the commitment to keep all claimants in check since this area has a high strategic and economic value. Nearly a third of the world’s maritime shipping traverse this area. An encouraging sign has come from China’s next leader Xi Jinping. In his address to the annual meeting with ASEAN members, held in the southern Chinese city of Nanning recently, Xi said China was committed to “common development and a peaceful regional solution to the dispute”.

#### No econ impact

Robert Jervis Poli Sci Professor 11, Professor in the Department of Political Science and School of International and Public Affairs at Columbia University, December 2011, “Force in Our Times,” Survival, Vol. 25, No. 4, p. 403-425

Even if war is still seen as evil, the security community could be dissolved if severe conflicts of interest were to arise. Could the more peaceful world generate new interests that would bring the members of the community into sharp disputes? 45 A zero-sum sense of status would be one example, perhaps linked to a steep rise in nationalism. More likely would be a worsening of the current economic difficulties, which could itself produce greater nationalism, undermine democracy and bring back old-fashioned beggar-my-neighbor economic policies. While these dangers are real, it is hard to believe that the conflicts could be great enough to lead the members of the community to contemplate fighting each other. It is not so much that economic interdependence has proceeded to the point where it could not be reversed – states that were more internally interdependent than anything seen internationally have fought bloody civil wars. Rather it is that even if the more extreme versions of free trade and economic liberalism become discredited, it is hard to see how without building on a preexisting high level of political conflict leaders and mass opinion would come to believe that their countries could prosper by impoverishing or even attacking others. Is it possible that problems will not only become severe, but that people will entertain the thought that they have to be solved by war? While a pessimist could note that this argument does not appear as outlandish as it did before the financial crisis, an optimist could reply (correctly, in my view) that the very fact that we have seen such a sharp economic down-turn without anyone suggesting that force of arms is the solution shows that even if bad times bring about greater economic conflict, it will not make war thinkable.

#### Resource nationalism will not lead to war – History is on our side

Hughes **Professor of Political Science** 11 - Professor of Political Science and International Affairs@ George Washington University Llewelyn Hughes, “Resource Nationalism in the Asia-Pacific: Why Does It Matter?,” Asia’s Rising Energy and Resource Nationalism: Implications for the United States, China, and the Asia-Pacific Region, National Bureau of Asian Research, NBR Special Report #31 | September 2011

The biggest concern about resource nationalism is that energy scarcity could lead governments to use military force to ensure access to supplies. History suggests this concern is unfounded. Resource nationalism in the Asia-Pacific in fact replicates the approach taken historically in Europe and Japan to managing risk in oil markets. For decades, these governments sought to increase the share of their domestic markets controlled by national firms and to increase the amount of oil reserves held by these firms internationally. In each case, resource competition did not lead to worst-case outcomes such as a descent into militarized conflict. China and India, in this sense, are following the path previously taken by the governments of other major oil-importing states.

The predominant trend over the last three decades has also been for these early resource nationalists to reduce, rather than increase, support for NOCs. Indeed, the weakening of links between governments and NOCs is the biggest change in patterns of oil ownership since the oil shocks of the 1970s; over the last three decades, Japan, France, Italy, Spain, and other countries have substantially reduced the importance of resource nationalism in their national energy strategies.

This change means there are fewer governments that see control over oil as a useful strategy for managing risk in the international oil market. It also means that, even as the newly industrializing powers of China and India increase their intervention in oil markets though their NOCs, they are less likely to bump up against other state-sponsored NOCs from oil-importing countries. Pg. 9-10 //1nc

#### prevents Russian deals

Hulbert **Analyst at European Energy Review** 12 (Matthew, contributor to Forbes, Analyst at European Energy Review and consultant to a number of governments & institutional investors, most recently as Senior Research Fellow, Netherlands Institute for International Relations (Clingendael), previously Senior Research Fellow at ETH Zurich working on energy and political risk, 5/26 “Why American natural Gas will change the world” http://www.forbes.com/sites/matthewhulbert/2012/05/26/why-american-natural-gas-will-change-the-world/)

This 2020 ‘lead time’ is important for Europe, not just because it’s going to take some time for US LNG trains to gather speed, but because **the first wave of exports will predominantly go to Asia.** Japan has been in the headlines post-Fukushima boosting short term demand, but the real prize remains China. Gas demand has been going up 5% year on year, while LNG shot up 31% once China’s fifth import terminal went online. That’s closely followed by India where LNG remains a strategic priority given the impossibility of getting pipelines into Delhi via Pakistan or Afghanistan. Although India and China are actively developing domestic shale reserves, (Beijing has earmarked no less than 30bcm capacity), **America should have little problem taking Asian market share, particularly if it provides greater flexibility on take or pay contracts to hedge long term price risk.**

Indeed, the mere prospect of US LNG is Asia is already creating major problems for Middle East and Russian players trying to sell gas (LNG or pipeline) on an oil indexed basis. Australia is in no better shape; despite headline figures of 80mt/y of LNG by 2018 (i.e. the world leader), cost inflation is rife and coal bed plays are looking more costly to develop than originally thought. International players are still investing in Australia (ironically as a double hedge against US LNG flopping), but given that Australian LNG docks into Asian ports for around $17-$18MM/Btu, any softening of prices could leave current (and prospective) LNG projects in the red.

#### Natural gas deals are key to broader co-op

Dan **Overseas Investment Environment Department** 09 (Feng, Overseas Investment Environment Department, CNPC Research Institute of Economics and Technology, “Analysis on Natural Gas Geo-politics in Central Asia-Russia Region,” Submitted to the 21st World Energy Congress, http://www.worldenergy.org/documents/congresspapers/140.pdf)

With principles of “mutual benefits and win-win benefits”, China will promote cooperation with central Asian countries and Russia in natural gas sector to achieve multilateral common and balanced development. Major markets for Russia’s natural gas export are in Europe, however, in recent years, Europe promoted cooperation with other natural gas resource countries in the world to diversify its natural gas imports to ensure the energy safety. Accordingly, potential increases for Russia to export natural gas to Europe will be quite limited. By promoting cooperation with China in natural gas sector, Russia may optimize its country/region configurations for natural gas export. At the same time, maximum economic benefits can be achieved through generation of competitions. To secure higher benefits from energy, central Asian countries actively promoted a strategy for diversification of their natural gas export. To achieve these goals, these countries strengthened cooperation with Europe, Southeast Asian countries and Northeast Asian countries in energy sectors. Since China lies close to central Asian countries, pipeline construction is characterized by short distance and low costs. Accordingly, economic benefits are high for bilateral/multilateral cooperation in natural gas sector. In addition, in the Northeast Asia Region, China is the only way for exporting of natural gas from central Asian countries to other countries. China will be or already is the most important and practical choice for diversification of natural gas export in Russia and central Asian countries. The three parties are highly complementary in energy development strategies and in economic development. Multilateral cooperation in energy sectors are beneficiary for **economic development, energy safety and regional stability of all relevant parties.** In the future, China, Russia and central Asian countries should take full advantages of market and resource potentials to expand and deepen cooperation in gas sector continuously. On base of that, cooperation in other sectors can be promoted and expanded to achieve common and balanced development.

#### Solves Central Asian instability

Weitz **director of the Hudson Institute’s Center for Political-Military Analysis** 12 (Richard, the director of the Hudson Institute’s Center for Political-Military Analysis, “Superpower Symbiosis: The Russia-China Axis,” November/December, http://www.worldaffairsjournal.org/article/superpower-symbiosis-russia-china-axis)

Although sunny assessments about current Sino-Russian ties are correct, such alignments are vulnerable to **shifts in the underlying conditions that support them**. In the case of Russia and China, these shifting variables include China’s increasing military power, its growing economic penetration of Central Asia, and its impending leadership changes, along with Russia’s political disorders, dependence on a mono-economy of energy, and gloomy demographic prospects. These and other plausible changes could at some point undermine the foundations of their current entente. Interested third parties may or may not be able to shape these variables, but at least other governments need to understand the evolving dynamic of this important relationship and prepare for its future evolution.

Since the Soviet Union’s disintegration in the early 1990s, the two countries have for the most part acted on the basis of shared interests—particularly in maintaining stability in Central Asia, whose energy supplies are vital for both countries’ economic development. China consumes the resources directly, whereas Russian companies earn valuable revenue by reselling Central Asian hydrocarbons in third-party markets, especially in Europe. Both countries know that certain regional events such as further **political revolutions or civil wars** could adversely affect core security interests. Both governments especially fear ethnic separatism in their border territories supported by Islamic fundamentalist movements in Central Asia.

The shared regional security interests between Beijing and Moscow have meant that the newly independent states of Central Asia—Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan—have become a generally unifying element in Chinese-Russian relations. Their overlapping security interests in Central Asia are visible in the Shanghai Cooperation Organization (SCO). Since its founding in 2001, the SCO has essentially functioned as a Chinese-Russian condominium, providing Beijing and Moscow with a convenient multilateral framework to manage their interests in Central Asia.

#### Nuclear war

Ahrari **Professor of National Security** 1 (M. Ehsan, Professor of National Security and Strategy of the Joint and Combined Warfighting School at the Armed Forces Staff College, August 2001, “Jihadi Groups, Nuclear Pakistan and the New Great Game,” http://www.strategicstudiesinstitute.army.mil/pdffiles/pub112.pdf)

South and Central Asia constitute a part of the world where a well-designed American strategy might well help avoid crises or catastrophe. The U.S. military would provide only one component of such a strategy, and a secondary one at that, but has an important role to play through engagement activities and regional confidence building. Insecurity has led the states of the region to seek weapons of mass destruction, missiles and conventional arms. It has also led them toward policies which undercut the security of their neighbors. If such activities continue, the result could be increased terrorism, humanitarian disasters, continued low-level conflict and potentially even major regional war or a thermonuclear exchange. A shift away from this pattern could allow the states of the region to become solid economic and political partners for the United States, thus representing a gain for all concerned.

### Warming 1nc

**Can’t solve – eliminating every coal plant would only be a POINT 2 degree change**

RAPIER Chief Technology Officer at Merica 12 Chief Technology Officer at Merica International – a Renewable Energy Company, Master’s in Chemical Engineering from Texas A&M University [Robert Rapier, Study: Eliminating Coal-Fired Power is Worth 0.2 Degrees in 100 Years, <http://www.consumerenergyreport.com/2012/03/05/study-eliminating-coal-fired-power-is-worth-0-2-degrees-in-100-years/>]

Who could have dreamed solving climate change would be so easy? A new paper in Environmental Research Letters called “Greenhouse gases, climate change and the transition from coal to low-carbon electricity” concludes that replacement of all of the world’s currently operating coal-fired power plants — which produce about 40% of the world’s electricity — and replacing them with renewable energy would have an impact of 0.2 degrees Celsius 100 years from now. Cherry-Picking Conclusions According to One’s Viewpoint However, a number of climate change websites took away a very different message than I took away from the paper. Here is Joe Romm’s view: Bombshell: You Can’t Slow Projected Warming With Gas, You Need ‘Rapid and Massive Deployment’ of Zero-Carbon Power I seem to recall another “bombshell” that he recently reported upon on the same theme: Natural Gas Bombshell: Switching From Coal to Gas Increases Warming for Decades, Has Minimal Benefit Even in 2100. I debunked that by showing that in that particular study, every possible alternative — including wind power, solar power, and even simply shutting down all of the coal plants — was projected to increase global warming in the short term: BOMBSHELL: Solar and Wind Power Would Speed Up, Not Reduce, Global Warming. But Joe is back with the hyperbolic titles and exaggerations (which I get into below), and he missed the biggest story in the paper. Coal and Sunlight-Reflecting Pollutants The subject of Romm’s earlier “natural gas bombshell” was a paper written by Tom Wigley that concluded that shutting down coal-fired power plants would cause the global temperature to increase in the short term because of the loss of sunlight-reflecting pollutants. In that particular paper, Dr. Wigley modeled what would happen if coal-fired power was replaced with natural gas. He did indeed project short-term warming in that scenario, yet it was a result of the air becoming cleaner and allowing sunlight through as the coal was phased out. Thus, the media really got that story wrong, which was not about a deficiency of natural gas, but rather about the peculiarity of burning coal — that the particulate emissions reflect sunlight. Those who fixated on natural gas as the culprit could have written the same story about solar power — which the study’s author confirmed for me. Hence, I made that my “Bombshell” to illustrate the point. However, that particular study didn’t actually model the temperature impact of shutting down coal plants and replacing them with anything other than natural gas. So, I posed the following question to Dr. Wigley: What does the graph look like in 2100 if all coal-fired plants were replaced with zero emission sources (as the idealized study)? I am just wondering what the potential actually is. Are we talking about 1 or 2 degrees lower? I just have no idea of the relative context. We had several email exchanges over his paper, and he said that my questions were intriguing and he would look into them. I never heard back from him on that, but this new paper answers the question. Shuttering All the World’s Coal Plants Wouldn’t Do Much The authors of this newest study modeled the replacement of coal-fired power plants with either natural gas, coal with carbon capture and storage, hydropower, solar PV, solar thermal, wind power, or nuclear power. You can see from Joe Romm’s headline how the story is being spun, but let’s break it down in a more objective fashion. The following graphic from the paper tells the story. Pay particular attention to the temperature scale. The graphic indicates — as Tom Wigley’s previous paper indicated but which was only reported relative to natural gas — that in every single case, it doesn’t matter what coal-fired power plants are replaced with, the temperature is projected to increase for almost the next 40 years. This is true even in the baseline “Conservation” case, which involves merely idling the coal-fired plants and not replacing them with anything. The paper projects that if coal-fired power plants continue to operate, the expected temperature rise relative to the baseline (i.e., relative to the expected temperature increase from other sources) in 50 years is 0.15 degrees C, and in 100 years is about 0.33 degrees C. If coal is phased out and replaced with natural gas, the relative 50 and 100 year temperature rise is projected to be 0.14 degrees C and 0.24 degrees C, respectively. So the paper shows slightly less warming when natural gas is used, which Climate Progress Tweeted as “Switch from coal to natural gas would have zero effect on global temperatures by 2100” and included a link to Joe’s “bombshell.” That is obviously an exaggeration, as the graphic clearly shows that the effect is not zero. If it was, the natural gas line would overlay the coal line. Shocking Implications One shocking implication from the paper was the projection that hydropower would be worse than coal for the next 60 years. The study’s authors cited methane emissions from organic matter buried under water as the reason for this apparent anomaly. But that’s not the really shocking thing about the study for me. The most shocking conclusion was the magnitude of the numbers we are talking about. Even if you could in theory shut down all of the coal-fired power plants in the world and replace them with wind, solar, and hydropower — in 50 years the projected temperature is only one-twentieth of a degree C cooler than the base case of continuing to use coal. In 100 years, if I could replace all global coal-fired power plants with firm, renewable power — the temperature is only projected to be about 0.2 degrees cooler than under the coal base case. And the way this is being spun is that the 0.09 degree reduction from switching to natural gas is equivalent to an effect of “zero”, but the 0.2 degree reduction in hypothetically replacing everything with wind and solar power 100 years from now is significant. About the natural gas case, Romm literally said the 0.09 degree lower temperature in switching to natural gas means that “natural gas is a bridge fuel to nowhere”, but the 0.2 degree lower temperature in switching to renewables is “the world’s only plausible hope to avert catastrophic temperature rise.” Nuclear & Natural Gas to the Rescue — But Most Environmentalists Hate Them A big irony here is that there are only two power sources that are today capable of achieving the study’s conclusion that we must rapidly replace coal-fired power plants: Nuclear power and natural gas. If people really believe that we must urgently address this issue — and they don’t believe that the change from going to natural gas is enough — that leaves nuclear power as the only option capable of achieving a rapid replacement. Bear in mind that this is for a global replacement of coal — most of which is used in Asia. Good luck trying to sell China and India on a 0.2 degree temperature difference in 100 years if they quickly abandon their coal-fired power plants and replace them with wind power. Conclusion: Study is a Major Downer for Activists Battling Climate Change To be honest, if I was devoting my life to fighting against the threat of climate change, this would be one of the most depressing papers I have ever read. If we could convince everyone in the world to shut down their coal-fired power plants — which we can’t — and replace them with renewable power — which isn’t available in quantities sufficient to replace coal-fired power — then by the end of my life there would still be no statistically significant temperature change to even be able to tell if my life’s work was successful. But let’s be realistic, shall we? The people who are concerned about global warming have dug in their heels over natural gas, and they are generally opposed to nuclear power. Because of the sheer impossibility that we will rapidly replace coal with wind and solar power (especially since “we” is the world), then we will in all likelihood be left with the status quo. As I have said before, emissions are much higher in Asia Pacific than they are in the U.S. and Europe combined, and they are rising rapidly. Unless we can figure out a way to convince them to develop without fossil fuels — something no country has done — then global carbon emissions will continue to rise. This is why — even though I accept the science behind climate change — it isn’ t my focus. I just don’t see how the West can possibly do anything about it.

#### Natural gas increases CO2 emissions

Ahmed Director of the Institute for Policy Research 13 Executive Director of the Institute for Policy Research & Development and Chief Research Officer at Unitas Communications Ltd where he leads on geopolitical risk

[Nafeez Mosaddeq, “The Great Oil Swindle,” 1-10, www.fpif.org/articles/the\_great\_oil\_swindle]

The increasing shift from conventional to unconventional forms of oil and gas—tar sands, oil shale, and especially shale gas—heralds an unnerving acceleration of carbon emissions, rather than the deceleration promised by those who advocate shale as a clean 'bridge fuel' to renewables. According to the [CO2 Scorecard Group](http://co2scorecard.org/home/researchitem/24), contrary to industry claims, shale gas "cannot be credited" with U.S. emissions reductions over the last half-decade. Nearly 90 percent of reductions, says the group, "were caused by decline in petroleum use” and the “displacement of coal" by "non-price factors" rather than shale, and coal's "replacement by wind, hydro, and other renewables." To make matters worse, where natural gas saved 50 million tons of carbon by substituting coal generation due its lower price, it generated 66 million additional tons across the commercial, residential, and industrial sectors.

#### Plan eliminates SO2 --- massively spikes short term warming

V. Ramanathan\* **Scripps Institution of Oceanography** and Y. Feng**, University of California** 9/23/2008. Scripps Institution of Oceanography, University of California at San Diego. “On avoiding dangerous anthropogenic interference with the climate system: Formidable challenges ahead,” PNAS 105.38, 14245-14250, www.pnas.org/content/105/38/14245.full.pdf.

Currently coal, oil, and natural gas contribute 41%, 39%, and 20%, respectively, to the fossil fuel CO2 emission (19). If we just compare CO2 emissions per joule of energy released, natural gas is the cleanest fuel among fossil fuels: coal emits 􏲏25 kg C/GJ (kg of carbon per giga joule of energy), oil emits 􏲏20 kg C/GJ, and natural gas emits 􏲏15 kg C/GJ. Fossil fuel contributes 􏲏80% of the total CO2 emission, and other CO2 emissions include cement production (2%) and land-use changes (18%) (22). Weighting the percent contribution of each fuel to total CO2 emission with the CO2 climate forcing (as of 2005), we obtain the following: coal, oil, and natu- ral gas contributed 􏲏18%, 17%, and 9%, respectively to the committed warming of 2.4°C. The rest of the com- mitted warming is from CO2 emission caused by cement production and land- use changes (11%) and from emission of other GHGs (45%) (11). On the other hand, viewed in terms of surface warming, coal and oil are also the major sources of SO2 emissions (the precursor for sulfate aerosols in ABCs) as they are responsible for 55% and 25% of global SO2 emissions and natural gas 1% (year 2002). Sulfate aerosols con- tribute 70% of the 47% masking effect by ABCs (18). When we factor in the sulfate masking effect, gas is likely the strongest global warming fossil fuel. It should be pointed out, however, that coal and oil only look favorable if their associated SO2 emissions are allowed to continue unabated. With respect to oil, however, diesel is a major source of black carbon, and when this is factored in, oil may emerge as the strongest global-warming agent (23). The above estimates illustrate the significance of the GHG–air pollution interactions in deter- mining the actual warming potential of fuels. The GHG–SO2 coupling illustrated above is consistent with a more quantitative modeling study (24). This study showed that when fossil fuel related CO2 emission is considered along with fossil fuel-related SO2 emission, Organization for Economic Cooperation and Development countries emerged as the ‘‘dominant contributor’’ to recent global warming, because of their great success in reducing SO2 emissions (see Fig. 3 and refs. 25–32). Switching from coal to ‘‘cleaner’’ natural gas will reduce CO2 emission and thus would be effective in minimizing future increases in the committed warming. However, because it also reduces air pollution and thus the ABC masking effect, it may speed up the approach to the committed warming of 2.4°C (1.4– 4.3°C). We are not arguing in favor of more coal combustion (a major contributor to ABCs) but simply point out that increasing natural gas consumption by 70% from 2005 to 2030 as projected now by the International Energy Agency (19) without an overall reduction in fossil fuel consumption could significantly accelerate the warming. The large warming experienced since the 1970s may, in part, be caused by the dramatic (160%) increases in consumption of natural gas from 1970 to 2005. The other likely contributor is the decrease in SO2 emissions from a peak of 75 Mton (million tons) of sulfur in early 1970s to 62 Mton of sulfur by 2003.

#### No impact—mitigation and adaptation will solve—no tipping point or “1% risk” arguments

Mendelsohn **the Edwin Weyerhaeuser Davis Professor** 9—Robert O. Mendelsohn, the Edwin Weyerhaeuser Davis Professor, Yale School of Forestry and Environmental Studies, Yale University, June 2009, “Climate Change and Economic Growth,” online: http://www.growthcommission.org/storage/cgdev/documents/gcwp060web.pdf

The heart of the debate about climate change comes from a number of warnings from scientists and others that give the impression that human-induced climate change is an immediate threat to society (IPCC 2007a,b; Stern 2006). Millions of people might be vulnerable to health effects (IPCC 2007b), crop production might fall in the low latitudes (IPCC 2007b), water supplies might dwindle (IPCC 2007b), precipitation might fall in arid regions (IPCC 2007b), extreme events will grow exponentially (Stern 2006), and between 20–30 percent of species will risk extinction (IPCC 2007b). Even worse, there may be catastrophic events such as the melting of Greenland or Antarctic ice sheets causing severe sea level rise, which would inundate hundreds of millions of people (Dasgupta et al. 2009). Proponents argue there is no time to waste. Unless greenhouse gases are cut dramatically today, economic growth and well-being may be at risk (Stern 2006).

These statements are largely alarmist and misleading. Although climate change is a serious problem that deserves attention, society’s immediate behavior has an extremely low probability of leading to catastrophic consequences. The science and economics of climate change is quite clear that emissions over the next few decades will lead to only mild consequences. The severe impacts predicted by alarmists require a century (or two in the case of Stern 2006) of no mitigation. Many of the predicted impacts assume there will be no or little adaptation. The net economic impacts from climate change over the next 50 years will be small regardless. Most of the more severe impacts will take more than a century or even a millennium to unfold and many of these “potential” impacts will never occur because people will adapt. It is not at all apparent that immediate and dramatic policies need to be developed to thwart long-range climate risks. What is needed are long-run balanced responses.

#### Coal decline inevitable

Afsah **President and CEO of CO2 Scorecard** and Salcito **Policy Communications Specialist** 12 [Shakeb, President and CEO of CO2 Scorecard, and Kendyl, Policy Communications Specialist for the CO2 Scorecard, "Shale Gas And The Overhyping Of Its CO2 Reductions," 8-7, http://thinkprogress.org/climate/2012/08/07/651821/shale-gas-and-the-fairy-tale-of-its-co2-reductions/]

In the future we expect the price of natural gas to increase ([Fordney 2012](http://www.platts.com/RSSFeedDetailedNews/RSSFeed/NaturalGas/8550142) and [Finger 2012](http://www.forbes.com/sites/richardfinger/2012/07/27/more-data-natural-gas-is-heading-higher/)) but we will continue to see a decline in coal generation. A big part of that trend will reflect the impact of USEPA’s regulation and the aging stock of coal-fired generation units, as more than 80% of coal units are forty years or older (Exhibit 5), and many will simply fade away. Industry experts have already written off coal ([Tierney 2012](http://www.analysisgroup.com/uploadedFiles/News_and_Events/News/2012_Tierney_WhyCoalPlantsRetire.pdf)), and recently Michael Liebreich of Bloomberg New Energy Finance called it a “…sunset for traditional, old-style, inefficient coal plants” ([Roberts 2012B](http://grist.org/climate-energy/coal-and-china-bad-but-maybe-not-as-bad-as-you-think/)). Just last week, their predictions got affirmed by the EIA ([EIA 2012C](http://www.eia.gov/todayinenergy/detail.cfm?id=7290)). In some sense the demise of coal may be on auto-pilot now. The CO2 story Natural gas is an even smaller factor in reducing CO2 emissions than it is in displacing coal. In fact, natural gas is the only fossil fuel that added emissions to the US inventory between 2006 and 2011 – a total of 138 million metric tons during the period (Exhibit-6). This figure is important because many have justified the low price of natural gas as good for our climate because it saves CO2 by displacing coal. But the portion of those emissions that displaced coal and oil emissions was limited. Table-1 shows the emissions savings involved in the price driven switching from coal and oil to gas. For coal the savings is a half-ton of CO2 per MWh displaced. For oil, it is around 0.15 tons. As shown in Table-1, natural gas displaced around 89-96 million MWh of coal electricity and 19 for petroleum. The two together generate a savings of »50 million metric tons of CO2—that seems significant at first glance, but total CO2 emissions declined by 446 Million metric tons between 2006 and 2011. The 50 million metric ton savings from natural gas accounts for just 11% of that. In other words, nearly 90% of the decline in the total CO2 emissions during the period 2006-11 should be attributed to other factors that slashed the consumption of both petroleum and coal. Even where natural gas is displacing coal, this substitution is not having a meaningful impact on CO2 emissions. Set on a national scale, the difference is negligible. Emissions dropped at a rate a 1.56% per year in the 5 years up to 2011, dropping from 5,919 to 5,473 million metric tons. If the 50 million metric tons of CO2 savings from natural gas were excluded from this calculation, emissions would have dropped 1.38%. That 0.18% change is within any reasonable margin of error. Shale gas has indeed contributed to CO2 reduction, but trivially compared to other factors.

#### Not try or die

**The Australian 11** [“Climate forecasts 'exaggerated': Science journal,” 11-25, <http://www.theaustralian.com.au/news/health-science/climate-forecasts-exaggerated-science-journal/story-e6frg8y6-1226205464958>]

DRAMATIC forecasts of global warming resulting from a doubling of atmospheric carbon dioxide have been exaggerated, according to a peer-reviewed study by a team of international researchers. In the study, published today in the leading journal Science, the researchers found that while rising levels of CO2 would cause climate change, the most severe predictions - some of which were adopted by the UN's peak climate body in its seminal 2007 report - had been significantly overstated. The authors used a novel approach based on modelling the effects of reduced CO2 levels on climate, which they compared with proxy-records of conditions during the last glaciation, to infer the effects of doubling CO2 levels. They concluded that current worst-case scenarios for global warming were exaggerated. "Now these very large changes (predicted for the coming decades) can be ruled out, and we have some room to breathe and time to figure out solutions to the problem," the study's lead author, Andreas Schmittner, an associate professor at Oregon State University, said. Scientists have struggled for many years to understand how to quantify "climate sensitivity" - how Earth will respond to projected increases in atmospheric carbon dioxide. In 2007, the UN's peak climate body, the Intergovernmental Panel on Climate Change, warned that a doubling of CO2 from pre-industrial levels would warm the Earth's surface by an average of 2C to 4.5C, although some studies have claimed the impact could be 10C or higher. Professor Schmittner said it had been very difficult to rule out these extreme "high-sensitivity" scenarios, which were very important for understanding risks associated with climate change. The study found high-sensitivity models led to a "runaway effect" under which the Earth would have been covered in ice during the last glacial maximum, about 20,000 years ago, when CO2 levels were much lower. "Clearly that didn't happen, and that's why we are pretty confident that these high climate sensitivities can be ruled out," he said. Professor Schmittner said taking his results literally, the IPCC's average or "expected" value of a 3C average temperature increase for a doubling of CO2 ought to be regarded as an upper limit. "Many previous climate-sensitivity studies have looked at the past only from 1850 through to today, and not fully integrated paleoclimate data, especially on a global scale," he said. "If these paleoclimatic constraints apply to the future, as predicted by our model, the results imply less probability of extreme climatic change than previously thought."

#### Not anthropogenic – other factors are more important and there is a diminishing curve. Evidence to the contrary is media hysteria

#### Paterson Professional Engineer and Consulting Geophysicist 11 [Norman R., Professional Engineer and Consulting Geophysicist, PhD in Geophysics from University of Toronto, Fellow of the Royal Society of Canada, “Global Warming: A Critique of the Anthropogenic Model and its Consequences,” Geoscience Canada, Vol 38, No 1, March, Ebsco]

The term ‘global warming’ is commonly used by the media to mean ‘anthropogenic’ global warming; that is, warming caused by human activity. In this article, the writer has chosen to prefix ‘global warming’, where appropriate, by the terms ‘anthropogenic or ‘humancaused’ in order to avoid confusion. We are led today by our media, governments, schools and some scientific authorities to believe that, through his CO2 emissions, man is entirely, or almost entirely, responsible for the modest, modulated rise in global temperature of about 0.7° C that has taken place over the past 100 years. We are told, and many sincere people believe, that if we continue on this path, the planet will experience escalating temperature and dangerous sealevel rise before the end of this century. Over the past 20 years or so, this has become so much a part of our belief system, that to challenge it is to be labelled a ‘denier’ and put in the same category as a member of the Flat Earth Society. Yet, even a cursory review of the peer-reviewed scientific literature will show that the popular anthropogenic global warming dogma is being questioned by hundreds of respected scientists. Furthermore, emerging evidence points directly to other natural phenomena as probably having greater effects on global temperatures than can be attributed to human-caused CO2 emissions. The disproportionate scientific weighting attributed to the anthropogenic warming interpretation, and the general public perception of its validity, could be a serious problem for society, as the human-caused global warming belief is diverting our attention from other, more serious anthropogenic effects such as pollution and depletion of our water resources, contamination of our food and living space from chemicals, and diminishing conventional energy resources. PROBLEMS WITH THE ANTHROPOGENIC MODEL The fact that the world has undergone cycles of warming and cooling has been known for a very long time, but the question as to man’s influence on climate did not become a hot debate until after the mid-twentieth century, when Revelle and Seuss (1957) first drew attention to the possible effect of greenhouses gases (particularly CO2 ) on the earth’s temperature. Subsequent studies pointed to the increase in atmospheric CO2 from roughly 0.025% to 0.037%, or 50%, over the past 100 years. Much was made of the apparent but crude covariance of atmospheric CO2 and global temperature, and the conclusion was drawn that [hu]man’s escalating carbon emissions are responsible for the late 20 th century temperature rise. Anxiety was rapidly raised among environmentalists, and also attracted many scientists who found ready funding for studies aimed at better understanding the problem. However, scientists soon encountered three important difficulties: i) To this date, no satisfactory explanation is forthcoming as to how CO2 at less than 0. 04% of atmospheric concentration can make a major contribution to the greenhouse effect, especially as the relationship between increasing CO2 and increasing temperature is a diminishing logarithmic one (Gerlich and Tscheuschner 2009); ii) Geological records show unequivocally that past temperature increases have always preceded, not followed, increases in CO2 ; i.e. the warming could potentially cause the CO2 increase, but not the reverse. Studies (e.g. Petit et al. 1999) have shown that over the past 400 000 years of cyclical variations, temperature rose from glacial values about 800 years before CO2 concentration increased. A probable explanation is that solar warming, over a long period of time, causes the oceans to outgas CO2 , whereas cooling results in more CO2 entering solution, as discussed by Stott et al. (2007). Averaged over a still longer period of geological time, it has been shown (Shaviv and Veizer 2003) that there is no correlation between CO2 and temperature; for example, levels of CO2 were more than twice present day values at 180 Ma, at a time when temperature was several degrees cooler; iii) Other serious mistakes in analysis were made by some scientists over the years. Perhaps the worst of these (see Montford 2010 for a thorough discussion) was the publication of the ‘Hockey Stick Curve’ (Fig. 1), a 1000-year record of past temperature which purported to show that “The 20 th century is likely the warmest century in the Northern Hemisphere, and the 1990s was the warmest decade, with 1998 as the warmest year in the last 1000 years” (Mann et al. 1999). This conclusion was adopted by the Intergovernmental Panel on Climate Change (IPCC) in its 2001 report and also by Al Gore in the movie An Inconvenient Truth. Subsequently, Mann et al.’s work has been challenged by several scientists (though to be fair, it is also supported by some). For example, McIntyre and McKitrick (2003) amended Mann’s graph, using all available data and better quality control (Fig. 1), and showed that the 20 th century is not exceptionally warm when compared with that of the 15 th century. However, the IPCC has continued to report a steady increase in global temperature in the face of clear evidence that average temperature has remained roughly level globally, positive in the northern hemisphere and negative in the southern hemisphere, since about 2002 (Archibald 2006; Fig. 2). WHAT CAUSES WARMING? It is likely that the cyclical warming and cooling of the earth results from a number of different causes,

none of which, taken alone, is dominant enough to be entirely responsible. The more important ones are solar changes (including both irradiance and magnetic field effects), atmosphere–ocean interaction (including both multidecadal climatic oscillations and unforced internal variability), and greenhouse gases. All of these factors have been discussed by IPCC, but the first two have been dismissed as negligible in comparison with the greenhouse-gas effect and man’s contribution to it through anthropogenic CO2 . It is claimed (e.g. Revelle and Suess 1957) that the particular infrared absorption bands of CO2 provide it with a special ability to absorb and reradiate the sun’s longer wavelength radiation, causing warming of the troposphere and an increase in high-altitude (cirrus) cloud, further amplifying the heating process. Detailed arguments against this conclusion can be found in Spencer et al. (2007) and Gerlich and Tscheuschner (2009). These scientists point out (among other arguments, which include the logarithmic decrease in absorptive power of CO2 at increasing concentrations), that clouds have poor ability to emit radiation and that the transfer of heat from the atmosphere to a warmer body (the earth) defies the Second Law of Ther-modynamics. They argue that the Plank and Stefan-Boltzman equations used in calculations of radiative heat transfer cannot be applied to gases in the atmosphere because of the highly complex multi-body nature of the problem. Veizer (2005) explains that, to play a significant role, CO2 requires an amplifier, in this case water vapour. He concludes that water vapour plays the dominant role in global warming and that solar effects are the driver, rather than CO2 . A comprehensive critique of the greenhouse gas theory is provided by Hutton (2009). It is firmly established that the sun is the primary heat source for the global climate system, and that the atmosphere and oceans modify and redirect the sun’s heat. According to Veizer (2005), cosmic rays from outer space cause clouds to form in the troposphere; these clouds shield the earth and provide a cooling effect. Solar radiation, on the other hand, produces a thermal energy flux which, combined with the solar magnetic field, acts as a shield against cosmic rays and thereby leads to global warming. Figures 3 and 4 illustrate both the cooling by cosmic rays (cosmic ray flux, or CRF) and warming by solar irradiation (total solar irradiance, or TSI) in the long term (500 Ma) and short term (50 years), respectively. CRF shows an excellent negative correlation with temperature, apart from a short period around 250 Ma (Fig. 3). In contrast, the reconstructed, oxygen isotope-based temperature curve illustrates a lack of correlation with CO2 except for a period around 350 Ma. Other studies have highlighted the overriding effect of solar radiation on global heating. Soon (2005) studied solar irradiance as a possible agent for medium-term variations in Arctic temperatures over the past 135 years, and found a close correlation in both decadal (5–10 years) and multi-decadal (40–80 years) changes (Fig. 5). As to the control on this variation, the indirect effect of solar irradiance on cloud cover undoubtedly results in modulations of the sun’s direct warming of the earth. Veizer (2005) estimated that the heat reflected by cloud cover is about 78 watts/m2 , compared to an insolation effect of 342 watts/m2 , a modulation of more than 25%. This contrasts with an IPCC estimate of 1.46 watts/m2 , or about 0.5% of TSI, for the radiative effect of anthropogenic CO2 accumulated in the modern industrial era (IPCC 2001). Veizer concludes: “A change of cloud cover of a few percent can therefore have a large impact on the planetary energy balance.” In addition to solar insolation effects, the intensity of the Earth’s magnetic field (which deflects the charged particles that constitute cosmic rays) and associated sun-spot maxima are correlated with historic periods of global warming such as the Medieval Climate Optimum (Fig. 6), and typically occur mid-way between ice ages (Veizer 2005). Solar magnetic minima have accompanied global cooling, such as occurred during the Little Ice Age between 1350 and 1850 A.D. A proxy for sunspot activity prior to the start of telescope observations in 1610 can be reconstructed from the abundance of cosmogenic 10 Be in ice cores from Antarctica and Greenland (Miletsky et al. 2004). Global temperature oscillations have been evident in both geologic and recent times, with periods varying from a few years (mostly solar and lunar driven) up to 120 million years (galactic and orbital influences) (Plimer 2009). In addition, ocean– atmosphere interactions are implicated in the control of some shorter-period climatic oscillations. For example, McLean et al. (2009) have studied the El Niño Southern Oscillation (ENSO), a tropical Pacific ocean–atmosphere phenomenon, and compared the index of intensity (the Southern Oscillation Index, or SOI) with global tropospheric temperature anomalies (GTTA) for the 1960–2009 period (Fig. 7). McLean et al. (2009) concluded that “Change in SOI accounts for 72% of the variance in GTTA for the 29-year long record, and 68% for the 50-year record”. They found the same or stronger correlation between SOI and mean global temperature, in which SOI accounted for as much as 81% of the variance in the tropics (Fig. 8). A delay of 5 to 7 months was deduced between the SOI maximum and the associated temperature anomaly. Volcanic influences on temperature are also evident (Figs. 7, 8), probably caused by the injection of sulphur dioxide into the stratosphere, where it is converted into sulphate aerosols that reflect incoming solar radiation (McLean et al. 2009). The GTTA nearly always falls in the year or two following major eruptions. Both solar irradiation and ocean–atmosphere oscillations have therefore been demonstrated to have effects on global temperature of at least the same order of magnitude as the CO2 greenhouse gas hypothesis, and these alternative mechanisms are supported by well-documented empirical data. Nevertheless, the CO2 hypothesis, the theoretical basis for which is being increasingly challenged, remains the popular explanation for global warming in the public domain. THE CONTROVERSY The main factors that have led to heated scientific controversy regarding the cause of the mild late 20 th century global warming can be summarized as follows: i) A surge of media coverage and consequent public interest and anxiety, magnified by productions such as Al Gore’s An Inconvenient Truth. ii) Fear and concern on the part of environmentalists, who were already aware of many other harmful aspects of industrial, commercial and other human activities. Environmentalists, including NGOs such as Greenpeace and the World Wildlife Fund, exploited the open disagreements that existed among scientists as to the scale of the warming and its impacts, disagreements that inevitably arose because climate science is complex and empirical data were in short supply until recently.

#### Can’t solve – 2 degree rise inevitable

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This already demanding conclusion becomes even more challenging when assumptions about the rates of viable emission reductions are considered alongside an upgrading of the severity of impacts for 2◦C. Within global emission scenarios, such as those developed by Stern [6], the CCC [8] and ADAM [47], annual rates of emission reduction beyond the peak years are constrained to levels thought to be compatible with economic growth—normally 3 per cent to 4 per cent per year. However, on closer examination these analyses suggest such reduction rates are no longer sufficient to avoid dangerous climate change. For example, in discussing arguments for and against carbon markets the CCC state ‘rich developed economies need to start demonstrating that a low-carbon economy is possible and compatible with economic prosperity’ [8, p. 160]. However, given the CCC acknowledge ‘it is not now possible to ensure with high likelihood that a temperature rise of more than 2◦C is avoided’ and given the view that reductions in emissions in excess of 3–4% per year are not compatible with economic growth, the CCC are, in effect, conceding that avoiding dangerous (and even extremely dangerous) climate change is no longer compatible with economic prosperity.

In prioritizing such economic prosperity over avoiding extremely dangerous climate change, the CCC, Stern, ADAM and similar analyses suggest they are guided by what is feasible.34 However, while in terms of emission reduction rates their analyses favour the ‘challenging though still feasible’ end of orthodox assessments, the approach they adopt in relation to peaking dates is very different. All premise their principal analyses and economic assessments on the ‘infeasible’ assumption of global emissions peaking between 2010 and 2016; a profound departure from the more ‘feasible’ assumptions framing the majority of such reports. The scale of this departure is further emphasized when disaggregating global emissions into Annex 1 and non-Annex 1 nations, as the scenario pathways developed within this paper demonstrate.

Only if Annex 1 nations reduce emissions immediately35 at rates far beyond those typically countenanced and only then if non-Annex 1 emissions peak between 2020 and 2025 before reducing at unprecedented rates, do global emissions peak by 2020. Consequently, the 2010 global peak central to many integrated assessment model scenarios as well as the 2015–2016 date enshrined in the CCC, Stern and ADAM analyses, do not reflect any orthodox ‘feasibility’. By contrast, the logic of such studies suggests (extremely) dangerous climate change can only be avoided if economic growth is exchanged, at least temporarily, for a period of planned austerity within Annex 1 nations36 and a rapid transition away from fossil-fuelled development within non-Annex 1 nations.

The analysis within this paper offers a stark and unremitting assessment of the climate change challenge facing the global community. There is now little to no chance of maintaining the rise in global mean surface temperature at below 2◦C, despite repeated high-level statements to the contrary. Moreover, the impacts associated with 2◦C have been revised upwards (e.g. [20,21]), sufficiently so that 2◦C now more appropriately represents the threshold between dangerous and extremely dangerous climate change. Consequently, and with tentative signs of global emissions returning to their earlier levels of growth, 2010 represents a political tipping point. The science of climate change allied with emission pathways for Annex 1 and non-Annex 1 nations suggests a profound departure in the scale and scope of the mitigation and adaption challenge from that detailed in many other analyses, particularly those directly informing policy.

However, this paper is not intended as a message of futility, but rather a bare and perhaps brutal assessment of where our ‘rose-tinted’ and well intentioned (though ultimately ineffective) approach to climate change has brought us. Real hope and opportunity, if it is to arise at all, will do so from a raw and dispassionate assessment of the scale of the challenge faced by the global community. This paper is intended as a small contribution to such a vision and future of hope.

## 2NC Case

### China 2nc

#### Shipping concerns make the region a hotspot for conflict

#### YaleGlobal 11 [Carlyle A. Thayer, "South China Sea: A Commons for China Only?," 7-7, http://yaleglobal.yale.edu/content/south-china-sea-commons-china-only]

The decades-old claims have become more urgent with China’s emergence as a major trading nation, ever more dependent on international shipping routes that extend from the waters of East Asia to the Middle East. China, once self-sufficient in energy resources, now imports oil and its dependency on imports of natural gas will grow markedly over the next two decades. China’s concerns for the safety of sea lines of communication and its need for hydrocarbon energy resources converge on the South China Sea, which is believed to contain substantial deposits of oil and gas.

#### Specifically concern over shipping draws non claimants in

SCMP 13 [South China morning Post, "Japan offers Philippines 10 ships to patrol South China Sea," http://www.scmp.com/news/asia/article/1125081/japan-offers-philippines-10-ships-patrol-south-china-sea]

While Japan is not a claimant to the South China Sea, it has grown concerned at China's actions over its disputes with countries bordering the sea, given the importance of the area's vital shipping lanes to its economy.

### No Exports 2nc

#### Drilling can't solve prices in time to make exports viable

#### EIA 7 ["Impacts of Increased Access to Oil and Natural Gas Resources in the Lower 48 Federal Outer Continental Shelf," http://www.eia.gov/oiaf/aeo/otheranalysis/ongr.html]

The projections in the OCS access case indicate that access to the Pacific, Atlantic, and eastern Gulf regions would not have a significant impact on domestic crude oil and natural gas production or prices before 2030. Leasing would begin no sooner than 2012, and production would not be expected to start before 2017. Total domestic production of crude oil from 2012 through 2030 in the OCS access case is projected to be 1.6 percent higher than in the reference case, and 3 percent higher in 2030 alone, at 5.6 million barrels per day. For the lower 48 OCS, annual crude oil production in 2030 is projected to be 7 percent higher—2.4 million barrels per day in the OCS access case compared with 2.2 million barrels per day in the reference case (Figure 20). Because oil prices are determined on the international market, however, any impact on average wellhead prices is expected to be insignificant. Similarly, lower 48 natural gas production is not projected to increase substantially by 2030 as a result of increased access to the OCS. Cumulatively, lower 48 natural gas production from 2012 through 2030 is projected to be 1.8 percent higher in the OCS access case than in the reference case. Production levels in the OCS access case are projected at 19.0 trillion cubic feet in 2030, a 3-percent increase over the reference case projection of 18.4 trillion cubic feet. However, natural gas production from the lower 48 offshore in 2030 is projected to be 18 percent (590 billion cubic feet) higher in the OCS access case (Figure 21). In 2030, the OCS access case projects a decrease of $0.13 in the average wellhead price of natural gas (2005 dollars per thousand cubic feet), a decrease of 250 billion cubic feet in imports of liquefied natural gas, and an increase of 360 billion cubic feet in natural gas consumption relative to the reference case projections. In addition, despite the increase in production from previously restricted areas after 2012, total natural gas production from the lower 48 OCS is projected generally to decline after 2020. Although a significant volume of undiscovered, technically recoverable oil and natural gas resources is added in the OCS access case, conversion of those resources to production would require both time and money. In addition, the average field size in the Pacific and Atlantic regions tends to be smaller than the average in the Gulf of Mexico, implying that a significant portion of the additional resource would not be economically attractive to develop at the reference case prices.

#### No exports --- resource nationalism outweighs.

Reuters, 6/8/2012. “U.S. likely to cap gas exports – analysts,” http://www.reuters.com/article/2012/06/08/usa-lng-exports-idUSL5E8H678C20120608.

Industrial lobbying in the United States is likely to put a cap on potentially huge natural gas exports, benefiting domestic industries such as petrochemicals and refining, but limiting export profits from gas-hungry Asia and Europe.¶ The U.S. has experienced a boom in shale gas exploration, which will potentially turn it from a net importer of natural gas into a gas exporter. Several companies have applied for licences to export excess domestic reserves to Europe and Asia.¶ Baringa, a London-based consultancy with a focus on energy, said that between 40 and 80 billion cubic metres (bcm) of liquefied natural gas (LNG) will be exported each year, starting from 2015.¶ These figures are below some estimates that expect U.S. LNG exports to rise above 110 bcm by 2020, but Baringa's Jayesh Parmar and other analysts have said that political pressure could limit export capacities.¶ "There is a lot of lobbying in the U.S. to limit LNG exports and to instead use the gas to allow the domestic industry to benefit from low energy prices," Parmar told Reuters.¶ "Petrochemicals and refined products, as well transportation industries that use natural gas, stand to gain from such a policy, and this could change the entire oil balance in the U.S. economy."¶ A report this week by Eurasia Group, the New York-based political risk consultancy, said: "Resource nationalism is the biggest political risk to U.S. LNG (exports), with many opponents to exports concerned about the impact on domestic natural gas prices."

#### Infrastructure, equipment, and human capital issues.

Charles Ebinger, Kevin Massy, and Govinda Avasarala, January 2012. Director and Senior Fellow [Foreign Policy](http://www.brookings.edu/about/programs/foreign-policy), [Energy Security Initiative](http://www.brookings.edu/about/projects/energy-security) @ Brookings, served as an energy policy advisor to over 50 governments, adjunct professor of electricity economics at Johns Hopkins Nitze School; Assistant Director of the Energy Security Initiative at the Brookings Institution; and Research Assistant, Energy Security Initiative @ Brookings. “Evaluating the Prospects for Increased Exports of Liquefied Natural Gas from the United States,” Report of the Energy Security Initiative, <http://www.bespacific.com/mt/archives/029324.html>.

The feasibility of U.S. LNG exports depends upon the ability of the country’s natural gas infrastruc- ture to support the production, transportation, storage, and shipment of natural gas.¶ Pipeline and Storage Capacity¶ The development of shale gas plays is likely to have a profound effect on the regional dynamics of the U.S. natural gas market. Increased produc- tion from the Marcellus Shale is likely to displace some supplies from the Gulf Coast and other re- gions that currently serve the Northeast.27 More- over, if significantly increased LNG exports from the Gulf Coast go ahead, there may be a need to reverse the pipelines to allow gas to flow toward the Gulf Coast.¶ To maximize the economic potential of the U.S. shale gas endowment, whether for exports or for domestic use, there will be a requirement for significant expansion in the nation’s continental natural gas pipeline network, particularly in the vicinity of the Marcellus Shale. In 2010, Mar- cellus producers predicted that fewer than half of the 1,100 wells drilled had pipeline access.28 ICF International, a consultancy, estimates that 3,300 additional miles of pipeline will be built in the Northeast between 2009 and 2035.29 There is currently 6 bcf/day of FERC-approved proposed pipeline capacity that will deliver gas from the Marcellus to demand centers. More than 2 bcf/ day of this capacity is scheduled to be complet- ed by the summer of 2012.30 Another concern is whether a gas pipeline infrastructure network will be developed quickly enough in liquid-rich plays, such as the Eagle Ford and Utica Shales, to fully capture the natural gas being produced. As outlined above, vast quantities of natural gas are currently being flared at some shale sites in the U.S. mid-continent. One way to reduce such flar- ing is being considered by Wyoming’s Office of State Lands and Investments, which has proposed a policy through which royalties payments would be required from operators of wells on state lands that continue to be flared for more than 15 days after completion. Absent strong state action on flaring, it is possible that the federal government will seek to regulate flaring at oil and natural gas wells.¶ In addition to constraints on pipeline capacity, there are also concerns about the adequacy of natural gas storage infrastructure, particularly in the Northeast, although the investments in pipe- line capacity should prompt similar investments in increased storage capacity.32¶ Drilling and Production Infrastructure¶ Even if there is sufficient transportation infra- structure to handle increased volumes and new regional bases for natural gas production, there may be limits on the amount of available equipment and qualified petroleum engineers to develop the gas. To date, concerns about a shortage of drilling rig availability in the U.S. natural gas sector have not materialized. Horizontal drilling (for both oil and gas) increased 27 percent in the year to Octo- ber 2011 and the number of rigs allocated to un- conventional oil and gas production is at record levels.33 The increased productivity of new drilling rigs has also served to ensure that supply has kept pace with demand. In the Haynesville Shale play in Louisiana, for example, the rig count fell from¶ 181 rigs in July 2010 to 110 rigs in October 2011, yet production increased from 4.65 bcf/day to 7.58 bcf/day during the same period.34 A similar trend is occurring in the Barnett Shale in Texas, where production has remained flat despite a declining rig count.35 However, while the supply of drilling rigs remains adequate, the market for other equipment and services used for fracking – particularly high-pressure pumping equipment – is tight and likely to remain so for the near term, according to industry analysts.36¶ Human Capacity¶ Human capital in the unconventional oil and gas development sectors is also in short supply. According to the National Petroleum Council (NPC), there has been a 75 percent decrease in petrochemical-related course enrollment since 1982 in the United States.37 Moreover, within the next ten years, about 50 percent of the workforce in this industry will be eligible for retirement. The high demand for petroleum engineers, reflected in the high salaries of recent graduates in the field, is set to continue, with the NPC warning of a “considerable human resource challenge” in the oil and gas industry.38¶ Faculty at leading universities with petroleum- engineering departments point to a lack of re- search and development (R&D) funding, which they say is negatively affecting their capacity to adequately train people for jobs in the hydrocar- bons sector. While some of the shortfall in public R&D funding has been made up by private-sector support, academics note the frequent mismatch between the specific needs of individual compa- nies and the long-term needs of the sector. More- over, even if sufficient funding for R&D and train- ing is now provided, there may also be a time lag before there is an adequate supply of petroleum engineers in the market.

#### Global booms collapse export profitability

Medlock 12 -- Baker Institute Energy and Resource Economics fellow

(Kenneth, PhD in economics from Rice University, Rice University economics professor, Baker Institute Energy Forum’s natural gas program director, International Association for Energy Economics council member, United States Association for Energy Economics President for Academic Affairs, member of the American Economic Association and the Association of Environmental and Resource Economists, "US LNG Exports: Truth and Consequence," 8-10-12, bakerinstitute.org/publications/US%20LNG%20Exports%20-%20Truth%20and%20Consequence%20Final\_Aug12-1.pdf, accessed 8-16-12)

The Viability of US LNG Exports The prospect of exporting LNG from the US to consumers in Asia and Europe arises from the fact that spot prices for natural gas in both Europe and Asia are well above the current spot price at Henry Hub, as indicated in Figure 5, so much so that any trade evaluated at current market conditions looks very profitable. However, current market conditions do not define long-term commerciality of a trade; future market conditions do. Therefore, we must develop an assessment of the future given our state of knowledge today. To evaluate the likelihood of long- term profitable LNG exports from the US, we used the latest Reference Case of Rice World Gas Trade Model (RWGTM). In short, the Baker Institute projects that the next three decades do not indicate a future in which exports from the US Gulf Coast are profitable in the long term, at least not if developers are seeking a competitive rate of return to capital. 13 As outlined above, we know from international trade theory that upon the introduction of US LNG exports, the degree to which the price in the US increases and the degree to which the price abroad decreases will be dependent on the relative elasticities in the two markets. So, we simply need to assess the relative elasticities in the two markets to determine what is likely to happen in practice. In the US market, domestic production has risen dramatically in the past few years resulting in prices being driven down from double-digit highs in 2008 to the current environment in the low $3 per mcf range. Aside from the lack of heating demand this past winter, the softening of price in North America since 2008 is the result of innovations that have made recovery of natural gas from shale a commercial reality, and is indicative, more generally, of a domestic supply curve that has become relatively elastic. Notice, when evaluating the domestic price impacts of LNG exports, this should push our focus into the upper half of the diagram in Figure 7. An important point is worth emphasis here. We mention above that the long-term equilibrium price is likely to be in the $4 to $6 per mcf range. The current price environment is at least partly the result of an unexpected negative shock to demand in the US. In other words, we had a warm winter, which means demand is unexpectedly below normal, even with the current weakness in the US economy. Being unexpected, producers can only respond after the fact. This is another example of a short-term constraint (on demand in this case) that has exacerbated the current price spread between North America and the rest of the world. It also means that the correct point of reference when considering the impact of LNG exports from the US on domestic prices is the long-run equilibrium, since that is where prices will settle even without exports. Also in the last couple of years, increases in demand in Asia have tended to push price up. Moreover, given the lack of alternatives/competition for Asian consumers in particular, large rents are being earned in the short run by LNG suppliers to the Asian market. This all stems from the realization of a short-run capacity constraint, or a situation where supply is highly inelastic. Again referring to Figure 7, this will tend to push us into Quadrant I, meaning the introduction of LNG exports from the US will likely see most of the price response in the foreign market as the short-run capacity constraint abroad is relieved. Under virtually every condition described by Figure 7, the current price differential that exists between the US natural gas price and prices overseas will fall with the introduction of US LNG exports. Of course the volumes associated with a particular decline in the price spread will depend on the relative elasticities. In particular, if we move to the far upper right corner of Quadrant II, a large volume would be needed to erode the price differential. However, moving toward virtually any other corner on the diagram will require very little traded volume to see the price difference collapse. Given the short-run nature of the supply constraint in Asia, one should also expect that competing potential opportunities to provide natural gas supplies to the Asian market will be evaluated and perhaps even taken. Examples of competing projects could include development of unconventional resources in Asia, pipeline import options from Russia, Central Asia, and/or South Asia, and/or competing LNG supplies from Australia, East Africa, the Middle East, and/or North America. In other words, the current arbitrage opportunity is being aided by short-run inelasticity of supply in and to Asia. In the long run, this cannot be expected to persist, and **the** **development of new supplies from outside the US will** only serve to further **erode** regional **price differentials**, all else equal. Indeed, modeling at the Baker Institute indicates that prices outside of North America will likely soften relative to their current levels. This reflects several factors:  For one, longer term shale developments in places such as China, India, Australia, and several countries in Europe will become commercially attractive in price environments in excess of $7 per mcf. Thus, foreign shale supplies effectively serves as a sort of backstop on long-term prices. Secondly, the development of pipeline supplies from Russia, Central Asia, and South Asia to China will displace the need for LNG. This frees up those supplies for consumers in Korea and Japan. So, pipes serve as another point of competition for LNG longer term, particularly in developing continental markets.  Third, exchange rate movements will affect dollar-denominated supplies abroad. In particular, if the US dollar strengthens relative to its recent historical lows against major traded currencies, the evaluation of dollar-denominated arbitrage opportunities will change. This will tend to lower the current spreads between the US and Asia and the US and Europe, but importantly, this will not be due to any fundamental shift in the physical value of the commodity. Effectively, a stronger dollar makes dollar-denominated commodities more expensive.  Fourth, growth in competition will foster increased liquidity, and a movement away from the traditional pricing paradigm of long-term oil-linked contracts. Importantly, there is no guarantee that movement away from oil-indexation will result in natural gas prices falling longer term relative to crude oil; rather, a lack of oil-indexation should only mean that gas will be priced according to marginal cost. Each of these points has implications for US LNG exports to Asia and Europe. Global Shale Gas Opportunities and Foreign Supply Developments Relatively high prices in Europe and Asia have **already encouraged** supply responses from shale and other resources in those markets. While the initial forays into shale in Europe and other regions have proven to be more costly than the experience in the US, much of that is due to lack of equipment and personnel and **will** likely **prove transitory** as high quality opportunities are identified. The prospects for shale developments longer term in China, in Australia, and in Argentina (which could serve the Pacific basin via LNG) all look promising. With the Chinese natural gas market expected to be the primary source of growth for LNG suppliers in the coming decades, the large assessments for recoverable shale gas in China is certainly something to be considered. 14[14 In fact, the Baker Institute paper authored by Kenneth B. Medlock III and Peter Hartley entitled “Quantitative Analysis of Scenarios for Chinese Domestic Unconventional Natural Gas Resources and Their Role in Global LNG Markets” revealed that shale gas developments in China could be **every bit as game-changing** over the next couple of decades as shale gas developments in North America have been in the last decade. The study is available online at http://www.bakerinstitute.org/publications/EF-pub-RiseOfChinaMedlockHartley-120211-WEB.pdf.] Aside from unconventional natural gas resources, recent finds in offshore basins in the Eastern Mediterranean and East Africa may prove to be highly competitive resources that can serve demands in both Europe and Asia. While these sources of supply in particular would have to be transported as LNG, there are also viable sources of supply in both Western Siberia and Eastern Russia that could be transported by pipeline to Asia. In addition, Iraqi supplies by pipeline to Europe also remain a potential. To make matters more complex, supplies from Central and South Asia **already or soon** will enjoy pipeline links to China, and discussions continue regarding alternatives for Central Asian supply routes to Europe. Altogether, **the evidence is substantial that** the long-run **supply** curve **outside** of North **America is much more elastic than the current market might indicate, and development of these supplies will ultimately bring prices down.** In fact, this is a major point of competition for US LNG export projects currently under consideration. Specifically, if shale opportunities in Europe and Asia, and other sources of imported pipeline and LNG supply can be brought to market, then growth in global production will put downward pressure on prices everywhere. Of course, geopolitical and regulatory uncertainties and constraints could overwhelm commercial considerations, but **even if** these “above-ground” **constraints** do **exist, they would have to be substantial, widespread and persistent given the number of competing supply opportunities** that exist in the longer term. In sum, US LNG exports face risk from foreign supply developments. This is eerily reminiscent of the rush to build LNG import capacity in the US in the early 2000s, which ultimately turned out to be ex post ill-conceived investments due to US domestic supply response.

### Warming 2NC

#### --- The US will just export it

#### Science Daily 12 ["US Shale Gas Drives Up Coal Exports," 10-26, http://www.sciencedaily.com/releases/2012/10/121029082223.htm]

A report by researchers at The University of Manchester has concluded that whilst the US is burning less coal due to shale gas production, millions of tonnes of unused coal are being exported to the UK, Europe and Asia. As a result, the emissions benefits of switching fuels are overstated. US CO2 emissions from domestic energy have declined by 8.6% since a peak in 2005, the equivalent of 1.4% per year. However, the researchers warn that more than half of the recent emissions reductions in the power sector may be displaced overseas by the trade in coal. Dr John Broderick, lead author on the report from the Tyndall Centre for Climate Change Research, comments: "Research papers and newspaper column inches have focussed on the relative emissions from coal and gas. "However, it is the total quantity of CO2 from the energy system that matters to the climate. Despite lower-carbon rhetoric, shale gas is still a carbon intensive energy source. We must seriously consider whether a so-called "golden age" would be little more than a gilded cage, locking us into a high-carbon future." Professor Kevin Anderson of the Tyndall Centre notes: "Since 2008 when the shale gas supply became significant, there has been a large increase in US coal exports. This increases global emissions as the UK, Europe and Asia are burning the coal instead. Earlier Tyndall analysis suggests that the role for gas in a low carbon transition is extremely limited, with shale gas potentially diverting substantial funds away from genuinely low and zero carbon alternatives"

#### Natural gas does NOT slow warming

#### Romm Senior Fellow at American Progress 12 [Joseph, "Bombshell: You Can’t Slow Projected Warming With Gas, You Need ‘Rapid and Massive Deployment’ of Zero-Carbon Power," 3-1, http://thinkprogress.org/climate/2012/03/01/428764/ddrop-in-warming-requires-rapid-massive-deployment039-of-zero-carbon-power-not-gas/]

Another major study finds confirmsnatural gas is a bridge fuel to nowhere

A must-read new study by climatologist Ken Caldeira and tech guru Nathan Myhrvold (!) makes clear the world’s only plausible hope to avert catastrophic temperature rise this century is aggressive deployment of zero-carbon technologies and conservation. The Institute of Physics [news release](http://www.iop.org/news/12/feb/page_53901.html) explains: … technologies that offer only modest reductions in greenhouse gases, such as **the use of** natural gas **and perhaps carbon capture and storage,** cannot substantially reduce climate risk in the next 100 years. **Delaying the rollout of the technologies is not an option however; the risks of environmental harm will be much greater in the second half of the century and beyond if we** [continue](http://thinkprogress.org/climate/2012/03/01/428764/ddrop-in-warming-requires-rapid-massive-deployment039-of-zero-carbon-power-not-gas/) **to rely on coal-based technologies.** Those are the bombshell conclusions from “[Greenhouse gases, climate change and the transition from coal to low-carbon electricity](http://iopscience.iop.org/1748-9326/7/1/014019/pdf/1748-9326_7_1_014019.pdf),” in IOP Publishing’s journal Environmental Research Letters. These results are not entirely news to people who follow the recent climate and energy literature, which I’ve written about at length — see “[NCAR Study: Switching From Coal to Gas Increases Warming for Decades, Has Minimal Benefit Even in 2100](http://thinkprogress.org/romm/2011/09/09/315845/natural-gas-switching-from-coal-to-gas-increases-warming-for-decades/).” The fact that natural gas is a bridge fuel to nowhere was first shown by the International Energy Agency in its big June report on gas — see [IEA’s “Golden Age of Gas Scenario” Leads to More Than 6°F Warming and Out-of-Control Climate Change](http://thinkprogress.org/romm/2011/06/07/238578/iea-golden-age-of-natural-gas-scenario-warming-climate-change/). But what’s new is the first peer-reviewed analysis that “has predicted the climate effects of energy system transitions” with “a quantitative model … that includes life-cycle emissions and the central [physics of](http://thinkprogress.org/climate/2012/03/01/428764/ddrop-in-warming-requires-rapid-massive-deployment039-of-zero-carbon-power-not-gas/) greenhouse warming.” What’s also remarkable about this study is the lead author, Nathan Myhrvold. You may recall Myhrvold, the former CTO of [Microsoft](http://thinkprogress.org/climate/2012/03/01/428764/ddrop-in-warming-requires-rapid-massive-deployment039-of-zero-carbon-power-not-gas/), from his anti-clean-energy and pro-geoengineering quotes in”[Error-riddled book Superfreakonomics](http://thinkprogress.org/romm/2009/10/14/204805/superfreakonomics-errors-nathan-myhrvold-intellectual-ventures-bill-gates-warren-buffet/),” which I and many, many others debunked at length in 2009. Myhrvold was quoted back then about the “carbon debt” of the [clean energy](http://thinkprogress.org/climate/2012/03/01/428764/ddrop-in-warming-requires-rapid-massive-deployment039-of-zero-carbon-power-not-gas/) build-out: “Eventually, we have a great carbon-free energy infrastructure but only after making emissions and global warming worse every year until we’re done building out the solar plants, which could take 30 to 50 years.“ Caldeira loves to do actual analyses of such hand-waving claims. What he and Caldeira show here is that in fact replacing coal with clean energy starts getting you off the warming path within two decades and sharply off within four decades. But not natural gas. Myhrvold explained to [Climate Central](http://www.climatecentral.org/blogs/natural-gas-our-new-savoir-not-so-fast/): The bottom line that emerges from this “[life-cycle analysis](http://en.wikipedia.org/wiki/Life-cycle_assessment),” or LCA, said Myhrvold, is that by the time we could switch from coal to gas, there would already be so much more CO2 and methane in the atmosphere that we’d be much deeper in the hole. “It’s like living on a [credit card](http://thinkprogress.org/climate/2012/03/01/428764/ddrop-in-warming-requires-rapid-massive-deployment039-of-zero-carbon-power-not-gas/),” he said. “It’s easy to get into a situation where it will take years and years to pay back.” In fact, he argues, because CO2 stays in the atmosphere for so long once it’s up there, a switch to natural gas would have zero effect on global temperatures by the year 2100. “If you take 40 years to switch over entirely to natural gas,” he said, “you won’t see any substantial decrease in global temperatures for up to 250 years. There’s almost no climate value in doing it.” It should be obvious that if you are just building new gas plants and not replacing coal power 1 for 1 — which is what we are doing today — then things are even worse for gas. And this doesn’t even count the opportunity cost of all that money spent on gas infrastructure. **UDPATE:** Myhrvold explained **to me in an email** that “We only model ‘conventional’ gas, **because we did not have good LCA [life-cycle analysis] studies for shale gas from fracking. However since our paper was accepted several have come out. This area is still controversial but people are coming in with higher emissions from shale gas than conventional gas. That would tend to make any shale gas scenarios worse than the natural gas scenarios we cover.** Much of the media coverage of this study has been of the form, “[Low-carbon technologies ‘no quick-fix,’ say researchers,](http://www.kurzweilai.net/low-carbon-technologies-no-quick-fix-say-researchers#!prettyPhoto)” which is understandable since that was the headline of the IOP news release. But anyone who thought that even aggressive action today could substantially change our warming path before, say, 2040, wasn’t paying close attention to the literature (or reading Climate Progress). Yes, replacing the energy infrastructure can’t be done instantaneously, CO2 lasts a long time in the atmosphere, we have a fair amount of warming in the pipeline, and the “ocean thermal inertia delays the climate beneﬁts of emissions reductions,” as the study notes. **The climate fight is about the post-2040 world**. If we act aggressively now, we can keep global warming close to 3.6°F (2C). But if we delay we face the real prospect of 7-9°F (4-5C) global warming in the second half of the century, with substantially higher warming over most of the United States. That is “incompatible with organized global community, is likely to be beyond ‘adaptation’, is devastating to the majority of ecosystems & has a high probability of not being stable (i.e. 4°C [7F] would be an interim temperature on the way to a much higher equilibrium level),” according to Professor Kevin Anderson, director of the Tyndall Centre for Climate Change in Britain (see [here](http://137.205.102.156/Ms%20S%20J%20Pain/20111124/Kevin_Anderson_-_Flash_%28Medium%29_-_20111124_05.26.31PM.html)). That’s why the authors conclude that if you want to get “substantial reductions in temperatures relative to the coal-based system” you need to act now to shut down coal plants and replace them with very-low-carbon systems or conservation: Despite the lengthy time lags involved, **delaying rollouts of low-carbon-emission energy technologies risks even greater environmental harm in the second half of this century and beyond**…. Technologies that offer only modest reductions in emissions, such as natural gas and—if the highest estimates from the life-cycle analyses are correct—carbon capture storage, cannot yield substantial temperature reductions this century. **Achieving substantial reductions in temperatures relative to the coal-based system will take the better part of a century, and will depend on rapid and massive deployment of some mix of conservation, wind, solar, and nuclear, and possibly carbon capture and storage.** And this was a surprise to the lead author: “The most surprising thing we found,” lead author Nathan Myhrvold told me recently, “is that unless you switch to a form of energy that cuts emissions really drastically” — and he isn’t talking about any piddling 50%, either — “you basically don’t get any real effect.” Interestingly, methane leakage doesn’t seem to play a major role in these findings — even though recent research suggests it may be substantial (see [Study: High Methane Emissions Measured Over Gas Field “May Offset Climate Benefits of Natural Gas”](http://thinkprogress.org/romm/2012/02/08/421588/high-methane-emissions-measured-over-gas-field-offset-climate-benefits-of-natural-gasquot/)). **What is fascinating, if I am reading** [supplemental chart S2](http://iopscience.iop.org/1748-9326/7/1/014019/media/erl410200suppdata.pdf) correctly, is that t**here is substantially more radiative forcing from the waste heat in a natural gas plant then from methane leakage in the whole life-cycle of natural gas power**. If, like me, you thought waste heat was not a big factor, you were half right. It isn’t a big factor for coal per se, but when you are trying to replace coal, it turns out to have a moderate impact in the lifecycle analysis of some alternatives (like gas), which matters when you are doing this kind of mass energy transition. As an aside, I have to comment on a [new post](http://dotearth.blogs.nytimes.com/2012/02/29/a-fresh-scientific-defense-of-the-merits-of-moving-from-coal-to-shale-gas/) by NY Times blogger Andy Revkin, “A Fresh Scientific Defense of the Merits of Moving from Coal to Shale Gas.” Revkin, who doesn’t mention this new peer-reviewed whole-energy-system study, cites a [press release](http://dotearth.blogs.nytimes.com/2012/02/29/a-fresh-scientific-defense-of-the-merits-of-moving-from-coal-to-shale-gas/) (!) to conclude, “But, again, the notion that gas holds no advantage over coal, in weighing the climate implications of energy choices, is fading fast (to my reading of the science and that of many others).” The notion that “gas holds no advantage over coal in weighing the climate implications of energy choices” is a semantic red herring. We now have 2 major unrebutted peer-reviewed scientific studies that make clear that if your goal is to substantially alter the projected temperature rise on our current emissions path, natural gas isn’t your answer. Indeed, it is a massive diversion of resources that need to go to “rapid and massive deployment of some mix of conservation, wind, solar, and nuclear, and possibly carbon capture and storage.” And I repeat, if, as is the case today, natural gas isn’t replacing coal 1 for 1, it is even worse.

#### Methane pipeline leaks --- and that independently kills trees

**The Washington Post 3-5** ["Natural gas leaks may hasten global warming," 3-5, http://www.japantimes.co.jp/life/2013/03/05/environment/natural-gas-leaks-may-hasten-global-warming/#.UTY7LjDrzws]

Measuring how much methane gas is leaking from pipes under the District of Columbia could help answer a key policy question. As the production of natural gas expands in the United States and elsewhere, do its dangers for the climate far outweigh its benefits? Methane, the main component of natural gas, is about 25 times more powerful as a heat-trapping gas than carbon dioxide, the largest human contributor to climate change; the atmospheric concentration of methane has doubled since the start of the Industrial Revolution. While it largely dissipates in a few decades and there is far less of it in the atmosphere than carbon dioxide, it continues to drive global warming. Depending on how much leaks out in the journey from wellhead to homes and factories, some experts say, it could be enough to offset the advantages natural gas has over coal. “We don’t have enough data to develop sound policy going forward,” said Steven Hamburg, chief scientist of the advocacy group Environmental Defense Fund. He noted that natural gas has a complex supply chain with “different geographies and geologies” along the way. Hamburg is spearheading a $10 million, two-year effort to measure methane emissions along America’s supply chain. As activists and energy executives debate the natural gas industry’s impact and the Environmental Protection Agency weighs whether to impose new regulations, Hamburg said, “it’s critically important” that America develop a better data set on methane leaks. The group has brought together academics, environmentalists and industry representatives to track different stages of natural gas extraction, production and transmission and will issue its initial report in May. Other teams are also working to unlock the puzzle. Bob Ackley spent January driving the city for 10 to 12 hours a day, usually with a researcher riding alongside. Ackley, who runs a methane detection company, is part of a six-person group financed by Duke University’s Nicholas School of the Environment that has collected data on thousands of methane leaks under Washington’s roads. On a recent trip through the city, Ackley took the wheel while Duke professor Robert Jackson tracked real-time methane concentrations that an instrument stashed in the car’s trunk fed into a computer. Periodically the readings would spike to unsafe levels, with methane escaping from a single manhole making up as much as 32 percent of an air sample. Last fall, the team published the results of a similar survey of Boston, which showed the city’s aging infrastructure had 3,356 leaks. “Washington is at least as leaky as Boston, if not more,” Jackson said. “It looks like it has both more leaks and bigger leaks than Boston.” Researchers disagree about how much methane is leaking into the atmosphere. Cornell University’s Robert Howarth has estimated somewhere between 3.6 percent and 7.9 percent of methane escapes during the production life cycle of shale gas; the Massachusetts Institute of Technology countered with a study saying it is just a fraction of that amount. University of Colorado research scientist Gabrielle Petron, who also works in the National Oceanic and Atmospheric Administration’s (NOAA) global monitoring division, said the rate of increasing atmospheric methane concentrations has accelerated tenfold since 2007. She said it will take a few more years to determine whether the natural gas boom helps explain the change. “All we’ve done now are snapshot measurements,” she said. Their findings have major safety and environmental implications. Gas leaks contribute to smog and can lead to explosions and fires, including the one that leveled a restaurant in Kansas City, Missouri, on Feb. 19, or the 2010 pipeline explosion in San Bruno, California, that killed more than half a dozen people. And leaking gas can also weaken and kill trees in urban areas by replacing oxygen in their roots and drying them out; Ackley has helped organize a lawsuit by five communities surrounding Boston against the region’s gas company, National Grid, and he is consulting with residents of Montgomery County, Maryland, who are concerned about tree deaths there.

#### Speeds up warming --- and collapses oxygen levels

#### Park 92 [Christopher, Senior Lecturer Geography and Principal of – Graduate College of Lancaster University, “Tropical Rainforests”, p. 100-101]

Global climate might also be affected by deforestation through the loss of a valuable natural pollution filter which trees provide.78 Trees produce oxygen and take in carbon dioxide (CO2) by photosynthesis. Deforestation, by removing this natural air conditioning system, might have two consequences. Trees purify the air we breathe and forests play a significant role in maintaining the oxygen balance of the earth. Clearance might mean a shortage of oxygen for life on earth to survive. The second and more damaging effect stems from the very effective role which forests play in filtering carbon dioxide from the atmosphere. Rainforests act as a carbon sink and prevent the build-up of CO2 in the atmosphere, acting as the 'lungs' of the earth. This helps to constrain global warming triggered by greenhouse gases. Fears have been expressed that forest clearance is eroding this natural pollution filter and thus rempTing the check on global warming.79 Clearance by burning, which is very widespread, amplifies the problem because large-scale wood burning will deplete oxygen in the atmosphere and release more carbon in the form of CO2 (which will promote global warming). The significance of this loss of pollution sink is widely debated, and there is little hard evidence to confirm or reject it. Some take the threat seriously whereas others dismiss the prospect as just a myth'8° which is much less important than other mechanisms of climatic change.

#### Accidental methane hydrate release --- causes warming

Morningstar 11 [Cory Morningstar, “Destination—Hell. Are we there yet?,” Huntington News, Sunday, March 27, 2011—01:09, pg. http://www.huntingtonnews.net/2768

US Department of Energy meeting summary: "Alternatively, an undersea earthquake today, say off the Blake Ridge or the coast of Japan or California might loosen and cause some of the sediment to slide down the ridge or slump, exposing the hydrate layer to the warmer water. That in turn could cause a chain reaction of events, leading to the release of massive quantities of methane. Another possibility is drilling and other activities related to exploration and recovery of methane hydrates as an energy resource. The hydrates tend to occur in the pores of sediment and help to bind it together. Attempting to remove the hydrates may cause the sediment to collapse and release the hydrates. So, it may not take thousands of years to warm the ocean and the sediments enough to cause massive releases, only lots of drilling rigs. Returning to the 4 GtC release scenario, assume such a release occurs over a one-year period sometime in the next 50 years as result of slope failure. According to the Report of the Methane Hydrate Advisory Committee, “Catastrophic slope failure appears to be necessary to release a sufficiently large quantity of methane rapidly enough to be transported to the atmosphere without significant oxidation or dissolution.” In this event, methane will enter the atmosphere as methane gas. It will have a residence time of several decades and a global warming potential of 62 times that of carbon dioxide over a 20-year period. This would be the equivalent of 248 GtC as carbon dioxide or 31 times the annual man-made GHG emissions of today. Put another way, this would have the impact of nearly 30 years worth of GHG warming all at once. The result would almost certainly be a rapid rise in the average air temperature, perhaps as much as 3°F immediately. This might be tolerable if that’s as far as things go. But, just like 15,000 years ago, if the feedback mechanisms kick in, we can expect rapid melting of Greenland and Antarctic ice and an overall temperature increase of 30°F."

#### AND causes dead zones

#### Yamamoto et al 9 [A., Graduate School of Environmental Science, Hokkaido University, Y. Yamanaka[a](http://www.sciencedirect.com.proxy.library.emory.edu/science/article/pii/S0012821X09003136#aff1), [b](http://www.sciencedirect.com.proxy.library.emory.edu/science/article/pii/S0012821X09003136#aff2), E. Tajika,[c](http://www.sciencedirect.com.proxy.library.emory.edu/science/article/pii/S0012821X09003136#aff3) “Modeling of methane bubbles released from large sea-floor area: Condition required for methane emission to the atmosphere,” 6-21, Ebsco]

Applying our results to PETM, it is suggested that a methane bubble derived directly from the typical hydrate layer could not have contributed substantially to global warming. On the other hand, the methane derived from organic-rich sediments intruded by magma ([Svensen et al., 2004](http://www.sciencedirect.com.proxy.library.emory.edu/science/article/pii/S0012821X09003136#bib34)) could be emitted to the atmosphere. The collapse of methane hydrate would potentially cause a global-scale anoxic condition in the seawater. The methane of 2000 GtC dissolved into the world ocean consumes 3.3 × 1017 mol of dissolved oxygen, which is about the same amount of dissolved oxygen as is in the ocean at the present. The dissolved methane from the methane bubble rapidly consumes in situ and surrounding dissolved oxygen owing to advection and diffusion on the time scale of hundreds of years. Advection and diffusion would determine distribution of the anoxic condition by influencing oxygen supply from the sea surface. In other words, these mixing phenomena would also determine the distribution of dissolved methane without oxidation that would reach the atmosphere. We need General Circulation Models (GCMs) to estimate the expansion of anoxic conditions in the ocean and the amount of methane released into the atmosphere.

#### Extinction

**Maglir 10** [Fand, “Consider the Global Effects of Oil Spill on Oxygen Supply,” 9-6, <http://www.naturalnews.com/029666_oil_spill_oxygen_supply.html>]

Open-ocean microalgae is responsible for consuming about one fifth of all carbon dioxide taken up by global plant-life, and the oxygen they produce through photosynthesis is essential for the survival of life on Earth. More ocean algae means that more carbon dioxide is removed from the atmosphere to be replaced by more oxygen. When these algae blooms die and sink to the ocean floor, they move large amounts of carbon dioxide from the atmosphere to the oceans, which also helps control Earth`s climate. Upsets in the balance of ocean algae can be detrimental to marine life as well as human life. Increasing dead zones in the oceans affect not only local businesses who depend on abundant marine life such as fish, shrimp and the like, but also the very air we breathe! How will the growing number of dead zones in the world`s oceans affect ocean algae and the oxygen levels in the air? Ocean dead zones are created by a number of factors, both naturally occurring and human interference. At the very minimum, sea life requires 30% dissolved oxygen in the water and thrives at 80% or higher. When the amount of dissolved oxygen in the ocean decreases to below 30% the water becomes hypoxic, and below 1% it becomes anoxic. The World Resources Institute`s compiled data states that there are currently 375 dead zones in the world`s oceans. Although excessive algae blooms, due in part to an increase in the basic chemical nutrients in the water, cause oxygen depletion in the oceans, the recent increase in dead zones can be attributed to human alterations and pollution. The Mississippi River deposits Midwest agricultural pollution into the northern Gulf of Mexico, creating a dead zone which spans over 8500 square miles. As if that isn`t enough, BP`s ruptured well in the Gulf of Mexico is creating oxygen depleted dead zones, with methane concentrations as high as 100,000 times normal levels, along with high levels of crude oil and toxic chemical dispersants, killing marine life and oxygen-producing algae. Scientists point out that the oil slick, as well as the chemical dispersants, will kill off the phytoplankton and algal species for which oil is a toxin and will block the sunlight needed for all photosynthesizing algae. What we are looking at is a prospective dead zone of a 200 mile radius from the Deepwater Horizon disaster datum in the Gulf. That`s equivalent to over 125,663 square miles. If the oil contamination of our oceans continue, such as what we`re seeing in areas such as the Gulf of Mexico and the oil rich Niger Delta, the increasing dead zones could threaten Earth`s ability to sustain human life as oxygen-producing ocean algae, a huge contributor to our global oxygen supply, is killed off.

## 1NR Case

### Shale Sustainable 2NC

#### Your authors agree

Gold 2-27 [Russel, "Gas Boom Projected to Grow for Decades," 2-27, http://online.wsj.com/article/SB10001424127887323293704578330700203397128.html]

Art Berman, a petroleum geologist and consultant who has been a leading critic of what he says are overly optimistic projections of shale-gas production, said the research "is probably the most comprehensive study of the Barnett shale that will ever be done." But he said it bolsters his view that only a quarter of Barnett wells generate an economic return. The question for the industry, he said, is, "why didn't they identify the sweet spots initially, before spending $40 billion on land and wells?" The study does show that many of the wells drilled in the Barnett have been poor performers. And while the gas-bearing rock covers 8,000 square miles in and around Fort Worth, Texas, the study suggests it can be economically developed in an area only half that size. Some of the energy companies that spent enormous sums to lease thousands of acres in far-flung parts of the Barnett may be sitting on acreage of little value. Mr. Tinker agrees that the study shows the Barnett is highly variable, with some areas producing enough gas to make the wells profitable and other areas generating duds. Even so, the study concludes that 44 trillion cubic feet of natural gas will be recovered from the Barnett—more than three times what has been produced so far and about two years' worth of U.S. consumption at current rates. The university also is examining shale formations in Pennsylvania, Louisiana and Arkansas, work that has led investigators to conclude that U.S. natural gas production won't plateau until 2040. Reports on these formations are expected to be released next year. Enlarge Image Associated Press A drilling rig is seen near Kennedy, Texas, in May. U.S. natural-gas production will accelerate over the next three decades, new research indicates. One reason there has been a dispute over projections of shale-gas production is that much of the research, even inside universities, has been funded by groups with either pro- or anti- energy-development agendas. Many of the latter have strong views about the environmental impact of fracking on the air and groundwater. The Sloan Foundation said it looked into whether the researchers who performed the new study were unduly influenced by outside ties and was satisfied that "potential conflicts of interest or sources of bias have not influenced the research." The co-lead investigator of the study, Mr. Tinker, is paid to serve on the technical advisory boards of BP BP.LN +0.70% PLC and two smaller energy companies. He also receives speaking fees a few times a year for appearances before industry groups and private companies. The Bureau of Economic Geology receives research funding from government, industry and the University of Texas. The other lead investigator, Svetlana Ikonnikova, didn't disclose any potential conflicts to the university. Scott Anderson, who researches shale development for the Environmental Defense Fund, which is working on lowering the environmental impact of gas drilling, reviewed some of the study's preliminary results. He praised the report as "robust" and "sophisticated." The U.S. energy industry welcomed the conclusion that a large number of successful gas wells remain to be drilled. The American Petroleum Institute, the lobbying arm of large U.S. oil and gas companies, said in a statement that the study "underscores the fact that the U.S. has substantial and growing natural gas resources that will be able to supply future domestic markets and provide exports as well."

#### We'll go through their warrants here ---

#### Yes it declines rapidly after the first year --- but lasts significantly longer

#### Maize 12 [Kennedy, executive editor of MANAGING POWER, "Is Shale Gas Shallow or the Real Deal?," Power, Dec2012, Vol. 156, Issue 12, EBSCO]

Bullish on Gas

But Perm State geologist Terry Engelder, the major domo of Marcellus Shale (see sidebar), doesn't share Berman's pessimism about gas supply and prices, or Berman's assessment of the production decline of shale gas wells. "All wells decline," Engelder said in an interview. "What distinguishes shale wells from conventional reservoirs is the percentage of gas delivered over a long period of time." Shale wells, Engelder said, start producing at very high volumes, decrease considerably during the first year, but continue producing much longer than conventional gas wells, because the tight rock formations slow the release of the gas.

With shale gas, Engelder said, "You have a steeper decline curve initially, but a much longer period of production." That's a function of the tight shale reservoirs, "with inherent low permeability," he said. "The gas takes longer to get" to the well head "but remains economic over a longer period of time."

Here is where it can get pretty wonky. Engelder notes that the dispute with Berman and others in his camp who say shale wells decline too rapidly is a matter of hyperbolic production curves versus exponential curves. Engelder is in the hyperbolic school and Berman is one of the exponential advocates. If a well's decline is hyperbolic, Engelder explained, you get a decreasing rate of decline year after year. The best data for eastern shale wells available, he said, shows a general hyperbolic decline over a 40-year period, versus a 25-year lifespan for conventional gas wells.

#### Industry won't collapse --- industries will adapt to lower prices

Liou 12 [Joann, editorial coordinator for Drilling Contractor, [Positive rig demand steers 2013 outlook](http://www.drillingcontractor.org/positive-rig-demand-steers-2013-outlook-19247)," 11-2, http://www.drillingcontractor.org/positive-rig-demand-steers-2013-outlook-19247]

Mr LaMotte believes more consolidation is needed in the onshore US services market, moving from a phase that addressed a capacity shortage in services through the construction of rigs.

“We’ve been through the period of ‘shock and awe,’ during which the industry tossed hundreds of billions of dollars at the near-simultaneous identification and early development of the largest unconventional gas and liquids plays in the Lower 48; however, with more than 70% of the nation’s resource potential in a more mature ‘standardization’ phase, we believe E&P companies will become increasingly focused on the productivity of their spending as opposed to just spending more,” Mr LaMotte explained. “It will require the industry to focus on reducing the cost of services delivery, on efficiency and on developing technologies that improve the recovery factors.”

#### Berman’s wrong---flawed data, ignores new highly productive plays

Hurdle 12 – Jon Hurdle, December 5th, 2012, "Are US Shale Gas Resources Overstated? Part 2" energy.aol.com/2012/12/05/are-us-shale-gas-resources-overstated-part-2/

Enthusiasm over the US natural gas production renaissance has been steadily building over the past few years and increasing production of both gas and oil from shale deposits came up numerous times during the 2012 US presidential election cycle. However, not everyone views shale gas as a supply panacea, which is the thrust of a book due out next spring written by Bill Powers with a forward by Arthur Berman.¶ Potential Gas Committee executive director John Curtis rejected Berman's reliance on the committee's "probable" category, which is based on gas in existing fields.¶ "He's dead wrong," Curtis said, arguing that restricting the resource estimate to only "probable" gas ignores the existence of highly productive plays **like the Marcellus and the Haynesville that** were not initially included **in that category because they had not been drilled**.¶ Curtis added that **any deficit between a field's actual production and its resource estimate** may reflect a lack of pipelines or undeveloped markets **for the gas** rather than a resource that undershoots expectations**.**¶ The PGC's latest estimate, published in 2010, is for total US shale resource of 687 tcf, including "probable", "possible" and "speculative" gas. Including all categories of gas, the committee estimated a total resource of 1,900 tcf, not far below the EIA's assessment of 2,203 tcf.¶ Ahead of the next PGC report, due in April 2013, Curtis said there was no indication of a need to cut its current estimate of gas resources, and there had not been in 2010 compared with the previous report two years earlier.¶ The Thorny Issue of Reserve Estimates¶ "From year-end 2008 to year-end 2010 we saw no reason to move away from our position for the quality and quantity of resources, and from 2010 to now we still do not," he said.¶ For his part, Powers cited the EIA's own data in support of his case, noting that the organization sharply cut its estimate of unproved technically recoverable resource to 482 tcf in the latest outlook from 827 tcf a year earlier, largely because of a big decline in its TRR estimate for the Marcellus Shale to 141 tcf from 410 tcf a year earlier.¶ "**The EIA is starting to walk back from its earlier claims**," Powers said, in an interview ahead of the book's scheduled publication in May 2013. He said the EIA's credibility was hurt when it cut its Marcellus estimate after the US Geological Survey calculated in its own 2011 study that the Appalachian shale play contained just 84 tcf.¶ Philip Budzik, a spokesman for the EIA, said the changing estimates reflect the industry's increasing experience in the field. "The numbers have been changing significantly over the last couple of years," he said. "Producers have been experimenting with drilling and completion techniques."¶ Any confirmed cut in US shale gas resources could have far-reaching consequences ranging from reduced energy security to more greenhouse gas emissions and higher energy costs. With increased production and optimistic projections for recoverable resources, natural gas is assuming an increasingly important role in US energy policy.¶ The EIA estimated the TRR for all forms of natural gas including tight gas and coal bed methane is 2,203 tcf, or about a century's supply at the current national consumption rate of some 24 tcf a year. Shale gas represents about a quarter of the EIA's total, or around 22 years' worth; that resource would shrink to just 5.5 years if Powers is right.¶ Dan Whitten, a spokesman for the trade group America's Natural Gas Alliance, rejected Powers's estimates, **saying that shale gas production has risen more than 12-fold over the last decade, and estimates of recoverable resources have risen at a similar rate.** Whitten said Powers's assertions have been refuted by prominent organizations including the Massachusetts Institute of Technology and the Potential Gas Committee.¶ "There is no question**, with continued advances in both the technology used to produce natural gas and our understanding of resource potential, that** projections will continue to evolve," Whitten wrote in an email. "While we have not seen Mr. Powers' book, his conclusions run counter to the established science on the abundance of natural gas."

#### Their ev says the plan results in 80tcf of natural gas

Medlock, 8 [Medlock is a fellow in Energy Studies at Rice University's James A Baker III Institute for Public Policy and an adjunct assistant professor in the [Economics Department](http://www.chron.com/?controllerName=search&action=search&channel=opinion%2Foutlook&search=1&inlineLink=1&query=%22Economics+Department%22) at Rice, “Open outer continental shelf”, http://www.chron.com/opinion/outlook/article/Open-outer-continental-shelf-1597898.php]

A confluence of factors is responsible for the recent price run-up at the pump. One important factor behind the strength of oil prices is the expectation of inadequate oil supply in the future. This has led to a debate regarding the removal of drilling access restrictions in the U.S. Outer Continental Shelf (OCS). According to the Department of Interior's Minerals Management Service (MMS), the OCS in the Lower 48 states currently under moratorium holds 19 billion barrels of technically recoverable oil. Some analysts claim that opening the OCS will not matter that much, as the quantity of oil is only about two years of U.S. consumption. But a more appropriate way to look at the issue is this: If the OCS could provide additional production of 1 million barrels per day of oil, our import dependence on Persian Gulf crude oil would be reduced by about 40 percent. Moreover, at 1 million barrels per day, the currently blocked OCS resource would last about 50 years. Of course, opening the OCS will not bring immediate supplies because it would take time to organize the lease sales and then develop the supply delivery infrastructure. However, as development progressed, the expected growth in supply would have an effect on market sentiment and eventually prices. Thus, opening the OCS should be viewed as a relevant part of a larger strategy to help ease prices over time because an increase in activity in the OCS would generally improve expectations about future oil supplies. Lifting the current moratorium in the OCS would also provide almost 80 trillion cubic feet of technically recoverable natural gas that is currently off-limits. A recent study by the Baker Institute indicates that removing current restrictions on resource development in the OCS would reduce future liquefied natural gas import dependence of the United States and lessen the influence of any future gas producers' cartel.

#### The US uses 24tcf per year – means the plan is only good for 3 years

Energy Information Administration, 8-29-2012, “Frequently Asked Questions,” http://www.eia.gov/tools/faqs/faq.cfm?id=58&t=8

EIA estimates that there are 2,203 trillion cubic feet (Tcf) of natural gas that is technically recoverable in the United States. At the rate of U.S. natural gas consumption in 2011 of about 24 Tcf per year, 2,203 Tcf of natural gas is enough to last about 92 years.

#### Even a single onshore shale field is six times bigger than all OCS resources

Inman 12 Mason, National Geographic News, Feb 29, "Estimates Clash for How Much Natural Gas in the United States", news.nationalgeographic.com/news/energy/2012/03/120301-natural-gas-reserves-united-states/

Engelder is often given credit for spurring the shale gas rush in the Marcellus with early estimates that the formation held large amounts of natural gas. In his most recent published estimate, from 2009, he figured the Marcellus could in the long run yield 489 tcf, a number in the same ballpark as the EIA's 2011 estimate.

#### Their solvency evidence prove OCS restrictions only make a difference of 1.5tcf per year

Baker Institute, ‘8 (Baker Institute for Public Policy, Rice University, Baker Institute Policy Report, January 2008, “Natural Gas in North America: Markets and Security,” http://connection.ebscohost.com/c/articles/30064519/study-lift-u-s-drilling-restrictions-avoid-international-lng-cartel)//CC

As might be expected, the lower requirements for LNG under this scenario stem from larger, lowcost U.S. Lower 48 natural gas production. Modeling predicts that lifting access restrictions would lead to an increase overall in Lower 48 production of about 1.5 tcf in 2015 (or a 7.5 percent increase), increasing to 3.1 tcf greater production (or a 10.1 percent increase) in every year from 2015 through 2030. More specifically, OCS production would total 5.0 tcf in 2015 and 6.1 tcf in 2025 as compared to only 3.5 tcf in 2015 and 3.9 tcf in 2025 if the restrictions remain in place. Lifting restrictions in the Rocky Mountains adds another 0.10 tcf by 2015 and 0.93 tcf by 2025.

#### Their evidence conclusively says that the consensus of experts agree on-shore shale is sustainable enough for exports now

Ebinger, Senior fellow and Director of the Energy Security Initiative at Brookings, ‘12

(Charles, “Liquid Markets: Assessing the Case for US Exports of Liquefied Natural Gas,” 5-2-12, http:~/~/www.brookings.edu/~~/media/events/2012/5/02%20lng%20exports/20120502\_lng\_edu/~~/media/events/2012/5/02%20lng%20exports/20120502\_lng\_exports, accessed 10-22-12) PM

For an increase in U.S. exports of LNG to be considered feasible, there has to be an adequate and sustainable domestic resource base to support it. Natural gas currently accounts for approximately 25 percent of the U.S. primary energy mix. 3 While it currently provides only a minority of U.S. gas supply, shale gas production is increasing at a rapid rate: from 2000 to 2006, shale gas production increased by an average annual rate of 17 percent; from 2006 to 2010, production increased by an annual average rate of 48 percent (see Figure 2). 4 According to the Energy Information Adminis tration (EIA), shale gas production in the United States reached 4.87 trillion cubic feet (tcf) in 2010, or 23 percent of U.S. dry gas production. By 2035, it is estimated that shale gas production will account for 46 percent of total domestic natural gas production. 5 Given the centrality of shale gas to the future of the U.S. gas sector, much of the discussion over potential exports hinges on the prospects for its sustained availability and development. For exports to be feasible, gas from shale and other unconventional sources needs to both offset declines in conventional production and compete with new and incumbent domestic end uses. There have been a number of reports and studies that attempt to identify the total amount of technically recoverable shale gas resources—the volumes of gas retrievable using current technology irrespective of cost—available in the United States. These estimates vary from just under 700 trillion cubic feet (tcf) of shale gas to over 1,800 tcf (see table 1). To put these numbers in context, the United States consumed just over 24 tcf of gas in 2010, suggesting that the estimates for the shale gas resource alone would be enough to satisfy between 25 and 80 years of U.S. domestic demand. 6 The estimates for recoverable shale gas resources also compare with an estimate for total U.S. gas resources (onshore and offshore, including Alaska) of 2,543 tcf. 7 Based on the range of estimates below, shale gas could therefore account for between 29 percent and 52 percent of the total technically recoverable natural gas resource in the United States. sustainability of shale Gas Production In addition to the size of the economically recoverable resources, two other major factors will have an impact on the sustainability of shale gas production: the productivity of shale gas wells; and the demand for the equipment used for shale gas production. The productivity of shale gas wells has been a subject of much recent debate, with some industry observers suggesting that undeveloped wells may prove to be less productive than those developed to date. However, a prominent view among independent experts is that sustainability of shale gas production is not a cause for serious concern, owing to the continued rapid improvement in technologies and production processes.

## 1NR Arctic DA

### Overview

#### Magnitude—U.S.-Russia conflict is the only existential risk.

Nick Bostrom, 2002. Gannon Award winner, Professor of philosophy at Oxford University. http://www.nickbostrom.com/existential/risks.html.

A much greater existential risk emerged with the build-up of nuclear arsenals in the US and the USSR. An all-out nuclear war was a possibility with both a substantial probability and with consequences that might have been persistent enough to qualify as global and terminal.There was a real worry among those best acquainted with the information available at the time that a nuclear Armageddon would occur and that it might annihilate our species or permanently destroy human civilization.[4]  Russia and the US retain large nuclear arsenals that could be used in a future confrontation, either accidentally or deliberately**.** There is also a risk that other states may one day build up large nuclear arsenals. Note however that a smaller nuclear exchange, between India and Pakistan for instance, is not an existential risk, since it would not destroy or thwart humankind’s potential permanently. Such a war might however be a local terminal risk for the cities most likely to be targeted. Unfortunately, we shall see that nuclear Armageddon and comet or asteroid strikes are mere preludes to the existential risks that we will encounter in the 21st century.

Turns Warming

**Star 9**, University of Sydney, 8/2/09, (Stephen Starr and Peter King, , “Nuclear suicide”, Sunday, 02 August 2009, http://www.sciencealert.com.au/opinions/20090208-19496.html)

But there is little evidence yet that either the government or the Commission is fully alert to the most momentous truth of the present era: Our **best science** **now predicts** that nuclear arsenals are fundamentally incompatible with continued human existence. It is **imperative that the message coming from scientists in the US, Russia and elsewhere** about the environmental consequences of nuclear war be included in the general debate about the control and abolition of nuclear weapons. Unfortunately, the **nuclear weapon states apparently remain** oblivious to the **climatic**, **ecological** and **biological** consequences of nuclear war. No "environmental impact statement" has ever been created for the US or Russian nuclear weaponry, which is one of the reasons why there still are 22,000 intact nuclear weapons in their deployed and reserve arsenals. However, **new peer-reviewed studies** done at **several US universities** predict the **detonation of even a tiny fraction** of the global nuclear arsenal will result in major changes in the **global climate** and massive destruction of the stratospheric ozone layer (which protects the Earth from **deadly UV light**). Even a "regional" nuclear conflict between India and Pakistan, fought with 100 Hiroshima-size weapons, is predicted to loft five million tons of **smoke above cloud level**; there it would block about 10 per cent of **warming sunlight** from reaching the surface of the Northern Hemisphere. This would produce average surface temperatures colder than any experienced for the last 1000 years. The smoke would **remain in the stratosphere for more than a decade** and seriously impact global climate. It would probably be too cold to grow wheat in Canada for several years; grain exports would likely cease from grain-exporting nations .and **global nuclear famine** would result, Within a few years, most of the already-hungry **human** **populations could perish**, and the **populations of any nation** dependent upon grain imports would be at risk.

### Link

**3. Corporate interest in the Arctic will trigger a war**

**Backus & Strickland 08** - Principal member of technical staff @ Sandia National Laboratories and uses behavioral and physical simulation methods to access security risks associated with climate change & Manager of the Exploratory Simulation Technologies Department @ Sandia National Laboratories [George Backus (Director of environmental and energy research at Cambridge Econometrics) & James H. Strickland (PhD in Mechanical Engineering from Southern Methodist University), “Climate-Derived Tensions in Arctic Security,” SANDIA REPORT , SAND2008-6342, September 2008

As noted at the beginning of this section, nations, military forces, and corporations have overlapping interests and relationships. Nations could feel the need to intervene for corporations with armed forces for protecting what they see as national or sovereignty interests. Conversely, corporations could (and have) asked nations for protection. In the Arctic, natural resource companies and shipping companies from many nations, which are serving the strategic supply chain of other nations, will routinely “cross paths” and cross sovereignty boundaries (actual and legal). Simple accidents, routine asset/personnel protection, or the enforcement of shipping controls may lead to confrontations among corporations and nations. It is very easy to imagine a normally benign situation that becomes a worsening and convoluted security concern.

Corporations themselves are often associated with private security forces that protect their assets and affect broader military conflict. There is little evidence any corporation has ever considered military force outside of its self-directed protection, but the consequence of their activities do often spill over to security tensions previously considered the sole domain of nations and their adversaries.105 For example, Amnesty International urges boardrooms to consider the hazards with…

“…the use of security forces to protect foreign installations and the dilemmas of operating under corrupt regimes or in war zones. All those factors, it argues, have become more relevant as multinational corporations play an increasingly dominant role in economic development.”106

“Multinational corporations, especially involved in the extraction of raw materials, frequently collaborate closely with local security forces. … Internal armed conflicts may be prolonged where warring factions discover how remunerative control of territory containing valuable minerals can be…”107

The combination of private security forces and corporate protection needs can lead to conditions that engage broader conflict susceptibilities.108,109,110 Within the Arctic, the physical protection of off-shore assets and shipping resources, in combination with the host government or unilaterally by the corporations, can only complicate the dynamics of any security tensions that do occur. Pg. 32-33

### U: No drilling now

#### Shell proves that drilling is unsafe – Others are withdrawing from the Arctic- this also takes out any risk of a link turn – even the best technology is NOT good enough

**Browner & Podesta 1/17/**13 - Senior fellow @ Center for American Progress & Chair of the Center for American Progress [Carol Browner (Former administrator of the Environmental Protection Agency and served as director of the White House Office of Energy and Climate Change policy under President Barack Obama) & John Podesta (Chief of staff to President [Bill Clinton](http://topics.bloomberg.com/bill-clinton/)), “Why We Now Oppose Drilling in the Arctic,” Bloomberg, Jan 17, 2013 6:30 PM ET, Pg. http://www.bloomberg.com/news/2013-01-17/why-we-now-oppose-drilling-in-the-arctic.html

The [Arctic Ocean](http://topics.bloomberg.com/arctic-ocean/) is subject to some of the most volatile weather patterns on the planet. Geologists believe it also contains vast undersea oil and gas reserves.

Last year, the Arctic’s ice cover shrank to the lowest levels in recorded history and, not coincidentally, [Royal Dutch Shell Plc (RDSA)](http://www.bloomberg.com/quote/RDSA:LN) received the first permits in decades to begin prospecting for oil and gas in federal waters north of Alaska’s wilderness.

Developers and President [Barack Obama](http://topics.bloomberg.com/barack-obama/)’s administration assured us these operations would be safe, thanks to strict oversight and new technology. Now it seems this optimism was misplaced. Unfortunately for Shell and other oil producers seeking to exploit the region, the company’s best efforts were met with multiple failures.

We were open to offshore oil and gas development in the Arctic provided [oil companies](http://topics.bloomberg.com/oil-companies/) and the government could impose adequate safeguards, ensure sufficient response capacity and develop a deeper understanding of how oil behaves in ice and freezing water. Now, following a series of mishaps and errors, as well as overwhelming weather conditions, it has become clear that there is no safe and responsible way to drill for oil and gas in the Arctic Ocean.

Shell Rig

The most recent calamity occurred when Shell’s drilling rig, the Kulluk, slipped its cables as it was being towed and ended up on the shore of a small uninhabited island near Kodiak in the Gulf of Alaska. It has since been salvaged and towed to a nearby harbor so engineers can assess the damage.

Last week, announcing the beginning of an internal review of the Arctic drilling program, Interior Secretary [Ken Salazar](http://topics.bloomberg.com/ken-salazar/) admitted that he “never felt comfortable” with Shell’s efforts and added, “it may be that Shell isn’t even ready to move forward with drilling in 2013.”

He should take that statement a step further. The Obama administration shouldn’t issue any new permits to Shell this year and should suspend all action on other companies’ applications to drill in this remote and unpredictable region.

A suspension of operations would be a major blow to Shell, which has spent about $5 billion to prepare and commence drilling. But the oil giant has only itself to blame.

Shell promised that technological advances, combined with the expertise and experience of its engineers and operators, would allow it to handle even the harshest weather conditions. Yet it has become clear that the best Shell’s money can buy just isn’t good enough.

A February 2012 [report](http://www.americanprogress.org/wp-content/uploads/issues/2012/02/pdf/arcticreport.pdf) by the Center for American Progress detailed the glaring lack of spill-response infrastructure in the Arctic and the absence of scientific data about how cleanup could be undertaken. There are no major roads, railroads or ports close to Shell’s operations on [Alaska](http://topics.bloomberg.com/alaska/)’s North Slope. There aren’t adequate hotels or shoreside facilities to house and feed the army of responders a cleanup would require. And the closest permanent Coast Guard installation is more than 1,000 miles away.

A [report](http://www.eenews.net/assets/2012/03/30/document_gw_04.pdf) released in February by the Government Accountability Office identified a wide range of logistical, technical and environmental obstacles associated with Arctic offshore drilling. It concluded that even Shell’s best-laid plans “do not completely mitigate some of the environmental and logistical risks associated with the remoteness and environment of the region.”

Valid Warnings

Throughout 2012, these warnings were borne out. Over the summer, in a mishap that portended the Kulluk’s grounding, Shell lost control of its other rig, the Noble Discoverer, near Dutch Harbor in Alaska’s Aleutian Island chain. That rig drifted within 100 yards of shore.

Then, Shell’s oil-spill-response barge repeatedly failed to receive Coast Guard certification, delaying the start of operations.

And its containment dome -- a critical piece of response equipment required after the 2010 BP Plc spill in the [Gulf of Mexico](http://topics.bloomberg.com/gulf-of-mexico/) -- failed catastrophically during testing in the Puget Sound, prompting regulators to describe it as having been “crushed like a beer can” in those relatively calm and temperate waters.

With each new fiasco, the array of voices raising concerns about preparedness has grown broader. These now include Lloyd’s of [London](http://topics.bloomberg.com/london/), the German bank West LB, and the French [oil company](http://topics.bloomberg.com/oil-company/) [Total SA (FP)](http://www.bloomberg.com/quote/FP:FP), which announced it wouldn’t seek to drill in the Arctic because an accident there would be a “disaster.”

Last week, the [National Oceanic and Atmospheric Administration](http://topics.bloomberg.com/national-oceanic-and-atmospheric-administration/) [announced](http://www.bloomberg.com/news/2013-01-15/2012-was-world-s-10th-warmest-year-on-record-noaa-reports.html) that 2012 was by far the hottest year on record in the continental U.S. As the climate warms, the Arctic Ocean will surely have more open water than ever before, allowing access to untapped reserves of fossil fuels.

But just because we can access them doesn’t mean we can safely extract them. The Obama administration should hit the pause button on Arctic offshore drilling with relatively little damage done.

#### Drilling decreasing now - No way to make it safe

**Birdseye 1/18**/13 - Earthjustice's National Press Secretary [[Kari Birdseye](http://earthjustice.org/blogs/kari-birdseye), “[Going to Extremes In Arctic: Is it Worth It?](http://earthjustice.org/blog/2013-january/going-to-extremes-in-arctic-is-it-worth-it),” Earthjustice, 18 January 2013, 3:05 PM pg. <http://earthjustice.org/blog/2013-january/going-to-extremes-in-arctic-is-it-worth-it>

As Royal Dutch Shell continues to make perfectly clear, industry is not prepared to safely explore for oil in the pristine waters of America’s Arctic. Shell’s Arctic operations have been called the “[gold standard](http://www.forbes.com/sites/energysource/2012/05/30/reiss-eskimo-oilman-alaska-shell-drilling/3/)” of the oil industry and if this is the best they’ve got, the industry is not Arctic ready.

Beyond the arguments of the Arctic being a harsh, dangerous, infrastructure-less environment, the question remains, does it make economic sense to drill for oil in this remote region now for barrels of oil in 10 years? In 12 years, cars will be averaging 54.5 mpg. Energy efficiency and a growing renewable fuel market are also making headway. [U.S. oil production](http://www.stockhouse.com/news/usreleasesdetail.aspx?n=8713715) hit its highest level in 20 years in 2012 and it is projected to increase an additional 14 percent this year—without the extreme oil of the Arctic. In 10 years, will Americans need the extreme oil of the Arctic that Shell is so desperately seeking?

What happens in the Arctic doesn’t stay in the Arctic. In addition to the potentially catastrophic local impacts, climate pollution from drilling in the region, especially black carbon emissions from the drill fleet accelerates Arctic warming and melting. Black carbon, which was [reported this week](http://articles.washingtonpost.com/2013-01-15/national/36385685_1_black-carbon-impact-of-carbon-dioxide-soot) to be the second-largest human contributor to climate change after CO2. It is even worse when this pollution is emitted in the Arctic where it has direct effects on ice.

Interior Secretary Ken Salazar should take notice on his way out the door to Colorado that our country is done with lining the pockets of the oil industry and we do care about climate change and special places like the Arctic. Tens of thousands of our supporters have already [written](https://secure.earthjustice.org/site/Advocacy?cmd=display&page=UserAction&id=1409) to the Secretary and President Obama this week. Our goal is 60,000.

Caution and concern goes beyond the environmental community. As the drill ships were being prepared to head north for the summer, [Lloyd’s of London](http://earthjustice.org/blog/2012-april/lloyd-s-urges-caution-in-the-arctic) warned that offshore drilling in the Arctic would “constitute a unique and hard-to-manage risk.” The insurance giant also urged companies to “think carefully about the consequences of action” before exploring for oil in the region. Watching Shell's problems, Norwegian Statoil continues to defer its plans to drill in the Arctic Ocean, and French oil company Total SA ended the year by publicly calling Arctic drilling too risky for any company."

The Sustainable Energy and Environment Coalition, a group of 45 Democratic congressional representatives, called for a formal investigation of the Kulluk incident in order to determine whether Shell should be allowed to continue drilling for oil in Alaskan waters. And my personal favorite quote; Rep. Ed Markey (D-Mass.), the top Democrat on the House Natural Resources Committee, said recently:

Oil companies keep saying they can conquer the Arctic, but the Arctic keeps disagreeing with the oil companies.

This week, former EPA administrator and the director of the White House Office of Energy and Climate Change policy under President Barack Obama Carol Browner and former Chief of Staff for President Clinton, John Podesta delivered a strong warning to stay out of the Arctic.

Secretary Salazar has called for a 60-day investigation into Shell’s 2012 Arctic operations and media reports say there is an ongoing criminal investigation into pollution related to their drilling vessels. The top dogs from U.S. environmental groups sent Salazar [a letter last week](http://earthjustice.org/news/press/2013/conservation-groups-ask-obama-for-a-suspension-of-arctic-ocean-drilling) requesting a time out. We can go on about rigs hitting shores and the numerous “free passes” the Administration has granted Shell. Now is the time for the President and his team to recognize that drilling in the Arctic now just does not make sense and poses too great a risk.

### BMD lk

#### 3. BMD will be deployed – It is perceived as critical to our security interest in the Arctic

**Conley 12** – Director and senior fellow of the Europe Program at the Center for Strategic and International Studies [Heather A. Conley, “A New Security Architecture for the Arctic: An american perspective,” Center for Strategic and International Studies (CSIS), January 2012

Missile Defense and Early Warning Systems

Missile defense and early warning systems are the first critical security interest in the Arctic highlighted by NSPD-66. At the Multinational Ballistic Missile Defense Conference in 2004, Lieutenant¶ General Trey Obering, U.S. Air Force director of the Missile Defense Agency, defined the agency’smission as “straightforward…to develop and field an integrated layered ballistic missile defense system to defend the US, our allies, deployed forces and friends around the world.”22 U.S. missile¶ defense and early warning systems in the Arctic are an important element of national security.23

Three U.S. air force bases located in the Arctic—Fort Greely and Fort Clear in Alaska and Thule Air Force Base in Greenland—are integral to the U.S. Global Ballistic Missile Defense System¶ and are of significant strategic value. Fort Greely, which originally hosted the Chemical Corps¶ Arctic Test Team, was closed in 1995 as part of the Base Realignment and Closure, or BRAC,¶ process.24 The base was downsized and reopened in 2004 to station interceptor missiles as part of the Bush administration’s national missile defense plans.25 These plans were critical to expanding¶ the ballistic missile defense system, which is considered the first line of defense in deterring intercontinental ballistic missiles from North Korea or other potential threats from Asia.26 Fort Greely¶ is also home to the 49th Missile Defense Battalion, the 59th Signal Network Enterprise Center, the U.S. Air Force 12th Space Warning Squadron (which operates a ballistic missile early warning site), and members of the Alaska National Guard.

As the most northerly U.S. military installation, Thule Air Base participates in the Ballistic Missile Early Warning System (BMEWS) while providing satellite control and space situational¶ awareness for most of the Arctic. It is an integral part of the U.S. ability to observe and respond to¶ emergency situations in the Arctic. The Clear Air Force Station in Anderson, Alaska, serves as the¶ western U.S. counterpart to Thule Air Base as part of the BMEWS.27 Fort Greely, Thule Air Force Base, and Fort Clear are tasked with providing the underlying global missile defense architecture¶ for the United States and will continue to do so into the future. Pg. 22-23

#### 4. They will deploy an Arctic BMD – It fits within the DOD desire to use the Arctic to achieve a larger security mission

**Blunden 09** – Professor of International Affairs @ University of Westminster [Margaret Blunden, “The New Problem of Arctic Stability,” Survival | vol. 51 no. 5 | Oct–Nov 2009 | pp. 121–142

In the United States, where the end of the Cold War led¶ to a sustained period of inattention to the Arctic, President¶ George W. Bush issued National Security Presidential¶ Directive 66 in January 2009, just days before the handover¶ to Obama, setting out policy towards the region.25 The directive emphasised that the United States is an Arctic¶ nation, with broad and fundamental national-security interests there. It declared the intention to develop greater¶ capabilities and capacity, as necessary, to protect US air, land and sea borders in the Arctic, and to project a sovereign maritime presence in support of¶ its essential interests. Current national-security interests include missile defence and early warning, deployment of sea and air systems for strategic¶ sealift, strategic deterrence and maritime security operations. The directive expressed some vague interest in enhancing arrangements for cooperation among the eight Arctic nations and recommended that the Senate should¶ endorse accession to UNCLOS. Ratification has been endorsed by Obama.¶ Neither Bush nor his immediate predecessors had previously shown much interest in the Arctic: only one new icebreaking vessel had been added to¶ the existing small fleet since the early 1980s,26 the United States had only reluctantly joined the Arctic Council formed in 1996, and it had unilaterally withdrawn its military forces from Keflavik air base in Iceland in 2006. The Bush administration had, however, and perhaps inadvertently, contributed¶ to the remilitarisation of the Arctic with the upgrading of its early-warning radar at Thule in Greenland, adding missile-defence capabilities, and the creation of a missile-defence installation at Fort Greely, one of three US army bases in Alaska, as part of the worldwide missile-defence network said to be directed against rogue states but causing grave concern in Moscow. In 2009 the silos at Fort Greely contained 26 long-range missile interceptors. The Obama administration plans to forgo building additional intended interceptors as part of a $1.2 billion budget cut in the ballistic-missile-defence¶ programme, although Secretary of Defense Robert Gates has clarified that¶ this is ‘not a forever decision’.27 The administration is, however, under¶ strong pressure from Alaskan senators and the Missile Defense Advocacy¶ Alliance, an industry- and member-supported pressure group, which urges¶ that increasing North Korean nuclear capabilities make it imperative that¶ the additional interceptors should go ahead as planned.28 The specific security¶ context of the Arctic is barely visible in this debate.

### BMD impx

#### 2. BMD sets off a vicious spiral of suspicion and militarization – It destabilizes the Arctic

**Blunden 09** – Professor of International Affairs @ University of Westminster [Margaret Blunden, “The New Problem of Arctic Stability,” Survival | vol. 51 no. 5 | Oct–Nov 2009 | pp. 121–142

The most pressing risk is that the heightened strategic importance of the region will set off a vicious spiral of suspicion, nationalist rhetoric and re-militarisation. There is a danger that the pursuit of short-term national interests will jeopardise the overriding strategic objective, the maintenance of stability in the Arctic as a zone of peace and cooperation. New or upgraded defence systems have to be evaluated within that context. Increasing defence coordination among the Western states, sharpening Russia’s sense of strategic isolation, has to be balanced by reassurance, confidence building and a strenuous pursuit of the common interest. Engagement in environmental, economic or military collaboration builds interdependence, helps allay distrust and contributes to stability. A multilateral approach, currently institutionalised within UNCLOS and in the Arctic Council, needs to be maintained and significantly strengthened. Current commitments of the circumpolar states to the settlement of jurisdictional disputes by legal means need to be sustained. A broader participation in Arctic governance through the Arctic Council would signal a recognition that military, economic and environmental stability in the Arctic does not begin and end there. Pg. 137-138

#### 3. BMD shatters nuclear crisis management. It results in multiple nuclear wars

**Cimbala 12** – Professor of Political Science @ Penn State Brandywine [[Stephen J. Cimbala](http://www.tandfonline.com.proxy.library.emory.edu/action/doSearch?action=runSearch&type=advanced&searchType=journal&result=true&prevSearch=%2Bauthorsfield%3A%28Cimbala%2C+Stephen+J.%29), “Minimum deterrence and missile defenses: what's new, what's true, what's arguable,” Defense & Security Analysis, [Volume 28](http://www.tandfonline.com.proxy.library.emory.edu/loi/cdan20?open=28#vol_28), [Issue 1](http://www.tandfonline.com.proxy.library.emory.edu/toc/cdan20/28/1), 2012 pg. 65-80

Russian fears on this point can be traced all the way back to the Cold War and US President Ronald Reagan's proposal for a nationwide Strategic Defense Initiative to render ballistic missiles obsolete. The technical immaturity of missile defenses relative to offenses is less impressive for Russian pessimists than are their doubts about American and NATO intentions.[16](http://www.tandfonline.com.proxy.library.emory.edu/doi/full/10.1080/14751798.2012.651380#EN0016) In addition, expert analysts have noted that the uncertainty surrounding the actual performance of missile defenses under realistic conditions could yield paradoxical effects for policy and strategy. Technically underperforming missile defenses could, nevertheless, create dysfunctional effects in arms control and non-proliferation policy based on Russian and/or Chinese perceptions. As Yousaf Butt and Theodore Postol have argued:

The planned Block II interceptors in the later phases of the PAA threaten to provoke Russia's exit from New START, in addition to possibly restarting a nuclear arms race – while providing no credible defense against possible future Iranian or North Korean missiles hosting simple countermeasures. Russia and China might increase their arsenals, end future arms reduction talks with the United States, and decrease their assistance with worldwide counter-proliferation efforts.[17](http://www.tandfonline.com.proxy.library.emory.edu/doi/full/10.1080/14751798.2012.651380#EN0017)

Regardless, in the aftermath of the New START agreement, NATO and Russia have agreed to boost discussions on cooperative missile defenses with respect to threats from Europe posed by outside nuclear forces, e.g. Iran.[18](http://www.tandfonline.com.proxy.library.emory.edu/doi/full/10.1080/14751798.2012.651380#EN0018) Discussions launched under the imprimatur of the NATO–Russian Council (NRC) during its 2010 Lisbon meeting continued through the fall of 2011 with alternating expressions of optimism, pessimism and ambivalence about missile defense cooperation.[19](http://www.tandfonline.com.proxy.library.emory.edu/doi/full/10.1080/14751798.2012.651380#EN0019)

Doubts held by some Russians about NATO's trustworthiness as a security partner are mirrored by some governments in NATO, especially those states that are possibly vulnerable to future coercion by a Russia with a modernized and rebuilt military. These doubts about Russia within the ranks of NATO impact upon expectations for conventional or nuclear arms control in Europe. Doubts in both directions, East-West and West-East, also influence debates over further expansion in the membership of NATO. Russia's leadership has made it clear that the accession of Georgia or Ukraine to full membership in NATO would be troublesome to transatlantic relations, and in the case of Ukraine, probably destructive of Obama's reset, and more. NATO's perceived need for Russian support for the alliance's efforts in Afghanistan is also potentially hostage to Russia's opposition to further NATO expansion as well as any Russian nyet for European missile defenses.[20](http://www.tandfonline.com.proxy.library.emory.edu/doi/full/10.1080/14751798.2012.651380#EN0020)

A third pertinent issue is the post-cold war asymmetry between NATO and Russia with respect to their reliance on nuclear compared with conventional military forces as the makeweights of their national security policies. Russia's weaker conventional forces relative to NATO's place more burden on its strategic and non-strategic nuclear weapons to cover a wider range of deterrent situations and conflicts. Conversely, the US and NATO have advantages in information-based conventional warfare, including bellwether technologies for precision deep strike, C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance), and stealth, among others. Russia's greater reliance on nuclear weapons includes both its strategic and non-strategic nuclear forces. This poses the risk for NATO that even an outbreak of conventional warfare across the fault lines of former Soviet security space could rapidly trip into tactical or theater nuclear war, supported by the brooding omnipresence of Russian and American strategic nuclear weapons. Granted, in the present political climate, such an event is not only improbable, but unimaginable. But Russian and other military planners get paid to develop contingency plans for worst cases as well as for better ones.

Since political and military “futures” are indeterminate, policy-makers have the opportunity to shape their environments toward constrained nuclear proliferation.[21](http://www.tandfonline.com.proxy.library.emory.edu/doi/full/10.1080/14751798.2012.651380#EN0021) Factors favoring constrained nuclear weapons spread might include: (1) the ethical and moral inhibitions on the part of many governments and military professionals against the possession or use of nuclear weapons for deterrence or for warfare; (2) the possibility that sensible or rational decision-makers will find other and less destructive military means to accomplish their political objectives, including advanced conventional weapons, alliances for extended deterrence protection by existing nuclear powers, or modification of their political objectives for the purpose of war avoidance; and (3) the inertial effect of a presumed “nuclear taboo” in existence since Nagasaki, and the related uncertainty of a new world following the first nuclear attack in the twenty-first century.[22](http://www.tandfonline.com.proxy.library.emory.edu/doi/full/10.1080/14751798.2012.651380#EN0022) There are, in symbolism as well as in substance, no such things as “small” nuclear wars or nuclear attacks.[23](http://www.tandfonline.com.proxy.library.emory.edu/doi/full/10.1080/14751798.2012.651380#EN0023)

Of course, the contrasting forces that might favor additional nuclear weapons spread among state actors, with possible spillover into the hands of terrorists, are recognized by many experts. States see nuclear weapons as deterrents against nuclear coercion or attack from other states. Nuclear weapons are thought by some states to confer prestige and to provide a cost-effective entry into the ranks of major military powers. Other states might see nuclear weapons as a “last ditch upper of the ante” against a catastrophic defeat in a conventional war.[24](http://www.tandfonline.com.proxy.library.emory.edu/doi/full/10.1080/14751798.2012.651380#EN0024) Nuclear weapons are also used for diplomatic swaggering and posturing in order to buff the image of states whose military credibility might otherwise be suspected by onlookers and possible adversaries. Finally, nuclear weapons can serve a variety of domestic policy needs for states and regimes, including the appeasement of powerful military or nuclear industry groups and hawkish parliamentary factions.

One critical indicator of which “world” we are headed for is the fate of the existing nuclear non-proliferation regime. In the author's judgment, that regime of international institutions, procedures and consultations has performed admirably in the past and with more success than pessimists, including former US presidents and prominent nuclear weapons scientists, had anticipated. In some ways, it performed too well, leading to complacency in some quarters that nuclear weapons in the twenty-first century will continue to spread slowly, if at all. Kenneth Waltz's argument is correct (to a point) that the existence of survivable nuclear forces can induce caution on the part of otherwise attack-prone or brinkmanship-oriented political leaders and their military advisors.[25](http://www.tandfonline.com.proxy.library.emory.edu/doi/full/10.1080/14751798.2012.651380#EN0025)

Cold war experience supports this argument. On the other hand, Scott Sagan is equally persuasive on the point that the character of regimes and domestic policy-making processes, as well as organizational aspects of military decision-making, counts for a great deal in nuclear crisis management.[26](http://www.tandfonline.com.proxy.library.emory.edu/doi/full/10.1080/14751798.2012.651380#EN0026) The post-cold war world may provide a plurality of regimes and political cultures that challenge the requirements for successful nuclear crisis management, especially the need for transitive expectations, clear communications and shared understandings about nuclear danger.

# Finals vs Wake BM

## 1NC

### Politics

#### Obama pushing compromise and working together – key to getting House GOP on board for his agenda – Immigration’s only chance

AFP 3 – 7 – 13 Obama tries new tack -- talking to Republicans, http://www.google.com/hostednews/afp/article/ALeqM5js8Vq2BpvFfWBXu5jLLYKRSN\_sMA?docId=CNG.da8c946c1afca2a51f978806a1ab4ca4.311

President Barack Obama has hit on a novel antidote to Washington's endless cycle of political crises: breaking bread with Republicans

Since his re-election triumph in November, Obama has used his political capital to harangue his foes, holding rallies across the country at which he accused rival Republicans of obstructing legislation and serving the rich.

His strategy worked up to a point -- securing new higher tax rates for the wealthy as he pocketed a political win in December over the fiscal cliff showdown.

But with the glow of his re-election waning, Obama came up short in the sequester clash last week as Republicans refused to bend on raising taxes -- and $85 billion in economy-sapping austerity was set in motion.

Two years of incessant budget melodrama between Obama and his foes on Capitol Hill have poisoned the political well but done little to tackle the debt load endangering America's future prosperity.

Now, Obama and conservative Republicans in the House of Representatives are left staring across a seemingly unbridgeable ideological divide.

Since Obama's ambitious second term agenda must clear a divided Congress, the onus is on the president to plot a way through Washington's dysfunction.

So Obama, who disdains the superficiality of backslapping politics, has embarked on a charm offensive -- and on Wednesday night he bought dinner for a dozen Republican senators out of his own pocket.

At an expensive hotel, Obama supped with senators John McCain, Lindsey Graham and others, vocal foes who have also expressed frustration at being stuck in the political purgatory of a Washington where nothing gets done.

Next week, the president will make a rare foray into enemy territory on Capitol Hill to address Republicans from both the Senate and the House.

For now, Obama appears to have dropped the "outside" game of campaigning to move public opinion against Republicans, instead probing whether there is any space for a deal on key issues.

Steven Smith, a former congressional staffer who is now a professor of political science at Washington University, St Louis, said the president had little choice but to try to change the political climate in Washington.

"If you can't deal with the House Republicans in the current political environment -- see if you can change the political environment," he said.

"What (Obama) is hoping is that Republicans in the Senate can start serving almost as opinion leaders for a new way of tackling these fiscal challenges."

Obama is courting Republican senators who may be willing to deal on issues like the national debt, the deficit and growing costs threatening entitlement programs like health care for the elderly.

"The President is interested in finding the members of the 'caucus of common sense,'" said White House spokesman Jay Carney.

A person familiar with Obama's thinking said the White House believes there may be a window for action since -- after the sequester and fiscal cliff dramas -- Washington is finally not on the cusp of an immediate crisis.

Obama aides also think some Senate Republicans may be ready to compromise -- a feeling bolstered by Graham's recent comment that he would swap $600 billion in new revenues in return for entitlement reform.

It is not the first time that Obama has tried dialogue with Republicans -- he tried unsuccessfully to conclude a grand bargain with House Speaker John Boehner aimed at $4 trillion in deficit reduction during his first term.

Obama says that offer is still on the table, but so frayed are his relations with Boehner that it seems doubtful the two of them share the necessary trust to strike a bargain.

Should he fare better with Senate Republicans, Obama hopes his new dance partners can build pressure on their brethren in the House to compromise, which might also ease the way for other top initiatives, like immigration reform.

Republicans, who have long accused Obama of hectoring them, welcome his change of tone.

"Where this goes, I don't know," said Graham, who recently met Obama along with McCain at the White House.

"I do believe (in) what the president has been doing lately, getting off the campaign trail (and) back into the normal way of doing business up here, of talking to each other."

Moderate Republican Senator Susan Collins agreed.

"The important thing is, for the first time in a very long time, the president appears to be doing some outreach to both Republicans and Democrats, and that's long overdue," she said.

Wednesday's dinner might have been a good start, but such is the philosophical gulf between Obama and Republicans that any deal still seems a long shot.

And with mid-term congressional elections in 2014, the window for bipartisan comity is short.

#### Capital is key – Obama is spending it now

CBS NEWS 3 – 4 – 13 <http://www.cbsnews.com/8301-250_162-57572441/white-house-obama-not-focused-on-2014-right-now/>

Carney today said that Mr. Obama does believe his agenda -- which includes a plan to reduce gun violence, immigration reform and measures like raising the minimum wage -- would be easier to enact with Democrats in control of both chambers. "But it is also the president's belief, and it is established in fact in recent history, that you can achieve important policy objectives with divided government," he said.

Carney insisted the president is expending "great political capital and energy" on working quickly to pass immigration reform. Republicans have shown interest, he noted, in both immigration reform and some gun control measures.

#### Link --- Obama is holding off using capital on USEC until the new application in December --- plan forces fights NOW

Shesgreen ’13 – congressional correspondent for USA Today

(Deirdre, she has covered campaign finance, health care, and lobbying, and she is a two-time winner of the David Lynch Memorial Reporting Award for regional coverage of Congress, “Fate of Ohio centrifuge project murky in 2nd Obama term”, USA Today, 2-3-2013, Accessed 2-25-2013, http://www.usatoday.com/story/news/politics/2013/02/02/usec-centrifuge-plant-piketon-uranium/1881243/)

USEC officials said they would address such concerns in a strengthened loan application come December. The research and development program "will be successful . . . (and) will address any remaining technical issues about the technology," said Paul Jacobson, a spokesman for USEC. "We've been indicating as well . . . that we're working to strengthen our balance sheet." "We would want to put in a strong application, both from a technical and financial perspective," he added. USEC's most vocal supporters in Congress said they were hopeful the political and fiscal obstacles to the loan guarantee could be overcome. But they conceded they could not predict how the next phase would play out. "I think this is going to work for the public and . . . for taxpayers," Brown said. But "there are hurdles they have to jump over . . . (and) I can't evaluate eight months from now and know where we're going" to end up. Portman expressed concern that the Obama administration might be reluctant to "pull the trigger" on the loan guarantee. "It requires leadership from the administration that has been lacking," he said. "The arguments are compelling, and I'm optimistic that they will, in the end, make the right decision. But as folks in Piketon will remind you, time's a wasting."

**Solves the economy**

**Krudy, 13** (Edward, “Immigration reform seen boosting US economic growth,” January 29th, 2013, <http://www.nbcnews.com/business/economywatch/immigration-reform-seen-boosting-us-economic-growth-1C8159298>)

The sluggish U.S. economy could get a lift if President Barack Obama and a bipartisan group of senators succeed in what could be the biggest overhaul of the nation's immigration system since the 1980s. Relaxed immigration rules could encourage entrepreneurship, increase demand for housing, raise tax revenues and help reduce the budget deficit, economists said. By helping more immigrants enter the country legally and allowing many illegal immigrants to remain, the United States could help offset a slowing birth rate and put itself in a stronger demographic position than aging Europe, Japan and China. "Numerous industries in the United States can't find the workers they need, right now even in a bad economy, to fill their orders and expand their production as the market demands," said Alex Nowrasteh, an immigration specialist at the libertarian Cato Institute. The emerging consensus among economists is that immigration provides a net benefit. It increases demand and productivity, helps drive innovation and lowers prices, although there is little agreement on the size of the impact on economic growth. First Thoughts: Obama to embrace Senate immigration deal President Barack Obama plans to launch his second-term push for a U.S. immigration overhaul during a visit to Nevada on Tuesday and will make it a high priority to win congressional approval of a reform package this year, the White House said. The chances of major reforms gained momentum on Monday when a bipartisan group of senators agreed on a framework that could eventually give 11 million illegal immigrants a chance to become American citizens. Their proposals would also include means to keep and attract workers with backgrounds in science, technology, engineering and mathematics. This would be aimed both at foreign students attending American universities where they are earning advanced degrees and high-tech workers abroad. An estimated 40 percent of scientists in the United States are immigrants and studies show immigrants are twice as likely to start businesses, said Nowrasteh. Boosting legal migration and legalizing existing workers could add $1.5 trillion to the U.S. economy over the next 10 years, estimates Raul Hinojosa-Ojeda, a specialist in immigration policy at the University of California, Los Angeles. That's an annual increase of 0.8 percentage points to the economic growth rate, currently stuck at about 2 percent.

**Nuclear war.**

**Kemp 10** Director of Regional Strategic Programs at The Nixon Center, served in the White House under Ronald Reagan, special assistant to the president for national security affairs and senior director for Near East and South Asian affairs on the National Security Council Staff, Former Director, Middle East Arms Control Project at the Carnegie Endowment for International Peace

(Geoffrey Kemp, The East Moves West: India, China, and Asia’s Growing Presence in the Middle East, p. 233-4)

The second scenario, called Mayhem and Chaos, is the opposite of the first scenario; everything that can go wrong does go wrong. The world economic situation weakens rather than strengthens, and India, China, and Japan suffer a major reduction in their growth rates, further weakening the global economy. As a result, energy demand falls and the price of fossil fuels plummets, leading to a financial crisis for the energy-producing states, which are forced to cut back dramatically on expansion programs and social welfare. That in turn leads to political unrest: and nurtures different radical groups, including, but not limited to, Islamic extremists. The internal stability of some countries is challenged, and there are more “**failed states**.” Most serious is the collapse of the democratic government in Pakistan and its takeover by Muslim extremists, who then take possession of a large number of **nuclear weapons**. The danger of war between **India and Pakistan** increases significantly. **Iran**, always worried about an extremist Pakistan, expands and weaponizes its nuclear program. That further enhances **nuclear proliferation** in the **Middle East**, with Saudi Arabia, Turkey, and Egypt joining Israel and Iran as nuclear states. Under these circumstances, the potential for nuclear **terrorism** increases, and the possibility of a nuclear terrorist attack in either the Western world or in the oil-producing states may lead to a further devastating collapse of the world economic market, with a tsunami-like impact on stability. In this scenario, major disruptions can be expected, with dire consequences for two-thirds of the planet’s population.

### Japan CP

#### Counterplan Text

#### The Japan Bank for International Cooperation should provide a $2 billion loan guarantee for the American Centrifuge Project and guarantee capital for up to $10 billion towards the completion of the project.

#### THEIR 1ac EVIDENCE - Japense export credit agencies are in talks to do the aff

USEC ’12 [“Funding”, 2012, http://www.usec.com/american-centrifuge/what-american-centrifuge/plant/funding]

Additional capital beyond the $2 billion of DOE loan guarantee funding that USEC has applied for and USEC’s internally generated cash flow will be required to complete the project. USEC has had discussions with Japanese export credit agencies regarding financing up to $1 billion of the cost of completing the American Centrifuge Plant. Additional capital will also be needed and the amount of additional capital is dependent on a number of factors, including the amount of any revised cost estimate and schedule for the project, the amount of contingency or other capital DOE may require as part of a loan guarantee, and the amount of the DOE credit subsidy cost that would be required to be paid in connection with a loan guarantee. USEC has no assurances that it will be successful in obtaining this financing and that the delays the Company has experienced will not adversely affect these efforts.

#### AND JBIC can do the plan

SOENTOROL 04 NADI/Solidaritas Perempuan [Titi Soentorol, Export Credit and Investment Insurance Agencies (ECAs) and their support for destructive projects – an introduction, from A Brief Overview of Export Credit Agencies in the Asia-Pacific Region Editors: Stephanie Fried / Environmental Defense and Titi Soentoro / NADI, <http://www.eca-watch.org/problems/asia_pacific/documents/NADIEnvDef_WSFregionsummary_Jan04.pdf>]

Export Credit Agencies (ECAs) have supported hundreds of dangerous economically, socially and environmentally destructive mega-projects throughout the Asia-Pacific region, including2: the Three Gorges Dam in China, a US$ 75 billion project estimated to involve the displacement of more than 2 million people and the destruction of biodiversity and cultural sites; a $530 million ECA loan for India’s troubled Coal Sector Rehabilitation Project, tied to a World Bank structural adjustment agenda for the liberalization of Indian coal imports, the deregulation of coal prices, and potentially involving the lay-off of 200,000 people; Indonesia’s giant bankrupt Asia Pulp and Paper company (total debt ofover US$ 13 billion) apparently supplied with illegally logged timber3; the planned US$ 1.8 - $2 billion Inco Goro nickel mine in Kanaky/New Caledonia on indigenous lands in the middle of protected botanical reserves, adjacent to one of the world’s largest reef and lagoon systems; the US$1.1 billion Bataan Nuclear Power Plant, built in the Philippines but never operated as a result of massive anti nuclear protests – with the people of the Philippines now forced to pay off the associated debt. These and other ECA-supported projects have led to deforestation, the expropriation of indigenous lands and forests, forced evictions, the loss of livelihood, increasing impoverishment, health risks due to pollution, human rights violations, increasing militarization, increased arms sales, and increasing public debt of countries throughout the Asia Pacific region.

Many of those projects would not go forward without insurance against commercial and political risk, loan guarantees, and direct loans from powerful and little known Export Credit and Investment Insurance Agencies (ECAs). These agencies are actually the world’s largest public financial institutions, and overshadow the role of all other bilateral and multilateral development assistance.4 They include the US Export Import Bank and the Japan Bank for International Cooperation (JBIC) which, recently, have each annually approved new loans and guarantees amounting to approximately US$ 15 billion. Germany’s Hermesbuergschaft (Hermes Guarantee) provides German government guarantees aimed at the promotion of US$ 20 billion worth of German exports per year. France’s COFACE, the British Export Credit and Guarantee Department (ESGD), Canada’s Export Development Corporation (EDC), Italy’s SACE and Scandanavian ECAs are among the other major global actors5. In addition to ECAs from Europe, the United States, and Japan, there are also lesser known ECAs from China, India, Korea, Thailand, Malaysia and Sri Lanka – increasingly taking on a greater role in project support. The World Bank’s Multilateral Investment Guarantee Agency (MIGA) acts as the World Bank’s ECA and supports destructive projects in developing countries.

### T-For

#### Topical Financial Incentives must be FOR energy production –

#### A. FOR is exclusive

Clegg, 95 - J.D., 1981 Yale Law School; the author is vice president and general counsel of the National Legal Center for the Public Interest. (Roger, “Reclaiming The Text of The Takings Clause,” 46 S.C. L. Rev. 531, Summer, lexis)

Even if it made no sense to limit the clause to takings "for public use"--and, as discussed below, it might make very good sense--that is the way the clause reads. It is not at all ambiguous. The prepositional phrase simply cannot be read as broadening rather than narrowing the clause's scope. Indeed, a prepositional phrase beginning with "for" appears twice more in the Fifth Amendment, and in both cases there is no doubt that the phrase is narrowing the scope of the Amendment. n20

#### B. Nuclear energy production is measured by installed capacity

#### IAEA 8 [International Atomic Energy Agency, “A Newsletter of the Division of Nuclear Power,” Nuclear Power Newsletter, Vol. 5, No. 3, September, <http://www.iaea.org/Resources/Women/pdf/nenp0908.pdf>]

Energy production of nuclear power plants is a result of an installed capacity and effectiveness of its utilization. In 2007 there was no permanent shutdown, compared to eight in 2006, therefore the installed capacity was driven by investment into construction of new NPPs and into power uprating of existing reactor units. Three new reactors were connected to the grid and one long-term shutdown reactor was reconnected. The total installed capacity of the nuclear industry has risen from 369.8 to 372.2 GW(e) during 2007. Utilization of installed capacity can be measured by the energy availability factor (EAF). It is the percentage of maximum energy generation the plant is ready to supply to the electrical grid to meet its demand.

#### C. Nuclear Power has to be electricity from fission in a reactor

EIA 12 International Atomic Energy Agency U.S. Energy Information Administration. Online Glossary updated regularly [<http://www.eia.gov/tools/glossary/index.cfm?id=A>]

Nuclear electric power (nuclear power): Electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.

#### Violation – the aff incentivizes development of a fuel source --- not the energy production itself

#### Vote negative –

#### PREDICTABLE LIMITS – only limit on the thousands of technologies and process that could be used to potentially produce energy. They allow for the entire fuel cycle which is HUGE

#### CORE NEG GROUND – all of our disads are based on the production of electricity

### Uranium Prices

#### Undermines global uranium demand.

I.B Lambert, 2012. Geoscience Australia, Secretary General 34th IGC. “Global Uranium And Thorium Resources: Are They Adequate To Satisfy Demand Over The Next Half Century?” Geophysical Research Abstracts, Vol 14, meetingorganizer.copernicus.org/EGU2012/EGU2012-2544.pdf.

This presentation will consider the adequacy of global uranium and thorium resources to meet realistic nuclear power demand scenarios over the next half century. It is presented on behalf of, and based on evaluations by, the Uranium Group - a joint initiative of the OECD Nuclear Energy Agency and the International Atomic Energy Agency, of which the author is a Vice Chair. The Uranium Group produces a biennial report on Uranium Resources, Production and Demand based on information from some 40 countries involved in the nuclear fuel cycle, which also briefly reviews thorium resources.¶ Uranium: In 2008, world production of uranium amounted to almost 44,000 tonnes (tU). This supplied approxi- mately three-quarters of world reactor requirements (approx. 59,000 tU), the remainder being met by previously mined uranium (so-called secondary sources). Information on availability of secondary sources – which include uranium from excess inventories, dismantling nuclear warheads, tails and spent fuel reprocessing – is incomplete, but such sources are expected to decrease in market importance after 2013. In 2008, the total world Reasonably Assured plus Inferred Resources of uranium (recoverable at less than $130/kgU) amounted to 5.4 million tonnes. In addition, it is clear that there are vast amounts of uranium recoverable at higher costs in known deposits, plus many as yet undiscovered deposits. The Uranium Group has concluded that the uranium resource base is more than adequate to meet projected high-case requirements for nuclear power for at least half a century. This conclusion does not assume increasing replacement of uranium by fuels from reprocessing current reactor wastes, or by thorium, nor greater reactor efficiencies, which are likely to ameliorate future uranium demand. However, progressively increasing quantities of uranium will need to be mined, against a backdrop of the relatively small number of producing facilities around the world, geopolitical uncertainties and strong opposition to growth of nuclear power in a number of quarters – it is vital that the market provides incentives for exploration and development of environmentally sustainable mining operations.¶ Thorium: World Reasonably Assured plus Inferred Resources of thorium are estimated at over 2.2 million tonnes, in hard rock and heavy mineral sand deposits. At least double this amount is considered to occur in as yet undiscovered thorium deposits. Currently, demand for thorium is insignificant, but even a major shift to thorium-fueled reactors would not make significant inroads into the huge resource base over the next half century.

#### That destroys Kazakh economic modernization.

Gregory Gleason, 12/14/2011. Professor at the University of New Mexico and the George C. Marshall European Center for Security Studies. “KAZATOMPROM LOOKS EAST,” Central Asia Caucasus Institute Analyst, http://cacianalyst.org/?q=node/5683/print.

BACKGROUND: Kazakhstan’s uranium industry is a key part of the country’s diversification and modernization strategy. Kazakhstan played an important role in the Soviet nuclear industry with major mining, processing, fabricating and industrial facilities. Kazakhstan was the home of the Soviet Union’s major experimenting and testing facilities. The end of the Soviet Union brought the Soviet-era nuclear complex to a standstill. The first decree signed by Nursultan Nazarbayev, Kazakhstan’s first president, was to immediately close the Soviet nuclear weapons test range. Kazakhstan’s government moved quickly to eliminate the Soviet-era nuclear weapons and weapons facilities, and the country signed on to the basic principles of the Nuclear Non-proliferation treaty by rejecting nuclear armaments while endorsing peaceful use of the atom. Due to Kazakhstan’s large uranium mineral reserves, the development of the uranium industry for peaceful uses became one of Kazakhstan’s economic policy priorities.¶ Kazakhstan’s industrial privatization program in the mid-1990s gave rise to numerous industrial enterprises but the uranium industry, because of its dual role as a commercial as well as a strategic resource, was retained under government control. In 1997, the Kazakhstani government formed Kazatomprom, a state-run mineral and industrial complex with direct responsibility for the uranium industry as well as for some other specialized industrial metals such as beryllium and tantalum. In a very short period of time Kazatomprom brilliantly succeeded in cobbling together Kazakhstan’s remnants of the Soviet-era uranium complex to build an industrial juggernaut in the uranium business. Kazatomprom surpassed its competitors in 2009 by emerging as the world’s largest producer of uranium ore. ¶ Kazatomprom’s success was achieved through a business model which linked Kazakhstan’s upstream mineral extraction with the downstream industrial facilities located elsewhere. Kazatomprom turned first to the Russian uranium industry, drawing on long-standing relations with Russia’s state-run nuclear complex under the control of Rosatom and with Russia’s related nuclear industry commercial firms. Later Kazatomprom moved outside the connections of the former Soviet space to forge business connections with foreign partners, forming joint ventures with leading technological partners such as France’s Areva and Canada’s Cameco. But Russia’s nuclear industry remained the locomotive driving Kazakhstan’s nuclear sector as it moved from the role of primary commodity supplier to the role of an integrated transnational industrial enterprise. Working in parallel, driven by state-financed enterprises and focused on jointly gaining a position to capture the expanding nuclear services market, Russia’s Rosatom and Kazakhstan’s Kazatomprom made major investments in a coordinated effort to corner the future nuclear reactor fuel supply market in Asia, focusing on China, India, Japan and Korea.

#### Kazakh economic development is a key model for Central Asia --- instability would spread and trigger Central Asian conflict.

Margarita Assenova et al, 2008. Director of Institute for New Democracies @ CSIS; with Natalie Zajicova, Program Officer (IND); Janusz Bugajski, CSIS NEDP Director; Ilona Teleki, Deputy Director and Fellow (CSIS); Besian Bocka, Program Coordinator and Research Assistant (CSIS). “Kazakhstan’s Strategic Significance,” CSIS Institute for New Democracies, http://eurodialogue.org/Kazakhstan-Strategic-Significance.

The decision by the Organization for Security and Cooperation in Europe (OSCE) to award Kazakhstan the chairmanship of the organization for 2010 underscores a growing recognition of the country’s regional and continental importance. Kazakhstan is a strategic linchpin in the vast Central Asian-Caspian Basin zone, a region rich in energy resources and a potential gateway for commerce and communications between Europe and Asia.

However, it is also an area that faces an assortment of troubling security challenges. Ensuring a stable and secure Central Asia is important for the international interests of the United States and its European allies for several prescient reasons:

• Asian Security: Because of its proximity to Russia, China, Iran, and the South Asian sub-continent, Kazakhstan’s security and stability is an increasingly vital interest to all major powers. Kazakhstan’s tenure as chair of the OSCE will become an opportunity for greater multilateral cooperation in achieving this objective while strengthening the role and prestige of the OSCE throughout Central Asia.

• Afghanistan: Central Asia is a key staging area for U.S. and NATO military operations in Afghanistan against Taliban insurgents and Al Qaeda militants. Central Asia is a crucial conduit for U.S. and NATO troops and supplies into Afghanistan. U.S. offi cials recently reached new agreements with Russia, Kazakhstan, and other Central Asian countries to allow Afghanbound non-military supplies through their territories.

• Trans-National Terrorism: The Taliban resurgence in Afghanistan stimulates cross-border terrorism that may endanger the stability of several Central Asian neighbors and undermine Western interests. Central Asian states have been the victims of Afghanistan-based transnational terrorism. These states, including Kazakhstan, can support international efforts to counter regional terrorist networks.

• Organized Crime and Drug Traffi cking: Central Asia is an important transit region for narcotics traffi cking between Afghanistan and the countries of Europe and Asia. Joint initiatives that will enable the Kazakh government to control and monitor borders more effectively, intercept smuggling operations, and eradicate criminal networks will buttress international security and curtail funding to cross-border terrorist groups.

• Energy Security: Central Asia has the potential to be a vital energy source for Europe. The region contains a vast storehouse of oil and natural gas, which Europe urgently needs in order to lessen its reliance on Russian and Middle Eastern energy supplies. Disputes between Russia and several energy transit states, such as Ukraine, have increased Europe’s interest in developing direct supply lines between Europe and the Caspian countries.  
Challenges to International Interests

Despite the strategic significance of Central Asia and the Caspian Basin, in recent years Western countries have not paid sufficient attention to the region. This is due to a combination of factors, including the absence of a shared strategic framework for helping to stabilize and develop the heartland of Asia; insufficient focus on consolidating close political ties with key countries in the region through ustained high-level engagement; and opposition on the part of other major powers competing for influence in Central Asia.

Many Western experts conclude that Russia’s leaders have sought to use multi-national organizations, Moscow’s political connections and its economic leverage to assert greater control over ex-Soviet neighbors. There are reports that the Central Asian governments were pressured to curtail Western security interests, including limiting its military presence in the region by, for example, urging Uzbekistan and Kyrgyzstan to evict the U.S. military from bases on their territory.

Kazakh leaders are supportive of a more effective American and European role in Central Asia to help promote the region’s security and development, but without undermining Astana’s cordial relations with Russia. Kazakhstan’s independent foreign policy helps provide Western access to the region and enhances its position as a vital transport corridor. Kazakhstan is also a stabilizing factor in the geopolitical competition of the regional powers for access and influence across Central Asia. With its reinvigorated commitment to securing Afghanistan and stabilizing the wider region, the Obama administration has an ideal opportunity to reach out to key partners such as Kazakhstan and to enhance Astana’s role as a regional stabilizer.  
Kazakhstan as a Regional Stabilizer

Despite having the largest territory and economy in Central Asia, Kazakhstan is not a source of insecurity or threat to any of its neighbors. It does not employ territorial, ethnic, economic, or energy instruments to target and undermine any government in the region. On the contrary, Astana has sought to establish a system of collective security in Eurasia that would avert the emergence of a single dominant power. Kazakhstan’s “multi-vector” foreign policy, which seeks to pursue cooperative relations with all major powers, leads Astana to resist any hegemonic ambitions by larger countries that would undercut Kazakhstan’s political or economic independence.

While it is a member of the Commonwealth of Independent States (CIS), the Collective Security Treaty Organization (CSTO), and the Shanghai Cooperation Organization (SCO), Kazakhstan has sought to diversify its security relations and keep its freedom to establish and maintain international partnerships. Indeed, Astana has developed productive contacts with NATO by participating in NATO’s Euro-Atlantic Partnership Council (EAPC) and its Partnership for Peace (PfP) program. It was the only Central Asian government to negotiate an Individual Partnership Action Plan (IPAP) with NATO in January 2006.

NATO’s June 2004 summit affirmed the growing importance of Central Asia by designating the region as an area of “special focus” and stationing a liaison officer in the Kazakh capital of Astana in order to develop NATO assistance programs to modernize national military structures. A NATO Secretary General Special Representative for the Caucasus and Central Asia was also appointed.

Astana has underscored that neither the CSTO nor the SCO should become exclusive military alliances or anti-Western blocs that would challenge NATO’s mission in the wider region. Kazakhstan supports NATO operations in Afghanistan and grants overflight rights to U.S. and other NATO warplanes transporting non-lethal cargo to Afghanistan, as well as emergency landing rights for U.S. military aircraft in the Kazakh city of Almaty. The Kazakh authorities are also developing a Peacekeeping Battalion (KAZBAT), which is slated to become fully operational by 2011 and potentially available for international peace stability missions.

Kazakhstan is the only Central Asian country to have an Action Plan to assist in the reconstruction process in Afghanistan, including granting more than $3 million in the 2007-2008 fiscal year for social and infrastructure projects, humanitarian aid, and training for Afghan law enforcement and border patrol officers. For 2009-2011, Kazakhstan has committed an additional $5 million to improve the water supply and distribution infrastructure for shipments of grain and other commodities.

Kazakhstan also provides funding to support U.S. objectives in the region. Astana is the only regional donor giving significant aid to Kyrgyzstan, Tajikistan, and Afghanistan. According to the U.S. State Department’s Background note on Kazakhstan, “in 2006, Kazakhstan became the first country to share directly in the cost of a U.S. Government’s foreign assistance program. Through 2009, the Government of Kazakhstan will contribute over $15 million of a $40 million USAID economic development project aimed at strengthening Kazakhstan’s capacity to achieve its development goals.”

Kazakhstan has initiated and championed the Conference on Interaction and Confidence-Building in Asia (CICA). Modeled after the OSCE, the CICA process aims to promote peace and security throughout Eurasia through confidence-building measures and other means. The first CICA summit, held in June 2002, was attended by leaders from 16 states who signed the “Almaty Act,” as well as a declaration to eliminate terrorism and promote inter-cultural dialogue. The second CICA summit (hosted by Kazakhstan in June 2006) adopted the Catalogue of Confidence Building Measures (CBM) – a road map for implementing the CBM on a bilateral and multilateral basis. At the last CICA working meeting in India in February 2009, the participating states selected Turkey to chair the conference and host the third CICA summit in 2010. The Turkish chairmanship will expand CICA geographically and move it closer to Europe.  
Multi-National Counter-Terrorism

Kazakhstan has been combating several potential threats to its own stability and that of its neighbors, including terrorism, drug smuggling, and organized crime. Although Kazakhstan is generally not a source of these maladies, it is a transit country for such illicit activities. Kazakh leaders have been especially concerned about possible terrorist strikes against their country’s energy infrastructure that could affect exports to European and other consumers. To counter terrorist threats, the Kazakh government has supported multilateral efforts in key multilateral organizations to make counter-terrorism an essential ingredient of their security focus. Astana has also assigned troops to the Central Asian Rapid Reaction Force (CARRF), which is designed to defend each country against major terrorist threats.  
Regional Non-Proliferation

KazakhstanwasthefirstformerSovietrepublictoabandon its nuclear arsenal. It closed the largest nuclear weapons test site and has spearheaded regional denuclearization. Kazakh leaders have also made major progress in downgrading nearly all of the country’s highly enriched uranium, thus lessening the opportunities for such material to fall into the hands of foreign governments or terrorist groups. Astana’s non-proliferation initiatives have earned it praise from a number of international leaders.

With impetus from Kazakhstan, the Central Asian states have agreed to coordinate their nonproliferation and export control policies, especially to prevent the smuggling of Weapons of Mass Destruction (WMD) and related materials from the former Soviet Union. In September 2006 in Semipalatinsk, a former Soviet nuclear testing site in Kazakhstan, representatives of the five Central Asian states signed a treaty to create a Central Asian Nuclear Weapon Free Zone, which entered into force on March 21, 2009. The signatories pledged not to develop, manufacture, or otherwise acquire nuclear devices or to assist third parties in developing nuclear weapons programs. The treaty further addressed environmental protection as each of the five states share common problems of environmental damage resulting from the production and testing of Soviet nuclear weapons.  
Counter-Narcotics Trafficking

Countering the trafficking of narcotics from Afghanistan through Central Asia is a major security challenge for all countries in the region, as well as an issue of concern for European and Asian states seeking to stabilize Afghanistan. Proceeds from large-scale smuggling finance organized crime and cross-border terrorism. Central Asian states, including Kazakhstan, have been active in joint operations to intercept drug shipments from Afghanistan and are expanding their counter-narcotics agencies to deal more effectively with the threat. The Central Asian Regional Information and Coordination Centre (CARICC), established in Almaty under UN auspices, serves as the main regional communication center for analysis and exchange of information on transnational crime and the coordination of joint operations. The OSCE, which Kazakhstan will chair in 2010, has established the priority of curbing drug and arms smuggling, strengthening border controls to curtail illegal migration, and countering the financing of terrorist and criminal organizations.  
Energy Security

Kazakhstan is a major producer and exporter of crude oil, projected to export three million barrels of oil per day, or 150 million tons per year, by 2015. Kazakhstan also possesses substantial natural gas reserves and some of the world’s largest reserves of uranium.

The three energy-rich states of Central Asia (Kazakhstan, Uzbekistan, and Turkmenistan) understand that their political independence and energy security requires diversifying their energy customers and avoiding reliance on any single power or transit route. Currently, Russia is the main transit route for energy exports from Central Asia. Kazakhstan supports building oil and gas pipelines that would channel its energy resources directly to Europe and China. The Kazakh energy industry favors a direct energy connection with Azerbaijan across the Caspian Sea that would help supply the European market.

Astana is seeking to diversify its economy and avoid over-dependence on natural resources and energy exports. Until recently, oil and gas revenues have been aggressively used to develop a stronger economic foundation for expansion into new markets. Kazakhstan seeks to attract advanced technologies and modern management practices into its priority economic sectors, including high technology, financial services, and agriculture. However, the current global financial crisis poses considerable challenges to this agenda, not least because of the weaknesses it has exposed in Kazakhstan’s banking and financial services sector.  
Economic Development

Sustained economic development is a major determinant of long-term regional stability. Kazakhstan has emerged as a successful model of economic development in Central Asia and the secular Muslim world. It has the largest economy in Central Asia with a Gross Domestic Product (GDP) exceeding the combined total of its four Central Asian neighbors. The government is in the process of negotiating its entry into the World Trade Organization (WTO) and is a leading proponent of deepening economic cooperation in Central Asia and the Caspian region.

Kazakh leaders have focused on developing the Euro-Asian Economic Community (EurAsEC), an organization that also involves Belarus, Kazakhstan, Kyrgyzstan, Russia, and Tajikistan. More generally, Kazakhstan has strongly supported deeper economic integration among these states. Nonetheless, Astana opposes over-reliance on any single country because this would undermine Kazakhstan’s independence and integration into the global economy.

In positioning Kazakhstan as a potential economic hub and the core of a “Eurasian transport corridor,” President Nursultan Nazarbayev has proposed creating a regional organization, styled as the Eurasian Economic Union (EEU), to harness and intensify trans-border cooperation in such areas as water resource management, transportation infrastructure, crisis-response, environmental protection, and region-wide economic development. Such a process, even without the support of all Central Asian countries, could be the first steps toward lowering barriers to trade, harmonizing customs, and building closer economic associations. Kazakh officials contend that closer economic integration would reduce regional tensions, attract greater levels of foreign direct investment, and increase the region’s leverage and competitiveness in the international arena. Integration has also been fostered by tangible investments and capital flows as Kazakhstan has played a major role in exporting capital to its neighbors.

#### Nuclear war

Ahrari 1 (M. Ehsan, Professor of National Security and Strategy of the Joint and Combined Warfighting School at the Armed Forces Staff College, August 2001, “Jihadi Groups, Nuclear Pakistan and the New Great Game,” http://www.strategicstudiesinstitute.army.mil/pdffiles/pub112.pdf)

South and Central Asia constitute a part of the world where a well-designed American strategy might well help avoid crises or catastrophe. The U.S. military would provide only one component of such a strategy, and a secondary one at that, but has an important role to play through engagement activities and regional confidence building. Insecurity has led the states of the region to seek weapons of mass destruction, missiles and conventional arms. It has also led them toward policies which undercut the security of their neighbors. If such activities continue, the result could be increased terrorism, humanitarian disasters, continued low-level conflict and potentially even major regional war or a thermonuclear exchange. A shift away from this pattern could allow the states of the region to become solid economic and political partners for the United States, thus representing a gain for all concerned.

### Inherency

Inherency is a stock issue, and they don’t have it. This isn’t an inherency press—it’s a full court inherency blitzkrieg:

Lets begin by reading a few lines from their 1AC Shesgreen “inherency” card…obviously the un-underlined part:

It says “Big-picture changes will not be make-or-break for USEC” and “*Whoever the secretary is* will know we have bipartisan, strong support in the delegation and in the Congress overall."

The opening paragraph of the article Identifies the real issue: “Energy Secretary Steven Chu announced Friday that he was stepping down. And there have been rumors that some of his deputies, who have championed the USEC project, might also be leaving the Department of Energy (DOE).” Which could provide problems when “USEC officials said they would address such concerns in a strengthened loan application come December.”

That was before the nomination for the new energy secretary happened. Now that it has happened, WHOMMPPP WAAAAAA to the aff:

The new energy secretary is a man named Ernest Moniz. He is a nuclear physicist who was ON THE PAYROLL of the USEC—he LOVES the project, and will inevitably approve it when they apply for the loan guarantee—The USEC, Local senators, and anyone with half a brain agrees:

USA Today, an article hilariously titled “Nuclear Company Lauds Choice for Energy Department”, March 4th [http://www.usatoday.com/story/news/politics/2013/03/04/usec-moniz-department-of-energy/1962911/]

Ernest Moniz's nomination to replace Stephen Chu as head of the Department of Energy was welcomed by USEC, the firm that is seeking federal help in building a major nuclear facility in Ohio. WASHINGTON -- USEC officials on Monday applauded President Obama's nomination of Ernest Moniz to be the new Energy Secretary -- and it's no wonder.

Moniz has been familiar with the company for years and served as a strategic adviser to USEC, which is developing the American Centrifuge Project in Piketon, Ohio.

Moniz, an MIT physics professor, was a member of USEC's Strategic Advisory Council from 2002 to 2004, a paid position he held shortly after leaving an earlier stint with the Department of Energy (DOE) in the Clinton White House.

"Dr. Moniz's distinguished career as a scientist, educator and a public servant provide a solid foundation for him to serve as energy secretary," USEC spokesman Paul Jacobson said in a statement Monday after Obama's announcement. "Dr. Moniz has been an important advocate for the advancement of nuclear energy as a method to address carbon emissions and climate change and is familiar with uranium-enrichment technologies."

Moniz has long been a proponent of nuclear energy, writing after Japan's Fukushima nuclear disaster in 2011 that it would be a "mistake" for the U.S. and other countries to abandon the power source. Calling it safe, clean and reliable, he wrote, "Nuclear power is the largest source of carbon-free electricity in the country."

Such views have provoked skepticism from some environmental advocates.

In a statement Monday, the Sierra Club's executive director, Michael Brune, urged Moniz to focus on renewable energy sources such as solar and wind. "We would stress to Mr. Moniz that an 'all of the above' energy policy only means 'more of the same,' " Brune said, "and we urge him to leave dangerous nuclear energy and toxic fracking behind." Fracking, also known as hydraulic fracturing, is a drilling process used to extract natural gas from underground.

Sen. Sherrod Brown, D-Ohio, said Moniz's nomination was a positive development for the Piketon project.

"Dr. Moniz possesses a unique understanding of the importance of Piketon's American Centrifuge Program," Brown said. "I am confident that Dr. Moniz will continue the administration's support for this critical economic development and national security imperative."

Moniz has had a connection to USEC since the company's infancy. Now a Maryland-based global energy company and supplier of enriched uranium, USEC used to be part of the Energy Department. Congress privatized USEC in the mid-1990s, a process that was completed in 1998.

As the DOE's undersecretary during that time, Moniz was involved with the privatization, according to the company's 1998 Securities and Exchange Commission filings. He left the DOE in 2001, and in 2002, USEC tapped him to serve on its Strategic Advisory Council.

Jacobson confirmed that Moniz was paid for his work at USEC but declined to say how much.

"He was one of nine people on this council," Jacobson said. "All the council members . . . we're paid on an identical basis for the work." USEC set up the advisory body in 1999, saying its members would provide advice and perspective on everything from nuclear power trends to national security issues.

"They provided evaluations and advice on different options and technologies and strategies for the company," Jacobson said. He said he was not concerned Moniz's relationship with USEC would pose any conflicts if he were confirmed as Steven Chu's successor to lead the DOE.

Others said it simply showed that Moniz would have significant expertise when it comes to evaluating the uranium-enrichment project in Piketon. USEC is working in collaboration with the DOE on a research, development and demonstration project to test its centrifuge technology. Republicans in the House of Representatives have included $150 million for the project in a bill that would fund government programs through the rest of this fiscal year. It's likely to come up for a vote in the House later this week.

The centrifuge project is scheduled for completion at the end of this year, when USEC plans to renew its bid for a $2 billion federal loan guarantee. DOE officials put that application on hold in 2011, after glitches at the Piketon site raised concerns inside the energy agency about the viability of the project.

"The fact that he served on the (USEC) council certainly implies he has a relatively well-versed knowledge of the history, the background and the current status of USEC, which obviously I think would be considered a positive," said Salo Zelermyer, a former senior counsel at the DOE under President George W. Bush and now an energy lawyer in Washington.

And, Moniz is all about weapons. Also, he’s got a lot of Chutzpah. His swag is phenomenal. He’s gonna do the hell out of the plan.

Forbes, March 9th [http://www.forbes.com/sites/jamesconca/2013/03/09/will-secretary-moniz-put-energy-back-into-the-department-of-energy/]

President [Barack Obama](http://www.forbes.com/profile/barack-obama/?lc=int_mb_1001) announced Monday that he will nominate Dr. Ernest Moniz to head the U.S. Department of Energy as Secretary. This was a wise move. There are not many who are better qualified, few with as much experience, and none with more chutzpah than Ernie Moniz. And he will need all three if he is to accomplish anything in a job that has been a standing nightmare for decades.

However, all week long the pundits, reporters, supporters and critics alike focused on Dr. Moniz’ views and activities in renewable energy, fracking, climate change and environmental issues.  This is all incredibly interesting, but all incredibly irrelevant. Moniz knows better than anyone else that the Department of Energy has almost nothing to do with energy.  It’s all about weapons and waste. Nuclear weapons and nuclear waste to be exact.

The public, Congress and even the White House can be forgiven for being confused by the word Energy in the title of the Department of Energy. There is a small component of nuclear energy in DOE, and an even smaller component of alternatives and fossil fuel ([DOE FY2013 budget](http://www.cfo.doe.gov/cf30/budgetmap/budgetmap.html)) but most of this is for basic scientific research.

Fairly recently, Moniz reiterated nuclear energy’s critical role in reducing greenhouse gases as part of a balanced, low-carbon electricity generation portfolio ([Foreign Affairs](http://www.foreignaffairs.com/articles/136544/ernest-moniz/why-we-still-need-nuclear-power)). DOE even has some licensing authority in exporting liquefied natural gas. As Secretary, Moniz could increase the DOE’s role in actual energy.

But fracking, pipelines and wind turbines will not be much in the official mind of the Secretary, although it is one of his passions. His main focus will be: 1) moving nuclear waste disposal forward in the post-Yucca Mountain era of leaking nuclear waste tanks ([Hanford tanks](http://www.huffingtonpost.com/2013/02/22/hanford-nuclear-reservation_n_2744974.html); [Waste to NM](http://seattletimes.com/html/localnews/2020501061_hanfordinsleexml.html)), and 2) dealing with nuclear weapons, both their upkeep in the U.S. and their proliferation globally ([Reuters](http://www.reuters.com/article/2013/03/07/us-korea-north-attack-idUSBRE9260BR20130307)). Iran and North Korea will pull his attention more than Pennsylvania and New York.

Not that Secretary Moniz doesn’t know more than most about all energy sources. As the founding Director of the MIT Energy Initiative (MITEI), Moniz’ vision was to link science, industry, innovation and policy to help transform global energy systems, focusing on renewables, energy efficiency, utility-scale liquid batteries and carbon management, among others ([MITEI reports](http://mitei.mit.edu/publications/reports-studies)). Among his host of credentials, a Ph.D. in theoretical physics from Stanford University started Dr. Moniz on this energetic path.

For the political realities of this job, Moniz is distinguished even from his predecessors. He served as Undersecretary of Energy from 1997 to 2001, overseeing all science and energy programs for DOE as well as the national laboratory system. He led a comprehensive review of our nuclear weapons stockpile stewardship program, enhanced the science and technology of environmental cleanup, and was the DOE special negotiator for Russia initiatives, focusing on disposal of Soviet-era nuclear materials. Before that, Moniz was an Associate Director for Science in the Clinton White House from 1995 to 1997.

He presently serves on the President’s Council of Advisors for Science and Technology and on the Department of Defense Threat Reduction Advisory Committee. He recently served on the Blue Ribbon Commission on America’s Nuclear Future (BRC).

It’s clear they don’t have any attitudinal inherency—there is support for the project in the status quo --- all it requires is some leadership. They don’t have structural inherency either—the loan guarantee, when submitted at the end of the year, will be instantly approved by Moniz.

I understand this is a little bit old school, but inherency is actually kinda a big deal. There’s a reason it’s a stock issue and was the first part of every 1AC. This is obviously a voting issue:

First—Neg ground—all negative disadvantage links rely on a substantial change occurring from the status quo. This includes both solvency based disads and perception based disads. Links to politics—*the* core negative generic—are only guaranteed by an AFF that is attitudinally inherent. By reading an aff that is functionally the status quo, they deny us those links and the ability to generate any reasonable offense. This is MORE IMPORTANT than any T argument—even if we can predict the aff, we can’t debate it because EVERY ARGUMENT WE READ is non unique.

This isn’t potential or hypothetical abuse either. They read a contention in the 1AC that they, in a clear act of Orwellian doublespeak, call “inherency”. This contention is ENTIRELY ARGUMENTS designed to non-unique disadvantages based on comparing the aff to the status quo. The tag to the second card in the 1AC—Korte—begins with “No disads”. You should take the aff at their word—there ARE no Disads because the Aff is the status quo. This is the biggest possible neg ground issue. We have none.

Let’s make this voting issue more simple—they WIN DEBATES because of that first contention. They make disads non-unique. They have willfully introduced a front-loaded, preemptive argument that they have devoted three cards to as of the 1NC. If reading a non-inherent AFF is good enough to be a tool to help them win debates, it’s enough that they should lose them. To get a little biblical: They have sowed the wind, now they must reap the whirlwind. They should be PUNISHED for a CONSCIOUS DECISION to obviate neg ground. This is especially true given that they approve a single 2 billion dollar loan—err STRONLY negative on this issue.

Also, if we win that the plan is the status quo, they aren’t topical—increase means to make greater—they maintain the status quo—that’s a voter for T.

Even if you don’t buy that, vote neg on presumption. The aff is the squo. We don’t need a DA, and their arguments that “it might not come to pass!” are not good enough. The burden of proof should be ON THEM to prove that the aff is not the squo. Out of generosity, we’ll establish a pretty low standard: treat it like a civil trial—they should have to prove that the preponderance of evidence indicates that the aff is not the status quo. This is a positive burden on the affirmative They can’t, they won’t, they lose.

### Solvency

#### Loan guarantees repress innovation

Sokolski 10—Testimony by Henry David Sokolski, Executive Director of the Nonproliferation Policy Education Center and serves on the U.S. congressional Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism, to the Domestic Policy Subcommittee of the Oversight and Government Reform Committee [April 20, 2010, “Nuclear Power Federal Loan Guarantees: The Next Multi-Billion Dollar Bailout?” The Nonproliferation Policy Education Center, http://www.npolicy.org/article.php?aid=39&tid=2]

3. Do increased loan guarantees for nuclear power plants misdirect resources that could be better used for energy efficiency and renewable power projects? Yes. One of the repeated findings of the analysts from institutions as disparate as the American Enterprise Institute, The Heritage Foundation, The Cato Institute, Greenpeace, and the Union of Concerned Scientists is that if we are serious about promoting clean energy experimentation, our government should stay out of picking commercial winners and losers by granting federal loan guarantees. One of the concerns repeatedly raised by these analysts is how much government investments in energy commercialization projects distorts and represses the kind of innovation we need. Historically, when the U.S. government has lent its financial support to specific commercial energy projects, the results have been abysmal. Among our government’s most prominent initiatives are such losers as synthetic fuels, breeder reactors, and corn ethanol. Mistakes, of course, can always happen but with the federal government, such errors dominate while admission to them comes late and at great expense. Indeed, generally, government energy commercialization projects continue to receive federal support well after it is clear they are white elephants. What’s worse, the government all too frequently tries to cover its mismanagement tracks by demanding that the public pay out of their own pockets to buy the costly commercial production of such schemes (e.g., corn ethanol mandates, which cost private U.S. consumers roughly $10 billion last year). Unlike small businesses, who pay for their cockups, the bill is passed on to the public. This is not to argue that there is not an important role for the federal government in promoting clean energy technologies and fuel. There is but it isn’t in spending on or off budget on commercialization efforts. Instead, what is needed is to have Washington work to promote increased energy market competition through regulatory reforms that state governments should undertake. These reforms would, among other things, (1) set standard rules for selling electricity through the grid; (2) remove conflicts of interest for existing grid or pipeline operations to block new entrants; (3) ensure regulated utilities have similar incentives to invest in efficiency as they do in expanding generation plants and energy supplies; (4) encourage key market constraints, be they carbon limits or liability coverage, through the market pricing system rather than through government subsidies; and (5) increase pricing visibility for power to final customers. Finally, as long as state utilities commissions do not allow utilities to profit fully from introducing fuel efficiencies, there will continue to be a role for the federal government to encourage and fund energy research and development directly.

#### Tons of Tritium now – Billion warrants

Grossman 11’

Some Nuclear Experts Question Ramp-up in U.S. Tritium Production Oct. 28, 2011 By Elaine M. Grossman

The U.S. nuclear complex is expanding production of an exotic gas widely seen as essential for keeping nuclear weapons functioning, but some progressive issue experts cast doubt on just how much new fabrication is required (see GSN, Aug. 25). The Energy Department's semiautonomous National Nuclear Security Administration plans over the next few years to more than triple capacity to produce tritium at the commercial Watts Bar reactor in eastern Tennessee, according to the agency's fiscal 2012 "Stockpile Stewardship and Management Plan." This budget year alone, the agency is seeking a $27.3 million boost for its "tritium readiness" effort, in which production will increase from 240 to 544 rods per cycle at a cost of $77.5 million, the NNSA fiscal 2012 funding request to Congress states. Since production began at the Tennessee Valley Authority reactor in 2004, 10 tritium-irradiation cycles -- each taking about 18 months -- have been completed. The readiness program also includes the process of extracting tritium from the irradiated rods at the Energy Department's Savannah River Site, located on South Carolina's western border with Georgia, and of maintaining military reserves of the gas. By 2020, the agency intends to boost production to 1,700 rods each cycle, according to Terry Johnson, a TVA spokesman. The Obama administration seeks to spend $270.5 million on tritium readiness between fiscal 2013 and 2016, producing no fewer than 240 rods per cycle as a minimum "sustaining rate" during that period. This will "ensure a capability is available in the event that future resources are allocated to ramp up production to support the requirements" of a future U.S. nuclear stockpile, the funding plan states. The blueprint also calls for extracting tritium at a clip of no less than one batch of rods per year. Thanks to post-Cold War reductions in the size of the nuclear stockpile, the Energy Department now needs less new tritium than initially projected in May 1999, according a recent federal notice. However, tritium production has gone a bit slower than anticipated because more of the gas than expected has leached from rods at Watts Bar into reactor coolant water. That has left slightly less tritium available to extract from each rod, Johnson said. The nuclear agency is thus exploring options for further increasing its production capacity, the notice states. However, not everyone sees new production as a must. Some experts are questioning why a standard practice of recycling tritium from deactivated nuclear warheads is not offering sufficient reserve stocks of the gas, particularly given anticipated arms control reductions and further weapon retirements from the strategic hedge force. If the United States can deactivate warheads at an average rate of at least 5 percent every year, "there would be no need to produce additional tritium," said Charles Ferguson, president of the Federation of American Scientists. That would offset the roughly 5 percent rate of annual decay in tritium in the remaining warheads, he said. On occasions when warheads are shifted out of the operationally deployed stockpile or ready-reserve force, tritium gas is typically removed, purified and reused in weapons that are still active, the career physicist and a number of other experts said. The nation removes tritium from inactive stockpile warheads "as soon as logistically practical, and the tritium is returned to the national repository" at Savannah River, according to the Defense Department's 2011 "Nuclear Matters Handbook." The government has not elaborated on the rate at which this is done or exactly how much reserve supply is available today. A mix of tritium -- a radioactive isotope of hydrogen -- and deuterium is maintained in a small reservoir in each U.S. nuclear weapon to boost the warhead's explosive power. Just a few grams of the gas, injected into the hollow pit of a warhead's primary stage, initiate a chain reaction and trigger a much more powerful secondary stage. To make a nuclear weapon detonate, "this is where the rubber hits the road," said Hans Kristensen, who directs the FAS Nuclear Information Project. "If you can get the primary to go off with enough yield, then the secondary will go off." Conversely, if a warhead's tritium-dispenser bottle has been removed or if the gas has significantly deteriorated, the secondary stage could fail to ignite and the explosive power of the weapon would be considerably diminished, experts explain. U.S. nuclear weapons policy calls on the Energy Department to maintain fresh tritium in the deployed arsenal of atomic warheads carried by ICBMs, submarine-launched missiles and bomber aircraft. Continuing a policy from previous administrations, the Obama White House is also keeping roughly 2,290 warheads in an active hedge reserve force that receives regular maintenance and is kept stocked with tritium, according to Nuclear Matters. This stockpile hedge force constitutes more than one fully assembled backup warhead for each strategic warhead deployed at bomber aircraft bases, on ICBMs or on submarine-launched ballistic missiles. The State Department last week announced that the nation now has 1,790 operationally deployed warheads, as the United States gradually reduces to a limit of 1,550 fielded weapons under the U.S.-Russian New START agreement (see GSN, Oct. 26). One key distinction between a warhead in the active force -- either deployed or hedge -- and one that has been deactivated is that the tritium reservoir in the active warhead is routinely replaced every few years to ensure that the weapon's radioactive gas does not expire. The hedge warheads are maintained in active reserve status in case "an unforeseen catastrophic failure of a class of delivery vehicles, warhead-type or family" is discovered or there is "an unexpected reversal of the geopolitical situation that would require an increase in the number of weapons available for use," according to the Pentagon handbook. Kristensen sees this as overkill and a waste of resources. "I think it's totally unnecessary to retain active weapons in the hedge," he said in an interview this week. "Short of a Martian attack, there's nothing that would require us to suddenly upload 2,000 warheads onto the force. It's not going to happen." Finding a technical defect that puts a portion of U.S. warheads out of commission is perhaps more plausible than a resurgent-threat scenario in justifying the retention of a hedge force, Kristensen said. However, if such a flaw was discovered, it could likely be handled quietly over time without a need for massive warhead swap-outs from the active reserve stockpile, he argued. "Would it really require us to have active weapons that we'd have to upload immediately?" he said, calling for a "reality check" on how big of a backup nuclear force is truly needed. "The rest of the force would still be good. We'd have enough [other] warheads left to bomb Russia back to the Stone Age." In fact, the Pentagon anticipates reducing the size of the active stockpile hedge force in coming years as warhead maintainers develop more replacement components that could help aging weapons remain functional (see GSN, Aug. 18). It is unclear, however, if long-term plans for reductions in the active hedge force have translated into a lower requirement for the amount of tritium that must be produced in the years to come. "The United States is in an era of fiscal constraint with an unprecedented debt and a substantial annual deficit," Ferguson said. "Political leaders need to take a very serious examination of additional costs for maintaining a rather large reserve stockpile of warheads." More than a decade ago, he joined Princeton physicist Frank von Hippel in a 1999 letter published by Physics Today estimating that given the amount of tritium available, its rate of decay and the standard use of recycling, a U.S. nuclear arsenal numbering 4,500 warheads could be sustained without new tritium production through 2025. The pair noted that the Energy Department at the time had established a requirement to maintain a five-year reserve supply of tritium. Assuming that the backup tritium-supply policy has not changed and the nation continues to keep its roughly 5,000-warhead arsenal maintained with fresh tritium, "then the year would be 2022" in which new gas would have to be produced, von Hippel said this week in an e-mail response to questions. "But probably DOE still has more than a five-year reserve [available] and is getting nervous that it will be approaching that level in a few years." Additional tritium has been produced since the two scientists calculated their 1999 estimates, which should result in an even deeper cushion of reserve gas, Ferguson noted. Von Hippel said a national production schedule for tritium should account more realistically for how hedge-force warheads are actually managed. In the unlikely case that an emergent threat dictated a more urgent need for new tritium, "it might take a few years to produce enough for 2,000 additional [deployed] warheads," but the United States would almost certainly have at least that much warning time that more tritium is needed, he said. "[Or,] if a problem developed with some deployed warheads that required them to be replaced by reserve warheads, the tritium could be swapped." Linton Brooks, who served as the first NNSA administrator during the Bush administration, played down debate over the issue. He noted that hedge force weapons do not have to be kept at an immediately usable state of readiness because upload schedules for operationally deploying those warheads would be largely driven by weapon delivery systems. "Uploading the entire force would take months for submarines (driven by patrol schedules, since we would not want to reduce the number of survivable missiles) and years for the ICBM force (driven by handling equipment)," he said in a Thursday e-mail message. Further nuclear-weapon reductions through arms control agreements or unilateral deactivations could allow Washington to produce tritium even later down the road, von Hippel told Global Security Newswire. Were Washington to cut the active stockpile in half from the current 5,000 or so warheads to a level of 2,500, "we would buy ourselves 12 years of no tritium requirements and still have a reserve for 800 warheads," he said.

#### Supplies come from elsewhere and even total phaseout means sufficient supplies.

Squassoni, 3/7/13 [Sharon Squassoni is a senior fellow and director of the Proliferation Prevention Program at the Center for Strategic and International Studies. “A US Nuclear Exit? (Part 3) The economics of a US civilian nuclear phase-out”. Bulletin of the Atomic Scientists March/April 2013 vol. 69 no. 2 22-33. http://www.pennenergy.com/articles/pennenergy/2013/03/a-us-nuclear-exit-part-3.html. Accessed 3/10/13]

A declared exit from commercial nuclear power in the United States is highly improbable. But a stealthy, gradual nuclear decline motivated by economics seems reasonably likely, as US utilities decide to close some plants early, rather than implement costly post-Fukushima safety regulations, and the number of new nuclear power plants fails to offset retirements. If nuclear power does make a slow exit, the national security implications are smaller than sometimes suggested. Nuclear energy is far down the list of options for enhancing the US military’s energy security.  The United States has not needed to produce fissile material for weapons in decades, and although tritium for defense purposes is now produced in civilian reactors, there are other options for obtaining it. A nuclear phase-out could affect US nuclear export control and nonproliferation efforts, but export controls are only one tool among many that can be used to curb the desire for nuclear weapons. Even in a slow slide toward phase-out, the United States would remain at the global nuclear bargaining table for decades because of its status as a military nuclear superpower.

### Deterrence

#### Nuclear primacy gives the US no coercive leverage. Any situation where it could be coherently used would just cause enemies to raise their alert status to jack US leverage.

**Li ‘6** (Bin, Dir. Arms Control Program – Institute of International Studies at Tsinghua U., China Security, “Paper Tiger with whitened Teeth”, Autumn, http://www.wsichina.org/cs4\_5.pdf)

The Lieber and Press thesis speculates that the United States may attain coercive power over its adversaries in a crisis if a position of nuclear primacy is achieved. The paper, however, does not explain how the United States would transfer its superior nuclear position into signals of threat in order to coerce others. Let us be very clear that it is thoroughly implausible that the United States would use its nuclear weapons to force other countries to yield to it in economic, social or cultural disputes. If it chose to do so, it would fail for two basic reasons. First, power and influence generated in one realm (nuclear primacy) is not necessarily transferable to another realm (economic or other). Second, the threat of using nuclear weapons for such ends would be abhorrent to Americans and the world. Rather, the coercive power of nuclear weapons, if real, should be effective only in serious security disputes - and are therefore the only scope for discussion. Moreover, if Lieber and Press expect that nuclear primacy enables the United States to coerce other countries in security disputes, they need to explain how the United States would send coercive signals and how its rivals would interpret the signals. In a scenario where the goal of the United States is to force a country to yield in a security dispute using the fear of American nuclear superiority, an important question arises: how would a country know whether the nuclear threats from the United States are real and consequently whether to withdraw from their previous position? The United States would need to make known at a certain stage in the dispute: (1) its security objectives in relation to its adversary; and (2) the threat of possibly using nuclear weapons against its adversary if it does not yield its position. The response by the adversary is important here for it may or may not take seriously the nuclear threats by the United States. If the adversary does not take such threats seriously, then they would not feel the necessity to yield and therefore coercion would not work. To clearly reveal its security objectives and convince its adversary that the nuclear threat is credible, the United States would have to send out very strong signals of threat, for example, upgrading its nuclear readiness. If the adversary does take the U.S. nuclear threat seriously, it can raise its nuclear alert accordingly and thereby increase the survivability of its nuclear weapons.

#### China gives zero credence to nuclear primacy.

**Blair and Yali ‘6** (Bruce, Pres. World Security Institute, and Chen, Ed. Washington Observer and Program Mamager – Chen Shi China Research Group, China Security, “The Fallacy of Nuclear Primacy”, Autumn, http://www.wsichina.org/cs4\_4.pdf)

The belief Mao Zedong possessed was that China will not invade other countries, and that no other countries could conquer China with or without nuclear weapons because of its vast territorial expanse and challenging terrain. Mao believed that nuclear weapons would not prevent China’s eventual victory in a war fought on Chinese soil. The logic of China’s nuclear doctrine thus regarded the use of nuclear weapons against China as ineffective, and therefore so improbable as to be virtually impossible, and therefore insignificant as a source of strategic advantage. China’s calculus for “unbearable loss” and China’s capacity to absorb a first nuclear strike differed completely from that of the United States 27 “The second strike capability” China marshals reassures it that other strategic powers cannot convert their nuclear superiority into real coercive power. In the view of Chinese leaders, superiority is not convertible. At best, any advantage gained would be small and virtually inconsequential. China not only completely discounts the utility of nuclear primacy, but also believes that other nuclear powers share its view in spite of the lip service those powers pay to the importance of nuclear weapons. China simply does not believe others truly believe nuclear primacy can serve utilitarian purposes.28 China’s experiences in dealing with U.S. nuclear threats have only strengthened its conviction that nuclear primacy has negligible utility. The United States considered using nuclear weapons against China in 1953 during the Korean War, in 1954-1955 during the cross-strait crises, and in 1964 before China carried out its first nuclear test. These cases in which U.S. leaders clearly thought about using nuclear weapons against China but ultimately decided against it reveal a multitude of reasons for counseling against their use. A nuclear taboo was ascendant at the time. Allies of the United States would oppose their use. Attacking China would create a vacuum for an even more hostile adversary, the Soviet Union, to occupy. Attacking China could not guarantee the destruction of China’s fledging nuclear program, due to sketchy information on the location of facilities in China’s nuclear infrastructure. Without the ability to achieve total victory and occupy China, the United States could not prevent China from rebuilding any destroyed facilities and revitalizing its nuclear program. The United States had better choices, especially given China’s flexibility in negotiating and compromising in resolving conflicts with the United States.29

#### Counterforce can't deter Russia. Weapons would be on highest alert when a strike would be most necessary.

**Corcoran ‘9** (Ed, Senior Fellow – Global Security.org, and Strategic Analyst – U.S. Army War College and former Chair – Office of Deputy Chief of Operations U.S. Army War College, “STRATEGIC NUCLEAR TARGETS”, http://sitrep.globalsecurity.org/articles/090421301-strategic-nuclear-targets.htm)

That brings us to Russia, our former main adversary, now a competitive partner and still a potential future adversary, particularly as relations have gradually soured in recent years. Russia is the only other nation with a formidable arsenal of some three thousand strategic weapons. Our opposing arsenals were built up in the period when Mutually Assured Destruction (MAD) was the underlying strategic concept -- each side deterred from striking the other by the prospect of assured retaliatory destruction. The situation became even madder as both sides worked to develop a capability to destroy the other's strike force with a crippling first strike. This resulted in further large increases in the sizes of the arsenals, as well as early warning systems and hair-trigger launch-on-warning alert procedures. The final result was an overall system in which each side could destroy the other in a matter of minutes. And it also raised another chilling specter, Nuclear Winter, in which the atmospheric dust raised from a major nuclear exchange would block sunlight for an extended period and essentially destroy human civilization globally. The collapse of the Soviet Union collapsed this threat, but did not eliminate it. US and Russian nuclear forces remained frozen in adversarial positions. The May 2002 Moscow Treaty began to address this legacy and is leading to a reduction in strategic nuclear forces down to levels of about two thousand on each side by 2012. These levels are still sufficient to destroy not only both nations but also human civilization. It is hard to even construct scenarios where the use of even a few strategic nuclear weapons does not risk a total escalation. Strikes on Russian warning facilities or strike forces would almost certainly bring a wave of retaliatory strikes. Strikes on hardened command centers would be of questionable effectiveness and also risk total escalation. In addition, successful elimination of Russian leaders could greatly complicate any efforts to stop escalation short of a total nuclear exchange. Counterforce targeting requires a larger number of accurate, high yield weapons. And if some extreme circumstances actually pushed the United States to initiate such a strike, the outcome would probably be the mutual destruction we are both trying to avoid. Counterforce strike capabilities are typically considered part of the US deterrent, but it is unclear just what they are supposed to be deterring. They can't deter a Russian first strike since by definition once a first strike is launched, strategic delivery vehicles are already on the way and no longer subject to attack. In actuality, counterforce targets are not a deterrent, but a provocation. They clearly demand a logical Russian response of both increasing the number and capabilities of Russian strategic nuclear forces and also increasing their alert status to facilitate launch in the event a US first strike is detected. Neither of these actions is in the US interest. Eliminating counterforce missions would not reduce deterrence since such capabilities do nothing to prevent a Russian strike. And in a condition of high tension, when a US first strike might seem most attractive, Russian forces would almost certainly be in a launch-on-warning status. The core of deterrence remains Mutually Assurred Destruction and this requires neither high accuracy nor high yield weapons. One recent analysis assessed the potential for replacing counterforce targeting with infrastructure targeting, proposing that such targeting could provide a strong enough disincentive to make a Russian strike on the United States unattractive. This would make a relatively small number of strategic nuclear weapons -- perhaps 500 -- adequate to deter a Russian strike. US retaliatory forces are targeted, so far as we know, on Russian high-value targets (presumably major cities). These are also the targets which infrastructure targeting would replace, though it is not clear that threats to infrastructure carry as strong a deterrent message as threats to cities. But in either case, high-yield weapons are unnecessary. And there is a particular problem associated with using high-yield, high-accuracy delivery systems for retaliatory targeting. From the US point of view, these are retaliatory (i.e., deterrent) systems. From the Russian point of view, whatever their present targeting, they could be rapidly re-targeted to first strike (i.e., provocative) targets.

#### China will not risk war—economics and diplomacy

Fravel 12—Associate Professor of Political Science and member of the Security Studies Program at MIT. Taylor is a graduate of Middlebury College and Stanford University, where he received his PhD. He has been a Postdoctoral Fellow at the Olin Institute for Strategic Studies at Harvard University, a Predoctoral Fellow at the Center for International Security and Cooperation at Stanford University, a Fellow with the Princeton-Harvard China and the World Program and a Visiting Scholar at the American Academy of Arts and Sciences(M. Taylor, “All Quiet in the South China Sea,” March 22nd, 2012, <http://www.foreignaffairs.com/articles/137346/m-taylor-fravel/all-quiet-in-the-south-china-sea>)

Little noticed, however, has been China's recent adoption of a new -- and much more moderate -- approach. The primary goals of the friendlier policy are to restore China's tarnished image in East Asia and to reduce the rationale for a more active U.S. role there.

Beijing is also unlikely to be more assertive if that sustains Southeast Asian countries' desires to further deepen ties with the United States.

The first sign of China's new approach came last June, when Hanoi dispatched a special envoy to Beijing for talks about the countries' various maritime disputes. The visit paved the way for an agreement in July 2011 between China and the ten members of the Association of Southeast Asian Nations (ASEAN) to finally implement a declaration of a code of conduct they had originally drafted in 2002 after a series of incidents in the South China Sea. In that declaration, they agreed to "exercise self-restraint in the conduct of activities that would complicate or escalate disputes."

Since the summer, senior Chinese officials, especially top political leaders such as President Hu Jintao and Premier Wen Jiabao, have repeatedly reaffirmed the late Deng Xiaoping's guidelines for dealing with China's maritime conflicts to focus on economic cooperation while delaying the final resolution of the underlying claims. In August 2011, for example, Hu echoed Deng's approach by stating that "the countries concerned may put aside the disputes and actively explore forms of common development in the relevant sea areas."

Authoritative Chinese-language media, too, has begun to underscore the importance of cooperation. Since August, the international department of People's Daily (under the pen name Zhong Sheng) has published several columns stressing the need to be less confrontational in the South China Sea. In January 2012, for example, Zhong Sheng discussed the importance of "pragmatic cooperation" to achieve "concrete results." Since the People's Daily is the official paper of the Central Committee of the Chinese Communist Party, such articles should be interpreted as the party's attempts to explain its new policy to domestic readers, especially those working lower down in party and state bureaucracies.

In terms of actually setting aside disputes, China has made progress. In addition to the July consensus with ASEAN, in October China reached an agreement with Vietnam on "basic principles guiding the settlement of maritime issues." The accord stressed following international law, especially the UN Convention on the Law of the Sea. Since then, China and Vietnam have begun to implement the agreement by establishing a working group to demarcate and develop the southern portion of the Gulf of Tonkin near the disputed Paracel Islands.

China has also initiated or participated in several working-level meetings to address regional concerns about Beijing's assertiveness. Just before the East Asian Summit last November, China announced that it would establish a three billion yuan ($476 million) fund for China-ASEAN maritime cooperation on scientific research, environmental protection, freedom of navigation, search and rescue, and combating transnational crimes at sea. The following month, China convened several workshops on oceanography and freedom of navigation in the South China Sea, and in January it hosted a meeting with senior ASEAN officials to discuss implementing the 2002 code of conduct declaration. The breadth of proposed cooperative activities indicates that China's new approach is probably more than just a mere stalling tactic.

Beyond China's new efforts to demonstrate that it is ready to pursue a more cooperative approach, the country has also halted many of the more assertive behaviors that had attracted attention between 2009 and 2011. For example, patrol ships from the Bureau of Fisheries Administration have rarely detained and held any Vietnamese fishermen since 2010. (Between 2005 and 2010, China detained 63 fishing boats and their crews, many of which were not released until a hefty fine was paid.) And Vietnamese and Philippine vessels have been able to conduct hydrocarbon exploration without interference from China. (Just last May, Chinese patrol ships cut the towed sonar cable of a Vietnamese ship to prevent it from completing a seismic survey.) More generally, China has not obstructed any recent exploration-related activities, such as Exxon's drilling in October of an exploratory well in waters claimed by both Vietnam and China. Given that China retains the capability to interfere with such activities, its failure to do so suggests a conscious choice to be a friendlier neighbor.

The question, of course, is why did the Chinese shift to a more moderate approach? More than anything, Beijing has come to realize that its assertiveness was harming its broader foreign policy interests. One principle of China's current grand strategy is to maintain good ties with great powers, its immediate neighbors, and the developing world. Through its actions in the South China Sea, China had undermined this principle and tarnished the cordial image in Southeast Asia that it had worked to cultivate in the preceding decade. It had created a shared interest among countries there in countering China -- and an incentive for them to seek support from Washington. In so doing, China's actions provided a strong rationale for greater U.S. involvement in the region and inserted the South China Sea disputes into the U.S.-Chinese relationship.

By last summer, China had simply recognized that it had overreached. Now, Beijing wants to project a more benign image in the region to prevent the formation of a group of Asian states allied against China, reduce Southeast Asian states' desire to further improve ties with the United States, and weaken the rationale for a greater U.S. role in these disputes and in the region.

So far, Beijing's new approach seems to be working, especially with Vietnam. China and Vietnam have deepened their political relationship through frequent high-level exchanges. Visits by the Vietnamese Communist Party general secretary, Nguyen Phu Trong, to Beijing in October 2011 and by the Chinese heir apparent, Xi Jinping, to Hanoi in December 2011 were designed to soothe spirits and protect the broader bilateral relationship from the unresolved disputes over territory in the South China Sea. In October, the two also agreed to a five-year plan to increase their bilateral trade to $60 billion by 2015. And just last month, foreign ministers from both countries agreed to set up working groups on functional issues such as maritime search and rescue and establish a hotline between the two foreign ministries, in addition to starting talks over the demarcation of the Gulf of Tonkin.

Even if it is smooth sailing now, there could be choppy waters ahead. Months of poor weather have held back fishermen and oil companies throughout the South China Sea. But when fishing and hydrocarbon exploration activities resume in the spring, incidents could increase. In addition, China's new approach has raised expectations that it must now meet -- for example, by negotiating a binding code of conduct to replace the 2002 declaration and continuing to refrain from unilateral actions.

Nevertheless, because the new approach reflects a strategic logic, it might endure, signaling a more significant Chinese foreign policy shift. As the 18th Party Congress draws near, Chinese leaders want a stable external environment, lest an international crisis upset the arrangements for this year's leadership turnover. And even after new party heads are selected, they will likely try to avoid international crises while consolidating their power and focusing on China's domestic challenges.

China's more moderate approach in the South China Sea provides further evidence that China will seek to avoid the type of confrontational policies that it had adopted toward the United States in 2010. When coupled with Xi's visit to Washington last month, it also suggests that the United States need not fear Beijing's reaction to its strategic pivot to Asia, which entails enhancing U.S. security relationships throughout the region. Instead, China is more likely to rely on conventional diplomatic and economic tools of statecraft than attempt a direct military response. Beijing is also unlikely to be more assertive if that sustains Southeast Asian countries' desires to further deepen ties with the United States. Whether the new approach sticks in the long run, it at least demonstrates that China, when it wants to, can recalibrate its foreign policy. That is good news for stability in the region.

#### No military aggression

Goldstein 11—Professor and Director of the China Maritime Studies Institute @ US Naval War College [Dr. Lyle J. Goldstein, “Resetting the US–China Security Relationship,” Survival | vol. 53 no. 2 | April–May 2011 | pp. 89–116]

Weighed in the aggregate, China’s rise remains a peaceful process, and the record to date should engender significant confidence. Beijing has not resorted to a significant use of force against another state in more than three decades. Its deployments of troops as UN peacekeepers to hot spots such as Lebanon and the Democratic Republic of the Congo have played a helpful role, as have the counter-piracy operations of its fleet in the Gulf of Aden. When dealing with weak and occasionally unstable states on its borders, such as Kyrgyzstan or Tajikistan, Beijing has not resorted to military intervention, nor even flexed its military muscles to gain advantage. Chinese maritime claims, whether in the South or the East China seas, are generally being enforced by unarmed patrol cutters, a clear signal that Beijing does not seek escalation to a major crisis on these matters. Contrary to the perception that China’s senior military officers are all irreconcilable hawks, one influential People’s Liberation Army Navy (PLAN) admiral recently said in an interview, with reference to lessons learned from recent border negotiations on China’s periphery: ‘If there are never any concessions or compromises, there is simply no possibility of reaching a breakthrough in border negotiations.’2 pg. 90

#### No risk of U.S.-Russian war – Russia knows the U.S. is infinitely more powerful and that it couldn’t be a threat.

**Bandow 08** (Doug, former senior fellow at the Cato Institute and former columnist with Copley News Service, 3/“Turning China into the Next Big Enemy.” http://www.antiwar.com/bandow/?articleid=12472)

In fact, America remains a military colossus. The Bush administration has proposed spending $515 billion next year on the military; more, adjusted for inflation, than at any time since World War II. The U.S. accounts for roughly half of the world's military outlays. Washington is allied with every major industrialized state except China and Russia. America's avowed enemies are a pitiful few: Burma, Cuba, Syria, Venezuela, Iran, North Korea. The U.S. government could destroy every one of these states with a flick of the president's wrist. Russia has become rather contentious of late, but that hardly makes it an enemy. Moreover, the idea that Moscow could rearm, reconquer the nations that once were part of the Soviet Union or communist satellites, overrun Western Europe, and then attack the U.S. – without anyone in America noticing the threat along the way – is, well, a paranoid fantasy more extreme than the usual science fiction plot. The Leninist Humpty-Dumpty has fallen off the wall and even a bunch of former KGB agents aren't going to be able to put him back together.

**U.S. - Russia nuclear war will be limited   
Oelrich 05** - Vice President for Strategic Security programs @ Federation of American Scientists

[Ivan Oelrich (Former professor of physics @ Technical University of Munich and Former pre-doctoral Research Associate at Lawrence Livermore National Laboratory),“Missions for Nuclear Weapons after the Cold War,” The Federation of American Scientists, Occasional Paper No. 3, January 2005]  
  
What has not happened since the end of the Cold War is a recalibration of our deterrence requirements based on the changes in the stakes. The Cold War analyses of nuclear wars took little regard of what the war might have been about, implicitly assuming it would be about national survival and world leadership. Today the stakes are, overall, much smaller. Indeed, it is nearly impossible to conjure up even hypothetical areas of conflict between the United States and Russia with stakes remotely comparable to those of the Cold War or even a crisis that could rationally justify nuclear weapons. Where the stakes are high–for example, the ongoing tension between Islamic fundamentalism and the West–the role of nuclear retaliation is limited. Pg. 22-23

**No Russia war—threats are just posturing**

**Canwest 3/17/09** (Canwest News Service, “Russia's militarization may be sabre-rattling: expert.” Peter O’Neil. Lexis.)

Russian sabre-rattling increased Tuesday as President Dmitry Medvedev, complaining of a threat by the U.S.-dominated North Atlantic Treaty Alliance at its borders, promised a ``large-scale'' expansion of his country's conventional and nuclear arsenal. Russia has also spoken openly about vague plans to locate long-range strategic bombers in either Cuba or Venezuela, evoking chilling memories of the Cuban Missile Crisis that took the world to the brink of nuclear war in 196But two analysts told Canwest News Service that much of the noise from Russia, a country facing particularly difficult economic woes due to plunging energy prices, amounts to posturing directed at both domestic and international audiences. ``The Russian bear is lean and hungry in these hard times. But its teeth are in danger of falling out, and it can do little more than growl,'' said Fen Hampson, of the Norman Paterson School of International Affairs in Ottawa, in an e-mail.

#### North Korea has no intention of starting a war

Kang, ‘10 [David, professor of international relations and business and director of the Korean Studies Institute at the University of Southern California, “Korea’s New Cold War,” 12-31, http://nationalinterest.org/commentary/koreas-new-cold-war-4653]

However, despite dueling artillery barrages and the sinking of a warship, pledges of “enormous retaliation,” in-your-face joint military exercises and urgent calls for talks, the risk of all-out war on the Korean peninsula is less than it has been at anytime in the past four decades. North Korea didn’t blink, because it had no intention of actually starting a major war. Rather than signifying a new round of escalating tension between North and South Korea, the events of the past year point to something else—a new cold war between the two sides. In fact, one of my pet peeves is the analogies we use to describe the situation between South and North Korea. We often call the situation a “powder keg” or a “tinderbox,” implying a very unstable situation in which one small spark could lead to a huge explosion. But the evidence actually leads to the opposite conclusion: we have gone sixty years without a major war, despite numerous “sparks” such as the skirmishing and shows of force that occurred over the past month. If one believes the situation is a tinderbox, the only explanation for six decades without a major war is that we have been extraordinarily lucky. I prefer the opposite explanation: deterrence is quite stable because both sides know the costs of a major war, and both sides—rhetoric and muscle-flexing aside—keep smaller incidents in their proper perspective. How can this be, when North Korea threatens to use massive retaliation and mentions its nuclear weapons in its rhetoric, and when the South Korean leadership and military is determined to "respond relentlessly" to meet any North Korean provocation? Local skirmishing has stayed local for sixty years. The key issue is whether a local fight could escalate into all-out war, such as North Korea shelling Seoul with artillery or missiles. Such a decision would clearly have to be taken at the top of the North Korean leadership. Especially when tensions are high, both militaries are on high alert and local commanders particularly careful with their actions. Without a clear directive from the top, it is not likely that a commander one hundred kilometers away from the military exercises would make a decision on his own to start shooting at Seoul. For their part, North Korean leaders have not made such a decision in sixty years, knowing that any major attack on Seoul would cause a massive response from the South Korean and U.S. forces and would carry the war into Pyongyang and beyond. After the fighting, North Korea would cease to exist. Thus, while both North and South Korean leaders talk in grim tones about war, both sides have kept the actual fighting to localized areas, and I have seen no indication that this time the North Korean leadership plans to expand the fighting into a general war.

#### Provocations won’t escalate—each side has too much to lose

Cohn 10 [Martin Regg Cohn is Deputy Editorial Page Editor. A foreign correspondent for 11 years, he was Chief of the Star's Middle East and Asia bureaus and most recently Foreign Editor, “Pyongyang’s mind games make perfect sense,” Dec 7, 2010, http://www.thestar.com/opinion/editorialopinion/article/902495--cohn-pyongyang-s-mind-games-make-perfect-sense]

The war drums are beating louder over North Korea this week — exactly as Pyongyang had planned. South Korea’s new defence chief has vowed to launch fighter jets if Pyongyang attacks again, the Americans still have an aircraft carrier in the region for war games, and Beijing is calling for talks — with no takers. It looks like a crisis and feels like a crisis. But it is a manufactured crisis — a North Korean specialty. Think of it as a carefully scripted drama — a narrative plotted, contrived and acted out by North Korea with its own people as pawns, the South Koreans as targets and the Americans as foils. Perennial brinkmanship born of chronic desperation. Whenever Pyongyang feels spurned or isolated, it conjures up an international incident to raise the stakes — so as to be bought off again with foreign aid or denuclearization subsidies. Neighbouring countries indulge these military tantrums because their hands are tied by the human and economic costs of confrontation. It’s diplomatic blackmail with no political solution or military resolution. The West is always fighting a losing battle, because its war games can’t compete with the mind games of the North. South Koreans are apoplectic over the unprovoked shelling of a small island that killed four people last month. The country is still mourning the loss of 46 sailors after the North torpedoed one of its frigates in March. But the carnage from any escalation would be incalculable. If North Korea deployed its 5,000 multiple-launch rockets pointed at the Seoul area’s 25 million people from just across the heavily fortified border, thousands could perish instantly. That’s why most South Koreans know better than to hit back hard. They have too much to lose. As suicidal as escalation seems for the South, outright war would also be a death wish for the North. For while Pyongyang has nothing to lose, it also has everything to lose. The North’s enfeebled military would be crushed almost immediately by South Korean forces, backed by nearly 30,000 Americans who form a human tripwire along the border. Like the doctrine of Mutual Assured Destruction (MAD) that argued for a stable Cold War dynamic since the 1950s, the two Koreas are locked in an embrace of Mutual Assured Carnage, which has sustained them since their civil war wound down in the early 1950s. Neither side is interested in a mutual suicide pact.

#### Won't escalate

WSJ 13 ["Don’t Expect Worsening of India, Pakistan Ties," 1-16, http://blogs.wsj.com/indiarealtime/2013/01/16/dont-expect-worsening-of-india-pakistan-ties/]

There’s no end for now to the hostile rhetoric between India and Pakistan. But that doesn’t necessarily presage anything more drastic. Pakistan claims another of its soldiers died Tuesday night in firing across the Line of Control in Kashmir, the divided Himalayan region claimed by both nations. Indian army chief, Gen. Bikram Singh, on Wednesday, said Pakistan had opened fire and India retaliated. “If any of their people have died, it would have been in retaliation to their firing,” Gen. Singh said. ”When they fire, we also fire.” It was the latest in tit-for-tat recriminations over deaths in Kashmir that began last week. Pakistan claimed one of its soldiers died on Jan. 6. Two days later, India said Pakistani forces killed two of its soldiers and mutilated the bodies. Tuesday night, Indian Prime Minister Manmohan Singh said the mutilations meant it could not be “business as usual” between the countries. That has worried some that peace talks, which have been in train for two years, could be about to break down. Mr. Singh’s comments built on a drumbeat of anger from India. Gen. Singh, Monday called the mutilations “unpardonable” and said India withheld the right to retaliate to Pakistan aggression when and where it chooses. Pakistan Foreign Minister Hina Rabbani Khar, who is in the U.S., Tuesday termed the Indian army chief’s comments as “very hostile.” There are some other worrying signs. India said Tuesday it was delaying the start of a visa-on-arrival program meant to make it easier for some Indians and Pakistanis to visit each other’s countries. The visa program, like talks on opening up bilateral trade, is supposed to pave the way toward broader peace talks that would encompass thornier issues, like how to solve the Kashmir problem. Also Tuesday, nine Pakistani hockey players who had come to participate in a tournament in India were sent home due to fears of protests and violence against them. Still, there’s little benefit for either side to escalate what is now still sporadic firing over the Line of Control, the de facto border in Kashmir. Pakistan is embroiled in its own political meltdown sparked by the Supreme Court’s decision Tuesday to order the arrest of Prime Minister Raja Pervez Ashraf on allegations of corruption. Tens of thousands of protesters Tuesday took to the streets in Islamabad, and remain there today, demanding immediate elections and a greater role for the army and Supreme Court in politics. Pakistan’s military continues to play an important political role, dominating defense and foreign policy. But it has so far shown little sign of mounting a full-blown coup despite persistent rumors of military intervention. Pakistan’s government must hold national elections by May, meaning the next few months are likely to be choppy ones in Pakistan politics. In such an environment, the military is unlikely to want to dial up tensions with India. On the Indian side, despite Mr. Singh’s unusually strident tone Tuesday, there also will be pause before taking matters to the next level. Mr. Singh has put immense personal political capital into trying to improve ties with Pakistan since he came to power in 2004. Last year, he hosted Pakistan President Asif Ali Zardari in New Delhi and promised a return visit. Such a trip is clearly off the table for now. But India still has put too much into peace talks to throw away the progress made so far on visas, trade and other issues. Even Gen. Singh, India’s army chief, Monday said he did not believe the latest flare-up would lead to a broader escalation in violence and an official end to a 2003 ceasefire agreement in Kashmir. The clashes so far, he noted, have been limited to specific areas of the Line of Control.

### Naval Power

**No Indo-China war**

**Wagner & Agarwal, ‘10**

[Daniel, Managing Dir. – Country Risk Solutions (a pol and econ risk consultancy), and Subhash, New-Delhi based political analyst and founer – India Focus, Huffington Post, “The State of Indian-Sino Relations”, 2010, <http://www.huffingtonpost.com/daniel-wagner/the-state-of-indian-sino_b_458847.html>]

Indian/Sino friction will continue in the coming decade and is likely will be based on three primary issues: 1) The disputed border: Having never formally resolved their lingering border dispute, both countries will continue to find the absence of a resolution an irritant that will underlay and influence the health of bilateral relations; 2) Naval rivalry in the Indian Ocean: As China seeks to project its power regionally, India's navy will continue to be the only regional impediment to China's blue water ambitions. Other countries in the region may object to China's projection of sea power, but only India has the ability to challenge it; and 3) Pakistan: China's continuing support of Pakistan's military, and by extension its ability to remain an irritant on the subject of Kashmir, will remain a point of contention for India. India is of course aware that China has deftly spread its diplomatic influence globally in a very short span of time, largely through the disbursement of overseas aid (to African and Latin American nations) and through careful nurturing of its political connections in the West. Indian business, more than Indian diplomats, look longingly at the list of former U.S. government officials who have at some point in the past two decades acted as intermediaries and lobbyists for Chinese business interests -- from Henry Kissinger to Alexander Haig to Cyrus Vance. India also knows that Chinese ascendancy is much more than economic. Part of the future competition between India and China will be based on whether India can develop its military hardware and rebuild its naval muscle faster than Chinese attempts to build cultural and diplomatic sophistication. **But neither China nor India have an interest in overt or uncontrolled hostility. Both will work for their respective long-term interests within the rules of the present global order,** with China having greater deliberation and speed than India. It is most unlikely that China will attack India, even in the Northeast. Any military action by China towards any of its neighbors, especially a democracy like India, will erode the carefully crafted image of its "peaceful rise" and will only serve to reignite the Tibet issue. It would also provide a diplomatic opportunity for the U.S. to justify its continued militarily presence in Asia, as well as prompt Japan to want to expand its own military presence in the region.

#### China/India trade increasing – interdependence checks

**AHMAD 08** PhD - full-time faculty in the School of Management at Walden University

Dr. Aqueil Ahmad, India and China: Conflict, Competition, and Cooperation in the Age of Globalization, <http://www.stwr.org/india-china-asia/india-and-china-conflict-competition-and-cooperation-in-the-age-of-globalization.html>

Despite these problems, cooperative science, technology, and trade have been steadily increasing between the two countries. Late Prime Minister Rajiv Gandhi of India signed an Indo-China inter-governmental science and technology agreement during his visit to Beijing in 1988. This led to a Joint S&T Committee to initiate broad-based cooperative programs. Specific joint projects are mooted at inter-agency levels in such diverse fields as meteorology, ocean science and technology, space science and technology, and biotechnology. As recently as September 2006, India’s Minister for Science and Technology, Kapil Sibal and his Chinese counterpart signed a Memorandum of Understanding (MoU) to further cement S&T cooperation between the two countries as part of the India-China Friendship Year 2006. India-China trade is currently running at $20 billion from only $1.8 billion in 1989-90. A substantial share of India’s mobile-phone market is run by Hutchison Telecommunications of China. Huawei Technologies has a software center in Bangalore that employs 1,150 Indian and 50 Chinese engineers. I understand that most of the Diwali lanterns for 2006 celebrations came from China. The Chinese computer giant Lenovo has recently established its global marketing hub in Bangalore to be run and managed by Indians. China imports iron ore and other minerals from India. From the Indian side, an estimated 150 companies are currently doing business in China, although India claims these business ventures are with other foreign firms operating in China, not with the Chinese companies. (The Economist, October 28th, 2006, pp. 50-51; and Nov. 18th, 2006, pp.43-44) The trend, nonetheless, is definitely pointing in the direction of increasing bilateral trade and technology agreements. Concluding Remarks This brief discussion of India and China in the context of globalization suggests several things. Nobel Laureate Amartya Sen, reports his teacher Joan Robinson at Cambridge University once telling him, “The frustrating thing about India is that whatever you can rightly say about it, the opposite is also true.” Interestingly enough, you can say exactly the same thing about China. It combines capitalism with communism, poverty and disparity with fast economic growth, impressive industrial development with neglect of its environment, and a massive rural-urban divide. These contradictions exist in India as well, with the exception of the first one. But they are due largely to long-standing historical and social factors, not exclusively to globalization, as some tend to suggest. Theoretically, globalization is about worldwide systemic interdependence, integration, mobilization, and redistribution of global resources that should lead to partial if not complete economic parity and equilibrium among the system members in due course of time. Generally speaking, all modern economies today are global in character. As Robert Reich (1991) said in his well-known book, The Work of Nations, there are no truly national economies any more. India and China are no exceptions. Economic globalization is driving and shaping national politics, economies, histories, social structures, environments, and international relations, and connecting them through interdependent networks as never before. A global power shift is indeed occurring that is still unseen and unrecognized by many among us. There are two major implications of this power shift. Ideology and politics are becoming the handmaidens of global economic forces, rather than the other way round, as the case used to be. The other development is unraveling of erstwhile hegemonies. The United States of America and Europe are no longer in the drivers’ seats. The balance of power is shifting from West to East, from North to South (Meredith, 2007). The recent demographic, economic, and political developments in China, India, Russia, Latin America, and the Middle East (barring some temporary setbacks here and there) all point in that direction (see endnotes). This shifting landscape strongly suggests that this century is poised to be an Asian century. And India and China, along with the Pacific Rim countries and Russia with her enormous natural resources, will be its biggest winners – unless the trend is reversed by unimaginative political and economic leadership in these countries, which is unlikely.

**Naval power is inevitable**

**Farley 7** (Robert Farley, Assistant professor at the Patterson School of Diplomacy and International Commerce, University of Kentucky, "The False Decline of the US Navy," The American Prospect, http://prospect.org/article/false-decline-us-navy)

We live in strange times. While the United States is responsible for close to 50 percent of aggregate world military expenditure, and maintains close alliances with almost all of the other major military powers, a community of defense analysts continues to insist that we need to spend more. In the November issue of The Atlantic, Robert Kaplan asserts that United States hegemony is under the threat of “elegant decline,” and points to what conventional analysts might suggest is the most secure element of American power; the United States Navy. Despite the fact that the U.S. Navy remains several orders of magnitude more powerful than its nearest rival, Kaplan says that we must beware; if we allow the size of our Navy to further decline, we risk repeating the experience of the United Kingdom in the years before World War I. Unfortunately, since no actual evidence of U.S. naval decline exists, Kaplan is forced to rely on obfuscation, distortion, and tendentious historical analogies to make his case. The centerpiece of Kaplan’s argument is a comparison of the current U.S. Navy to the British Royal Navy at the end of the 19th century. The decline of the Royal Navy heralded the collapse of British hegemony, and the decline of the U.S. Navy threatens a similar fate for the United States. The only problem with this argument is that similarities between the 21st century United States and the 19th century United Kingdom are more imagined than real. It’s true that the relative strength of the Royal Navy declined at the end of the 19th century, but this was due entirely the rise of the United States and Germany. But the absolute strength of the Royal Navy increased in the late 19th and early 20th centuries, as the United Kingdom strove to maintain naval dominance over two countries that possessed larger economies and larger industrial bases than that of Great Britain. In other words, the position of the Royal Navy declined because the position of the United Kingdom declined; in spite of this decline, the Royal Navy continued to dominate the seas against all comers until 1941. Britain’s relative economic decline preceded its naval decline, although the efforts to keep up with Germany, the United States, and later Japan did serious damage to the British economy. The United States faces a situation which is in no way similar. Returning to the present, Kaplan takes note of the growth of several foreign navies, including the Indian, Chinese, and Japanese. He points out that the Japanese Navy has a large number of destroyers and a growing number of submarines. He warns that India “may soon have the world’s third largest navy” without giving any indication of why that matters. Most serious of all, he describes the threat of a growing Chinese Navy and claims that, just as the Battle of Wounded Knee opened a new age for American imperialism, the conquest of Taiwan could transform China into an expansionist, imperial power. The curious historical analogies aside, Kaplan is careful to make no direct comparisons between the growing navies of foreign countries and the actual strength of the United States Navy. There’s a good reason for this oversight; there is no comparison between the U.S. Navy and any navy afloat today. The United States Navy currently operates eleven aircraft carriers. The oldest and least capable is faster, one third larger, and carries three times the aircraft of Admiral Kuznetsov, the largest carrier in the Russian Navy. Unlike China’s only aircraft carrier, the former Russian Varyag, American carriers have engines and are capable of self-propulsion. The only carrier in Indian service is fifty years old and a quarter the size of its American counterparts. No navy besides the United States' has more than one aircraft carrier capable of flying modern fixed wing aircraft. The United States enjoys similar dominance in surface combat vessels and submarines, operating twenty-two cruisers, fifty destroyers, fifty-five nuclear attack submarines, and ten amphibious assault ships (vessels roughly equivalent to most foreign aircraft carriers). In every category the U.S. Navy combines presumptive numerical superiority with a significant ship-to-ship advantage over any foreign navy. This situation is unlikely to change anytime soon. The French Navy and the Royal Navy will each expand to two aircraft carriers over the next decade. The most ambitious plans ascribed to the People’s Liberation Army Navy call for no more than three aircraft carriers by 2020, and even that strains credulity, given China’s inexperience with carrier operations and the construction of large military vessels. While a crash construction program might conceivably give the Chinese the ability to achieve local dominance (at great cost and for a short time), the United States Navy will continue to dominate the world’s oceans and littorals for at least the next fifty years. In order to try to show that the U.S. Navy is insufficient in the face of future threats, Kaplan argues that we on are our way to “a 150 ship navy” that will be overwhelmed by the demands of warfighting and global economic maintenance. He suggests that the “1,000 Ship Navy” proposal, an international plan to streamline cooperation between the world’s navies on maritime maintenance issues such as piracy, interdiction of drug and human smuggling, and disaster relief, is an effort at “elegant decline,” and declares that the dominance of the United States Navy cannot be maintained through collaboration with others. It’s true that a 600 ship navy can do more than the current 250-plus ship force of the current U.S. Navy, but Kaplan’s playing a game of bait and switch. The Navy has fewer ships than it did two decades ago, but the ships it has are far more capable than those of the 1980s. Because of the collapse of its competitors, the Navy is relatively more capable of fighting and winning wars now than it was during the Reagan administration. Broadly speaking, navies have two missions; warfighting, and maritime maintenance. Kaplan wants to confuse the maritime maintenance mission (which can be done in collaboration with others) with the warfighting mission (which need not be). A navy can require the cooperation of others for the maintenance mission, while still possessing utter military superiority over any one navy or any plausible combination of navies on the high seas. Indeed, this is the situation that the United States Navy currently enjoys. It cannot be everywhere all at once, and does require the cooperation of regional navies for fighting piracy and smuggling. At the same time, the U.S. Navy can destroy any (and probably all, at the same time) naval challengers. To conflate these two missions is equal parts silly and dishonest. The Navy has arrived at an ideal compromise between the two, keeping its fighting supremacy while leading and facilitating cooperation around the world on maritime issues. This compromise has allowed the Navy to build positive relationships with the navies of the world, a fact that Kaplan ignores. While asserting the dangers posed by a variety of foreign navies, Kaplan makes a distortion depressingly common to those who warn of the decline of American hegemony; he forgets that the United States has allies. While Kaplan can plausibly argue that growth in Russian or Chinese naval strength threatens the United States, the same cannot reasonably be said of Japan, India, France, or the United Kingdom. With the exception of China and Russia, all of the most powerful navies in the world belong to American allies. United States cooperation with the navies of NATO, India, and Japan has tightened, rather than waned in the last ten years, and the United States also retains warm relations with third tier navies such as those of South Korea, Australia, and Malaysia. In any conceivable naval confrontation the United States will have friends, just as the Royal Navy had friends in 1914 and 1941.

**Our fleet can take anyone’s—no challengers**

Robert O. **Work 12**, United States Under Secretary of the Navy and VP of Strategic Studies @ Center for Strategic and Budgetary Assessments, "The Coming Naval Century," May, Proceedings Magazine - Vol. 138/5/1311, US Naval Institute, www.usni.org/magazines/proceedings/2012-05/coming-naval-century

For those in the military concerned about the impact of such cuts, I would simply say four things:¶ • Any grand strategy starts with an assumption that all resources are scarce, requiring a balancing of commitments and resources. As political commentator Walter Lippmann wrote: “The nation must maintain its objectives and its power in equilibrium, its purposes within its means, and its means equal to its purposes.”¶ • The upcoming defense drawdown will be less severe than past post–World War II drawdowns. Accommodating cuts will be hard, but manageable.¶ • At the end of the drawdown, the United States will still have the best and most capable armed forces in the world. The President well appreciates the importance of a world-class military. “The United States remains the only nation able to project and sustain large-scale military operations over extended distances,” he said. “We maintain superior capabilities to deter and defeat adaptive enemies and to ensure the credibility of security partnerships that are fundamental to regional and global security. In this way our military continues to underpin our national security and global leadership, and when we use it appropriately, our security and leadership is reinforced.”¶ • Most important, as the nation prioritizes what is most essential and brings into better balance its commitments and its elements of national power, we will see the beginning of a Naval Century—**a new golden age of American sea power**.¶ The Navy Is More Than Ships¶ Those who judge U.S. naval power solely by the number of vessels in the Navy’s battle force are not seeing the bigger picture. Our battle force is just one component—albeit an essential one—of a powerful National Fleet that includes the broad range of capabilities, capacities, and enablers resident in the Navy, Marine Corps, and Coast Guard. It encompasses our special-mission, prepositioning, and surge-sealift fleets; the ready reserve force; naval aviation, including the maritime-patrol and reconnaissance force; Navy and Marine special operations and cyber forces; and the U.S. Merchant Marine. Moreover, it is crewed and operated by the finest sailors, Marines, Coast Guardsmen, civilian mariners, and government civilians in our history, and supported by a talented and innovative national industrial base.¶ If this were not enough, the heart of the National Fleet is a Navy–Marine Corps team that is transforming itself from an organization focused on platforms to a total-force battle network that interconnects sensors, manned and unmanned platforms with modular payloads, combat systems, and network-enabled weapons, as well as tech-savvy, combat-tested people into a cohesive fighting force. This Fleet and its network would make short work of any past U.S. Fleet—and of any potential contemporary naval adversary.

**Allies lock in naval power**

**Farley**, assistant professor of diplomacy and intl commerce – U Kentucky, 10/23/**’7**

(Robert, http://www.prospect.org/cs/articles?article=the\_false\_decline\_of\_the\_us\_navy)

This compromise has allowed the Navy to build positive relationships with the navies of the world, a fact that Kaplan ignores. While asserting the dangers posed by a variety of foreign navies, Kaplan makes a **distortion** depressingly common to those who warn of the decline of American hegemony; he forgets that the United States has allies. While Kaplan can plausibly argue that growth in Russian or Chinese naval strength threatens the United States, the same cannot reasonably be said of Japan, India, France, or the United Kingdom. With the exception of China and Russia, **all of the most powerful navies in the world belong to American allies**. United States cooperation with the navies of NATO, India, and Japan has tightened, rather than waned in the last ten years, and the United States also retains warm relations with third tier navies such as those of South Korea, Australia, and Malaysia. In **any conceivable naval confrontation** the United States will have friends, just as the Royal Navy had friends in 1914 and 1941.

Robert Kaplan wants to warn the American people of the dangers of impending naval decline. Unfortunately, he’s almost entirely wrong on the facts. While the reach of the United States Navy may have declined in an absolute sense, its capacity to fight and win naval wars has, if anything, increased since the end of the Cold War. That the United States continues to embed itself in a deep set of cooperative arrangements with other naval powers only reinforces the dominance of the U.S. Navy on the high seas. Analysts who want to argue for greater U.S. military spending are best advised to concentrate on the fiascos in Iraq and Afghanistan.

#### Naval Power doesn’t deter

Kaplan, senior fellow – Center for a New American Security, 12/17/‘8

(Robert, “A Gentler Hegemony,” Washington Post)

Declinism is in the air. The latest conventional wisdom is that the combination of the disastrous Iraq war, the military and economic rise of Asia, and the steep recession in the West has chastened America, ending its period of dominance in world affairs. It is time for us to be humble.

There is a lot of truth to this, but it goes too far. For decline itself -- as a concept -- is overrated. Britain's Royal Navy went into relative decline beginning in the 1890s, even as Great Britain remained powerful enough to help save the West in two world wars over the next half-century.

The proper analogy may be the Indian Mutiny in 1857 and 1858, after the orientalists and other pragmatists in the British power structure, who wanted to leave traditional India as it was, lost sway to Evangelical and Utilitarian reformers who wanted to more forcefully Christianize India -- to make it in a values sense more like England. The reformers were good people: They helped abolish the slave trade and tried to do the same with the hideous practice of widow-burning. But their attempts to bring the fruits of Western civilization, virtuous as they were, to a far-off corner of the world played a role in a violent revolt against imperial authority.

Yet the debacle did not signal the end of the British Empire, which expanded for nearly another century. Rather, it signaled a transition away from an ad hoc imperium fired occasionally by an ill-disciplined lust to impose its values abroad -- and to a calmer, more pragmatic and soldiering empire built on trade, education and technology.

That is akin to where we are now, post-Iraq: calmer, more pragmatic and with a military -- especially a Navy -- that, while in relative decline, is still far superior to any other on Earth. Near the end of the Cold War, the U.S. Navy had almost 600 ships; it is down to 280. But in aggregate tonnage that is still more than the next 17 navies combined. Our military secures the global commons to the benefit of all nations. Without the U.S. Navy, the seas would be unsafe for merchant shipping, which, in an era of globalization, accounts for 90 percent of world trade. We may not be able to control events on land in the Middle East, but our Navy and Air Force control all entry and exit points to the region. The multinational anti-piracy patrols that have taken shape in the Strait of Malacca and the Gulf of Aden have done so under the aegis of the U.S. Navy. Sure the economic crisis will affect shipbuilding, meaning the decline in the number of our ships will continue, and there will come a point where quantity affects quality. But this will be an exceedingly gradual transition, which we will assuage by leveraging naval allies such as India and Japan.

Then there are the dozens of training deployments around the world that the U.S. military, particularly Army Special Forces, conducts in any given week. We are all over Africa, Asia and Latin America with these small missions that increase America's diplomatic throw-weight without running the risk of getting us bogged down. Aside from Iraq and Afghanistan, our military posture around the world is generally light, lethal and highly mobile. We have been quietly reducing land forces in South Korea while compensating with a more effective air and naval presence. In Colombia, platoon-size numbers of Green Berets have been instrumental in fighting narco-terrorists; in Algeria, such training teams have helped improve our relationship with that formerly radical Arab country. Such stripped-down American military deployments garner no headlines, but they are a formula that works.

The Marines, after becoming virtually desert forces since 2001, will return to their expeditionary roots aboard amphibious ships in the Greater Indian Ocean and Western Pacific. American military power is not going away. But instead of being in-your-face, it will lurk just over the horizon. And that will make all the difference.

In sum, we may no longer be at Charles Krauthammer's "Unipolar Moment," but neither have we become Sweden. Declinism of the sort being preached will go immediately out of fashion at the world's next humanitarian catastrophe, when the very people enraged at the U.S. military because of Iraq will demand that it lead a coalition to save lives. We might have intervened in Darfur had we not been bogged down in Iraq; after Cyclone Nargis, our ships would have provided large-scale relief, had Burma's military government allowed them to proceed. As world population rises, and with vast urban areas with tottering infrastructures in the most environmentally and seismically fragile zones, the opportunities for U.S. military-led disaster relief will be legion. The American military remains a force for good, a fact that will become self-evident in the crises to come.

Of course we are entering a more multipolar world. The only economic growth over the next year or two will come from developing nations, notably India and China. But there are other realities, too. We should not underestimate the diplomatic and moral leverage created by the combination of the world's most expeditionary military and a new president who will boast high approval ratings at home and around the world. No power but the United States has the wherewithal to orchestrate an Israeli-Palestinian peace deal, and our intervention in Iraq has not changed that fact. Everyone hates the word, but the United States is still a hegemon of sorts, able to pivotally influence the world from a position of moral strength.

**naval power doesn’t deter – not perceived**

**ALLAN 94** Air Force National Defense Fellow at the CSIS

[Charles, “Extended Conventional Deterrence: In from the Cold and Out of the Nuclear Fire?” Washington Quarterly, Summer]

Information. As we have seen, imperfect information about a defender's commitment may be present for both the defender and the attacker. Prior to the crisis, the "intended deterrees [themselves] will not know how much of a politically and technically credible threat it would take to deter them" (Gray 1991, 14). In addition, as Arquilla and Davis point out (Arquilla and Davis 1992; Davis and Arquilla 1991), adversaries have historically discounted key elements of U.S. power such as strategic mobility, precision weapons, maritime power, and airpower due to lack of familiarity with these systems. Without understanding these elements of U.S. military strength, the regional aggressor will view the absence of U.S. heavy ground forces as evidence of a lack of both capability and commitment. Moreover, Adam Garfinkle (1992) asserts that third world leaders are frequently misled into overly optimistic views of their own forces' capabilities. Without clear recognition of U.S. power, deterrence cannot hold.

**Empirical studies prove the navy is not capable of deterring threats**

Daniel, December 2002 [Donald C.F. “The Future of American Naval Power: Propositions and Recommendations,” Globalization and American Power. Chapter 27. Institute for National Strategic Studies National Defense University. http://www.ndu.edu/inss/Books/Books\_2002/Globalization\_and\_Maritime\_Power\_Dec\_02/01\_toc.htm]

In sum, there would seem to be a special role for the U.S. Navy in contingency response along littorals, but, outside the context of a specific crisis, constant day-to-day presence does not do much to deter unwanted behavior. Thus, it would seem a raising of false expectations to argue, for example, that the “gapping of aircraft carriers in areas of potential crisis is an invitation to disaster—and therefore represents culpable negligence on the part of America’s defense decision-makers.”33 In the early 1960s, the United States maintained three aircraft carrier battlegroups in the Mediterranean Sea but later gradually found that it needed to scale back. Currently, a single battlegroup operates there for less than 9 months of the year on average. This is a significant reduction, but no one can prove that the Mediterranean region became less stable. Conversely, the Navy began to maintain a regular presence in the Arabian Gulf in 1979, but this did not prevent Iran or Iraq from attacking ships during their war. In the 1980s, attacks generally increased in number over the 8 years of the war. As for deterring the initiation of a crisis in the first place, it is essentially impossible for an outsider to prove that such deterrence was successful except in the rare case in which a deterred party admits that he was deterred and states the reasons. Adam Siegel, John Arquilla, Paul Huth, Paul Davis, and a Rutgers Center for Global Security and Democracy team led by Edward Rhodes have each attempted to study the effects of forward presence and general deterrence. The deficiency of such study is always in making the definitive link between them. The majority of these studies suggest that “[h]istorically seapower has not done well as a deterrent” in preventing the outbreak of conflicts,36 principally because land-based powers not dependent on overseas trade are relatively “insensitive” to the operations of naval forces.

## 2NC T

### AT: W/M

#### Provide fuel for commercial power reactors which produce electricity --- they don't produce energy

USEC, no date [“The American Centrifuge”, <http://www.usec.com/american-centrifuge>, accessed today]

Since 2002, USEC has been developing and demonstrating a highly efficient uranium enrichment gas centrifuge technology called the American Centrifuge. USEC is working to deploy this technology in its American Centrifuge Plant.

The American Centrifuge Plant is an advanced uranium enrichment facility in Piketon, Ohio, which will produce low enriched uranium, a key component for the fabrication of commercial nuclear fuel. The American Centrifuge Plant’s capacity will be equal to about one-third of the fuel requirements for the commercial power reactors in the United States, which provide approximately 20% of the U.S. electricity supply today.

#### They do lots of things that aren’t topical

USEC, no date [“Research, Development, and Demonstration Program”, http://www.usec.com/american-centrifuge/what-american-centrifuge/rdd-program]

Overview

USEC and the Department of Energy are moving forward with a $350 million cooperative research, development and demonstration (RD&D) program to confirm the technical readiness of the American Centrifuge, the next-generation U.S. uranium enrichment technology.

The RD&D program supports building, installing, operating, and testing commercial plant support systems and a 120-machine cascade that would be incorporated in the full commercial plant in Piketon, Ohio, which is planned to operate 96 identical cascades.

Over the last several months, USEC has prepared its demonstration facility for installation of a full-scale commercial cascade with related plant infrastructure. With the RD&D agreement in place, USEC is moving rapidly to build additional AC100 machines and related support systems to complete the demonstration cascade.

The cooperative agreement between USEC and DOE defines the scope, funding and technical goals for the program. The total investment in the program will be up to $350 million, with DOE providing 80 percent, or $280 million, and USEC providing 20 percent, or $70 million, of the total.

Current Status

Program within budget and on schedule

On November 30, 2012, USEC and American Centrifuge Demonstration, LLC amended their cooperative agreement with DOE to provide for additional federal funds of $45.7 million through February 23, 2013. This funding was made available pursuant to the six-month continuing appropriations measure passed by Congress and signed by the President on September 28, 2012.

More than 110 of the 120 centrifuges needed for the demonstration cascade have been assembled. AC100 machines will continue to be manufactured and assembled throughout the RD&D program.

All six service modules for the demonstration cascade have been welded into place and connected.

Cascade and balance of plant support system design is complete.

DOE also certified completion of 2 of the 5 program technical milestones. The remaining 3 are due in December 2013.

DOE has certified completion of Performance Indicator A, 10 machine years runtime with a safety enhancement and Performance Indicator B, demonstration of AC100 production capability by manufacturing, assembling and delivering 78 centrifuges.

The program is utilizing 169 companies from 28 states to support RD&D construction, manufacturing and operations activities.

Added more than 250 workers in Ohio, Tennessee and other states.

Cascade Construction

The program is in the next phase of construction for the 120-machine demonstration cascade.

During this phase, machine operations in the current lead cascade at the American Centrifuge Plant facilities in Piketon, Ohio, have been suspended for a planned electrical power outage.

The several-month outage will allow for the construction and installation of fully redundant support infrastructure systems.

Once the new support infrastructure systems are installed and tested, AC100 centrifuge machines will be installed to complete the 120-machine demonstration cascade, which will operate in a commercial plant configuration.

During the scheduled outage at Piketon, centrifuge machine operations, including reliability testing, will continue at USEC’s test facility in Oak Ridge, Tenn.

American Centrifuge Demonstration, LLC

USEC and its newly created subsidiary, American Centrifuge Demonstration, LLC, will carry out the RD&D program. American Centrifuge Demonstration is putting in place a program management and enhanced program execution structure as agreed to in the cooperative agreement with DOE. In July 2012, USEC entered into a limited liability company agreement for American Centrifuge Demonstration that, among other things, establishes a board of managers in accordance with the enhanced program execution structure. The board of managers will oversee and direct the management of the RD&D program. The seven-person board is comprised of the following members:

Luis Reyes, executive director for operations (retired), U.S. Nuclear Regulatory Commission (Chairman),

M. Roger Eshelman, executive vice president and chief operating officer (retired), Savannah River Nuclear Solutions, LLC,

Bruce Rash, director, nuclear project management, Exelon Generation Company, LLC,

Philip G. Sewell, senior vice president and chief development officer, USEC Inc.,

Randall J. Spickard, vice president, business development, Babcock & Wilcox Technical Services Group, Inc.,

Robert Van Namen, senior vice president and chief operating officer, USEC Inc., and

Hitoshi Yabuta, vice president, project management, Toshiba America Nuclear Energy Corporation.

Activities

The RD&D program funds the following activities:

Installation and operation of a 120 machine cascade, that will be replicated 96 times in a commercial plant, along with related plant support systems

Continued manufacture and assembly of the AC100 centrifuges used in the 120 machine demonstration cascade.

Ongoing technical support for centrifuge manufacturing and lead cascade operations.

Engineering, Procurement and Construction work needed to install and operate the 120-machine demonstration cascade.

Maintain the centrifuge intellectual property and sustain the domestic centrifuge technical and industrial base for national security purposes and potential ACP commercialization.

Activities to reduce risk and improve the prospects of future deployment of the American Centrifuge

#### Purchasing foreign military stockpiles is topical under their interp

**WNA 12** [World Nuclear Association, “The Nuclear Fuel Cycle,” Updated December 2012, pg. http://tinyurl.com/aqtk936

Other Sources of Nuclear Fuel

In the 1990s uranium mines gained a competitor, in many ways very welcome, as military uranium came on to the civil market under a US-Russian agreement. Since then half of the uranium used for electricity in the USA has come from Russian military stockpiles, and worldwide about one sixth of the market has been supplied thus.

#### Africa proves that their interp fundamentally changes the direction of the topic. The topic fundamentally becomes relations with other nuclear production states and not US domestic production

#### Ogunbamwo 98 - [Dr. Sola Ogunbamwo “Implementation of the Text of the African Nuclear-Weapon-Free Zone Treaty relating to Peaceful Uses of Nuclear Energy,” 1998-2000 El Organismo para la Proscripción de Armas Nucleares en la América Latina y el Caribe (OPANAL), pg . http://www.opanal.org/Articles/cancun/can-Ogunbamwo1.htm

With regard to the peaceful uses of nuclear energy, the existing situation in Africa is that the few African States that have shown interest in nuclear power plants and research reactors have been discouraged by the high costs involved, as well as by the effects of Chernobyl. Furthermore, the realities today are that only four States (South Africa, Egypt, Algeria and Libya) have programmes that require the application of safeguards. Of the four, only South Africa has nuclear power plants as well as a complete nuclear fuel cycle. Notwithstanding this existing situation, African States interests in nuclear energy lie in the fact that some of them are the major sources of nuclear fuel. For example, four states (South Africa, Namibia, Niger and Gabon) produce uranium commercially. Moreover, several African states have benefited from the uses of nuclear science and technology for agriculture, medicine, food preservation, animal husbandry, hydrology and mining.

#### They open the door for granite, seawater, and phosphate AFFs. They destroy the attempts to limit the areas of the topic

**Fleming 07** [David Fleming, LEAN GUIDE TO NUCLEAR ENERGY: A Life-Cycle in Trouble, November 2007]

Lovelock also urges that we have a readily-available stock of fuel in the ¶ plutonium that has been accumulated from the reactors that are shortly ¶ to be decommissioned. And he might have added that other candidates ¶ as sources of nuclear fuel are seawater and phosphates. So, if we put the ¶ supposed alternatives to uranium ore in order, this is what we have: (1) ¶ granite; (2) fast-breeder reactors using (a) plutonium and (b) thorium; ¶ (3) seawater; and (4) phosphates. Pg. 20

### A2: “Fuel Cycle Counts” (intl trade assoc)

This isn’t a We Meet arg—our interpretation is that only electricity generation counts. Links to all our limits arguments even worse because they make every part of the fuel cycle T—here’s the rest of the article that they read the intro from—this means they make mining, enriching, and disposal topical—radically explodes limits

International Trade Association ’12

(“The Nuclear Fuel Cycle”, http://trade.gov/mas/ian/nuclear/tg\_ian\_003164.asp)

The nuclear fuel cycle is the series of industrial processes which involve the production of uranium 235 for use in nuclear energy power reactors. Uranium 238 (uranium) is a relatively common element that is found throughout the world, and is mined in a number of countries. But before uranium can be used as fuel for a nuclear reactor, it must first go through a number of processes known as “enrichment.”

The various activities associated with the production of electricity from nuclear reactions are referred to collectively as the nuclear fuel cycle. The nuclear fuel cycle starts with the mining of uranium and ends with the disposal of nuclear waste (this is called an open fuel cycle). If the fuel is reprocessed after use, this is called a closed fuel cycle (note: even reprocessing produces a small amount of nuclear waste which cannot be re-used and must be disposed of).

[WAKE EV STOPS HERE]

Yellowcake

The first step in the nuclear fuel cycle is the mining of uranium ore, which takes place around the world.

Uranium ore is usually around .1% uranium, which is further concentrated in the milling process. The milling process produces a uranium oxide concentrate that is often referred to as yellowcake. Yellowcake is concentrated into uranium oxide of about 80%, but is not yet suitable for use in a nuclear reactor; the uranium oxide concentrate requires additional processing before being used as nuclear fuel.

Uranium Hexafluoride

For uranium yellowcake to be suitable for use in a nuclear reactor, the uranium isotope U-235 must be concentrated within the uranium. To do this, the yellowcake is first converted to uranium hexafluoride, a gas, at a conversion facility. This uranium hexafluoride gas is then taken to an enrichment plant where the U-235 is further concentrated, in order for the uranium to be able to undergo nuclear fission and produce energy. The product of this stage of the nuclear fuel cycle is enriched uranium hexafluoride, which is reconverted to produce enriched uranium oxide.

Enriched Uranium Fuel

Next, the enriched uranium oxide must be fabricated into nuclear reactor fuel. Reactor fuel is generally in the form of ceramic pellets. These are formed from pressed uranium oxide (UO2) which is sintered (baked) at a high temperature (over 1400°C). The pellets are then encased in metal tubes to form fuel rods, which are arranged into a fuel assembly ready for introduction into a reactor.

Controlled Nuclear Reaction

Inside a nuclear reactor the nuclei of U-235 atoms split (fission) and, in the process, release energy. This energy is used to heat water and turn it into steam. The steam is used to drive a turbine connected to a generator which produces electricity. The fissioning of U-235 is used as a source of heat in a nuclear power station in the same way that the burning of coal, gas or oil is used as a source of heat in a fossil fuel power plant, the difference being that uranium does not combust (a chemical reaction) but fissions (a nuclear reaction).

Spent Fuel

With time, the concentration of fission fragments and heavy elements in the fuel will increase to the point where it is no longer practical to continue to use the fuel. So after 12-24 months the spent fuel is removed from the reactor. The amount of energy that is produced from a fuel bundle varies with the type of reactor and the policy of the reactor operator.

When removed from a reactor, the fuel will be emitting both radiation, principally from the fission fragments, and heat. Used fuel is unloaded into a storage pond immediately adjacent to the reactor to allow the radiation levels to decrease. The pond water shields the radiation and absorbs the heat. Used fuel is held in such pools for several months to several years. It may be transferred to ventilated dry storage on site.

Reprocessing & Disposal

Depending on policies in particular countries, some used fuel may be transferred to central storage facilities. Ultimately, used fuel must either be reprocessed or prepared for permanent disposal.

Used fuel contains almost 1% U-235 that has not fissioned, around 1% plutonium, and 4% fission products (highly radioactive elements, with other transuranic elements formed in the reactor). In a reprocessing facility the used fuel is separated into its three components: uranium, plutonium and waste. Reprocessing enables recycling of the uranium and plutonium into fresh fuel, and produces a significantly reduced amount of waste (compared with treating all used fuel as waste).

The uranium from reprocessing, which typically contains a slightly higher concentration of U-235 than occurs in nature, can be reused as fuel after conversion and enrichment.

The plutonium can be directly made into mixed oxide (MOX) fuel, in which uranium and plutonium oxides are combined. In reactors that use MOX fuel, plutonium substitutes for the U-235 in normal uranium oxide fuel.

At the present time, there are no disposal facilities (as opposed to storage facilities) in operation in which spent fuel, not destined for reprocessing, and the waste from reprocessing, can be placed. A number of countries are carrying out studies to determine the optimum approach to the disposal of used fuel and wastes from reprocessing. The general consensus favors its placement into deep geological repositories, initially recoverable before being permanently sealed.

### A2: Good to debate fuel cycle

#### AND financial Incentives are direct --- not enabling or variable

DYSON 03 International Union for Conservation of Nature and Natural Resources [Megan, Flow: The Essentials of Environmental Flows, p. 67-68, http://moderncms.ecosystemmarketplace.com/repository/moderncms\_documents/iucn\_the-essentials-of-environmental-flows.pdf]

Understanding of the term ‘incentives’ varies and economists have produced numerous typologies. A brief characterization of incentives is therefore warranted. First, the term is understood by economists as incorporating both positive and negative aspects, for example a tax that leads a consumer to give up an activity that is an incentive, not a disincentive or negative incentive. Second, although incentives are also construed purely in economic terms, incentives refer to more than just financial rewards and penalties. They are the “positive and negative changes in outcomes that individuals perceive as likely to result from particular actions taken within a set of rules in a particular physical and social context.”80 Third, it is possible to distinguish between direct and indirect incentives, with direct incentives referring to financial or other inducements and indirect incentives referring to both variable and enabling incentives.81 Finally, incentives of any kind may be called ‘perverse’ where they work against their purported aims or have significant adverse side effects.

Direct incentives lead people, groups and organisations to take particular action or inaction. In the case of environmental flows these are the same as the net gains and losses that different stakeholders experience. The key challenge is to ensure that the incentives are consistent with the achievement of environmental flows. This implies the need to compensate those that incur additional costs by providing them with the appropriate payment or other compensation. Thus, farmers asked to give up irrigation water to which they have an established property or use right are likely to require a payment for ceding this right. The question, of course, is how to obtain the financing necessary to cover the costs of developing such transactions and the transaction itself.

Variable incentives are policy instruments that affect the relative costs and benefits of different economic activities. As such, they can be manipulated to affect the behaviour of the producer or consumer. For example, a government subsidy on farm inputs will increase the relative profitability of agricultural products, hence probably increasing the demand for irrigation water. Variable incentives therefore have the ability to greatly increase or reduce the demand for out-of-stream, as well as in-stream, uses of water. The number of these incentives within the realm of economic and fiscal policy is practically limitless.

## 2NC CP

### A2 International Fiat Bad

#### Counter-interpretation – counterplans that fiat an action discussed in the 1ac literature should be allowed. Their USEC 11 evidence says that getting foreign financing is a top priority for the project, and they are looking for loan guarantees there.

#### AND – here is evidence that it’s in the literature

REUTERS 2 – 22 – 11 [USEC and DOE Making Solid Progress Toward Conditional Commitment For American Centrifuge Plant Loan Guarantee, <http://www.reuters.com/article/2011/02/22/idUS239608+22-Feb-2011+BW20110222>]

Due diligence process well underway

USEC made significant progress in 2010 to address DOE concerns

Discussions continue with Japanese export credit agencies for additional financing

USEC Inc. (NYSE:USU) today reported on the progress of ongoing negotiations with the Department of Energy’s (DOE) Loan Guarantee Program office on a term sheet for a conditional commitment for the financing of the American Centrifuge Plant.

“We are pleased with the progress being made between DOE and USEC staff to develop the terms and conditions for a conditional commitment,” said John K. Welch, USEC president and chief executive officer. “Based on our recent discussions with DOE, I am optimistic that we can reach an agreement on terms in the near future and that DOE will then be able to move promptly to issue the conditional commitment. We want to move forward as quickly as possible so that we can begin remobilizing construction of the American Centrifuge Plant, but recognize that DOE needs to structure an agreement that protects the American taxpayer by ensuring loan repayment and we are committed to achieving that goal as well.

“USEC made substantial progress during 2010 to address DOE’s technical and financial concerns. This had the very positive effect of eliminating or mitigating project risks. Our cascade of AC100 machines demonstrated that we have a very solid machine, and the technology is ready to deploy commercially.

“The American Centrifuge staff has been working closely with DOE’s independent engineering firm as it prepares a report that will be a key part of the due diligence process. We believe the report will recognize the technical progress made since the independent engineer’s 2009 review of the project.

“We also strengthened the financial foundation of the project in 2010 through the strategic investment of Babcock & Wilcox and Toshiba Corporation. With Toshiba’s significant assistance, we are also in discussions with the Japanese export credit agencies for additional funding of up to $1 billion,” he said.

“During the past year, we saw many signs of support that show DOE values the American Centrifuge technology that it originally developed. A cooperative agreement with DOE for cost-sharing during 2010 helped to support operation of the AC100 cascade, the manufacturing of additional AC100 machines and refinement of the rotor tube manufacturing process. We also appreciated DOE’s recent agreement to extend the milestones included in our original 2002 agreement,” Welch said.

The American Centrifuge technology USEC is deploying requires 95 percent less electric power to produce low enriched uranium on a per SWU basis than its current gaseous diffusion technology. This will significantly reduce both USEC’s production costs and exposure to price volatility for electricity, the largest production cost component for gaseous diffusion. The American Centrifuge technology is a disciplined evolution of classified U.S. centrifuge technology originally developed by DOE and successfully demonstrated during the 1980s. USEC has improved the DOE technology through advanced materials, updated electronics and design enhancements based on highly advanced computer modeling capabilities.

As of December 31, 2010, USEC has invested approximately $1.95 billion in the American Centrifuge program, which includes $767 million charged to expense over several years for technology development and demonstration. Construction on the American Centrifuge Plant (ACP) began in May 2007 after a construction and operating license was issued by the U.S. Nuclear Regulatory Commission. Centrifuges have been operated as part of a lead cascade test program for more than 625,000 machine hours since August 2007. This gives USEC confidence in the performance of the technology and provides operating data and experience as the project transitions to commercial operation. Due to uncertainty of funding, at the time of an August 2009 agreement with DOE to delay consideration of USEC’s loan guarantee application, USEC significantly demobilized and reduced construction and machine manufacturing activities in the American Centrifuge project. USEC continues limited manufacturing, assembling and operating of centrifuge machines in the lead cascade test program and ongoing development efforts pending receipt of funding to remobilize the project and complete the plant.

During the course of 2010, USEC continued its lead cascade test program with AC100 machines. Installation of these AC100 machines further demonstrated the ability of suppliers to build components, assemble the machines and successfully bring them into operation. More than 400,000 machine hours have accumulated in AC100 machine operations since the summer of 2009. This cascade was in a commercial plant like configuration and operates under commercial plant like conditions. These machines are production-ready and could be deployed in the commercial plant. During cascade operations, USEC demonstrated that the cascade operates as designed and that a range of commercial product assays can be produced for USEC’s customers.

USEC believes the DOE’s Loan Guarantee Program is essential to obtaining the financing needed to complete the ACP and it has applied for a $2 billion loan guarantee. In late October 2010, following an initial technical review of USEC’s updated loan guarantee application submitted in July, DOE provided USEC with a draft term sheet that has served as the framework for discussions with DOE. Completion of due diligence by DOE and negotiation of terms and conditions with DOE are the next steps toward the potential issuance of a conditional commitment. USEC is working with DOE and its technical, legal and financial advisors to obtain such a commitment in an expeditious manner. After obtaining a conditional commitment, USEC will need to conclude final documentation and to satisfy any technical, financial and other conditions to funding in order to close on the financing.

In order to obtain a DOE loan guarantee, USEC needs to demonstrate that sufficient capital is available to complete the project. The Company is in discussions with Japanese export credit agencies regarding financing up to $1 billion of the cost of completing the ACP. Their willingness to provide financing is closely tied to USEC obtaining a DOE loan guarantee. USEC is also looking to complete the remaining two phases of a $200 million strategic investment by Toshiba Corporation and Babcock & Wilcox Investment Company in 2011. The next two phases are conditioned upon progress in obtaining a DOE loan guarantee and other conditions. The first phase of the investment of $75 million was completed in September 2010. USEC cannot provide any assurance that it will be successful in obtaining any or all of the financing being sought.

## 2NC Case

### Solvency

#### SRTE is awesome and sufficient

SRNC 13’

Fiscal Year Press Release for 2012. Savannah River Nuclear Solutions. February 2013

The National Nuclear Security Administration (NNSA) has rated the Savannah River Tritium Enterprise’s overall Fiscal Year 2012 performance as “excellent,” meaning that the Savannah River Site’s tritium-related work has once again successfully met and exceeded NNSA’s Defense Programs goals. The Savannah River Tritium Enterprise (SRTE), which is managed for NNSA by Savannah River Nuclear Solutions (SRNS), earned the rating for its successful performance of the four missions it carries out in support of the nation’s security: tritium supply, nuclear stockpile maintenance, nuclear stockpile surveillance, and helium-3 recovery. Tritium is an isotope of hydrogen and a key component of nuclear weapons, but it decays radioactively at the rate of 5.5 percent each year and must be replenished periodically. Replenishment is accomplished by recycling tritium from existing warheads and by extracting new tritium from target rods irradiated in nuclear reactors that are operated by the Tennessee Valley Authority. “The country relies on Savannah River Site for vital tasks related to our national security,” said NNSA Savannah River Site Office Deputy Manager Scott Cannon.

#### Loan guarantees makes it harder for every other domestic tritium producer to get access to funding

Carden and Hammock 10 [Art and Mike, “Nuclear Energy Should Be Subsidized?,” Vol: 60, Issue: 5, http://www.thefreemanonline.org/columns/it-just-aint-so/nuclear-energy-should-be-subsidized/]

But that doesn’t mean federal loan guarantees are in order.

Government should not be trying to pick winners and losers in the energy industry. If one company has its loans backed by the government, other companies without guarantees will have trouble borrowing capital. Bureaucrats don’t know and can’t know whether (or in what combination) nuclear energy, biodiesel, ethanol, solar energy, hydroelectricity, fuel cells, or any other alternatives are “best” for meeting our energy needs. This information can only emerge through market competition.

This is not just about energy. We don’t know—once and for all—the best way to build a computer chip. We don’t know the ingredients for the next tasty trend in food. We’re ignorant about a lot of things we would like to know. Markets—and competition—produce the information that allows us to make decisions. But governments distort it by intervening in the capital markets, by doing things like guaranteeing loans to particular firms.

In other words, we do not find the best way to build a computer chip by having the government offer loan guarantees to firms that use particular production processes. We let firms compete for customers, and in a free market without government interference, firms earn profits when they use resources wisely and produce things people want at prices they are willing to pay.

Solving these problems—what to produce and how—requires information embodied in prices. Few of us buy golden faucets, because they’re too expensive. Prices help producers decide whether to use gold or steel, or try to come up with something better. F. A. Hayek called competition a “discovery procedure.” As they compete with one another for profits, firms discover the best way to produce things. The firms that can maximize the difference between the price of what they produce and the cost of producing it will survive and thrive; those that cannot must change or perish.

Energy prices might not reflect the full costs of production and consumption. There are additional costs—the harm caused by air pollution or climate change (if that’s what’s going on)—that producers do not pay but are imposed on the public generally. Therefore they produce too much energy from dirty sources like coal and too little energy from clean sources like nuclear power. It is intuitively appealing, therefore, to have the government simply pick a cleaner energy source and subsidize it. But this is a mistake that leaves too many questions unanswered. It is a mistake for the same reason that it would be a mistake to order all chip manufacturers to use a 32-nanometer process, or subsidize cake makers that use margarine: The government is in no position to know if these are the best processes to produce the desired results. A 32-nanometer process would be expensive overkill for a pocket calculator, and many people prefer cakes made with butter. The market reaches these conclusions by punishing firms that ignore them.

Similarly, we do not know how much more nuclear power to use, how many more plants to build, and at what point we should start using other energy sources instead.

Firms competing in truly free markets will find the best ways to get desired results. Competition forces the answers on them.

## 1NR DA

### Overview

#### Independently, growth is a universal conflict dampener—it eliminates war-fighting incentives.

Gartzke 11—Erik Gartzke is an associate professor of political science at the University of California, San Diego. Gartzke holds a Ph.D.in political science from the University of Iowa and a B.A. in history from the University of San Francisco. [February 9, 2011, “Security in an Insecure World,” Cato Unbound, http://www.cato-unbound.org/2011/02/09/erik-gartzke/security-in-an-insecure-world/]

Almost as informative as the decline in warfare has been where this decline is occurring. Traditionally, nations were constrained by opportunity. Most nations did not fight most others because they could not physically do so. Powerful nations, in contrast, tended to fight more often, and particularly to fight with other powerful states. Modern “zones of peace” are dominated by powerful, militarily capable countries. These countries could fight each other, but are not inclined to do so. At the same time, weaker developing nations that continue to exercise force in traditional ways are incapable of projecting power against the developed world, with the exception of unconventional methods, such as terrorism.

The world is thus divided between those who could use force but prefer not to (at least not against each other) and those who would be willing to fight but lack the material means to fight far from home. Warfare in the modern world has thus become an activity involving weak (usually neighboring) nations, with intervention by powerful (geographically distant) states in a policing capacity. So, the riddle of peace boils down to why capable nations are not fighting each other. There are several explanations, as Mack has pointed out.

The easiest, and I think the best, explanation has to do with an absence of motive. Modern states find little incentive to bicker over tangible property, since armies are expensive and the goods that can be looted are no longer of considerable value. Ironically, this is exactly the explanation that Norman Angell famously supplied before the World Wars. Yet, today the evidence is abundant that the most prosperous, capable nations prefer to buy rather than take. Decolonization, for example, divested European powers of territories that were increasingly expensive to administer and which contained tangible assets of limited value.

Of comparable importance is the move to substantial consensus among powerful nations about how international affairs should be conducted. The great rivalries of the twentieth century were ideological rather than territorial. These have been substantially resolved, as Francis Fukuyama has pointed out. The fact that remaining differences are moderate, while the benefits of acting in concert are large (due to economic interdependence in particular) means that nations prefer to deliberate rather than fight. Differences remain, but for the most part the capable countries of the world have been in consensus, while the disgruntled developing world is incapable of acting on respective nations’ dissatisfaction.

While this version of events explains the partial peace bestowed on the developed world, it also poses challenges in terms of the future. The rising nations of Asia in particular have not been equal beneficiaries in the world political system. These nations have benefited from economic integration, and this has proved sufficient in the past to pacify them. The question for the future is whether the benefits of tangible resources through markets are sufficient to compensate the rising powers for their lack of influence in the policy sphere. The danger is that established powers may be slow to accommodate or give way to the demands of rising powers from Asia and elsewhere, leading to divisions over the intangible domain of policy and politics. Optimists argue that at the same time that these nations are rising in power, their domestic situations are evolving in a way that makes their interests more similar to the West. Consumerism, democracy, and a market orientation all help to draw the rising powers in as fellow travelers in an expanding zone of peace among the developed nations. Pessimists argue instead that capabilities among the rising powers are growing faster than their affinity for western values, or even that fundamental differences exist among the interests of first- and second-wave powers that cannot be bridged by the presence of market mechanisms or McDonald's restaurants.

If the peace observed among western, developed nations is to prove durable, it must be because warfare proves futile as nations transition to prosperity. Whether this will happen depends on the rate of change in interests and capabilities, a difficult thing to judge. We must hope that the optimistic view is correct, that what ended war in Europe can be exported globally. Prosperity has made war expensive, while the fruits of conflict, both in terms of tangible and intangible spoils have declined in value. These forces are not guaranteed to prevail indefinitely. Already, research on robotic warfare promises to lower the cost of conquest. If in addition, fundamental differences among capable communities arise, then warfare over ideology or policy can also be resurrected. We must all hope that the consolidating forces of prosperity prevail, that war becomes a durable anachronism.

#### Turns Indo-Pak

Mead 9 (Walter Russell, Henry A. Kissinger Senior Fellow in U.S. Foreign Policy at the Council on Foreign Relations and the author of God and Gold: Britain, America and the Making of the Modern World, Lauren Gottlieb Provided Research Assistance, Only Makes You Stronger, Accessed Online @ TNR)

The political consequences could include dangerous unrest--and a bitter climate of anti-foreign feeling that blames others for China's woes. (Think of Weimar Germany, when both Nazi and communist politicians blamed the West for Germany's economic travails.) Worse, instability could lead to a vicious cycle, as nervous investors moved their money out of the country, further slowing growth and, in turn, fomenting ever-greater bitterness. Thanks to a generation of rapid economic growth, China has so far been able to manage the stresses and conflicts of modernization and change; nobody knows what will happen if the growth stops. India's future is also a question. Support for global integration is a fairly recent development in India, and many serious Indians remain skeptical of it. While India's 60-year-old democratic system has resisted many shocks, a deep economic recession in a country where mass poverty and even hunger are still major concerns could undermine political order, long-term growth, and India's attitude toward the United States and global economic integration. The violent Naxalite insurrection plaguing a significant swath of the country could get worse; religious extremism among both Hindus and Muslims could further polarize Indian politics; and India's economic miracle could be nipped in the bud.

#### Turns Russia

Ockham Research 8 (Independent Equity Research Provider based in Atlanta Georgia, Economic Distress and Geopolitical Risks, November 18th, Accessed Online @ Seeking Alpha)

Russia, whose economy, stock markets and financial system have literally imploded over the past few months, could become increasingly problematic if faced with a protracted economic downturn. The increasingly authoritarian and aggressive Russian regime is already showing signs of anger projection. Its invasion of Georgia this summer and increasing willingness to confront the West reflect a desire to stoke the pride and anger of its people against foreign powers—particularly the United States. It is no accident that the Russians announced a willingness to deploy tactical missile systems to Kaliningrad the day after Barack Obama’s election in the U.S. This was a clear “shot across the bow” of the new administration and demonstrates Russian willingness to pursue a much more confrontational foreign policy going forward. Furthermore, the collapse in the price of oil augers poorly for Russia’s economy. The Russian budget reputedly needs oil at $70 per barrel or higher in order to be in balance. Russian foreign currency reserves, once huge, have been depleted massively over the past few months by ham-fisted attempts to arrest the slide in both markets and the financial system. Bristling with nuclear weapons and nursing an ego still badly bruised by the collapse of the Soviet Union and loss of superpower status, an impoverished and unstable Russia would be a dangerous thing to behold.

#### Turns China

Mead 9 (Walter Russell, Henry A. Kissinger Senior Fellow in U.S. Foreign Policy at the Council on Foreign Relations and the author of God and Gold: Britain, America and the Making of the Modern World, Lauren Gottlieb Provided Research Assistance, Only Makes You Stronger, Accessed Online @ TNR)

All this means that China's rise looks increasingly like a gradual process. A deceleration in China's long-term growth rate would postpone indefinitely the date when China could emerge as a peer competitor to the United States. The present global distribution of power could be changing slowly, if at all. The greatest danger both to US-China relations and to American power itself is probably not that China will rise too far, too fast; it is that the current crisis might end China's growth miracle. In the worst-case scenario, the turmoil in the international economy will plunge China into a major economic downturn. The Chinese financial system will implode as loans to both state and private enterprises go bad. Millions or even tens of millions of Chinese will be unemployed in a country without an effective social safety net. The collapse of asset bubbles in the stock and property markets will wipe out the savings of a generation of the Chinese middle class. The political consequences could include dangerous unrest--and a bitter climate of anti-foreign feeling that blames others for China's woes. (Think of Weimar Germany, when both Nazi and communist politicians blamed the West for Germany's economic travails.) Worse, instability could lead to a vicious cycle, as nervous investors moved their money out of the country, further slowing growth and, in turn, fomenting ever-greater bitterness. Thanks to a generation of rapid economic growth, China has so far been able to manage the stresses and conflicts of modernization and change; nobody knows what will happen if the growth stops. India's future is also a question. Support for global integration is a fairly recent development in India, and many serious Indians remain skeptical of it. While India's 60-year-old democratic system has resisted many shocks, a deep economic recession in a country where mass poverty and even hunger are still major concerns could undermine political order, long-term growth, and India's attitude toward the United States and global economic integration. The violent Naxalite insurrection plaguing a significant swath of the country could get worse; religious extremism among both Hindus and Muslims could further polarize Indian politics; and India's economic miracle could be nipped in the bud.

### Key to econ

#### Increase in high-skilled visas key to US growth.

Bloomberg, 10/23/2012. “Blame Politics for the U.S. Engineer Shortage,” http://www.bloomberg.com/news/2012-10-23/blame-politics-for-the-u-s-engineer-shortage.html.

Given the tepid economic recovery, it’s sad that Congress cannot enact a pro-growth immigration policy. Giving citizenship or permanent residency to more high-skilled immigrants is perhaps the [single-easiest way](http://www.theatlantic.com/business/archive/2012/06/give-us-your-geniuses-why-seeking-smart-immigrants-is-a-no-brainer/258451/) to grow the American economy. Science and technology companies face labor shortages in their industries, preventing expansion, and the students themselves want to stay here and make valuable contributions to research and business. All we have to do is let these people stay here and let American companies hire them.

The cost of failing to do so is large, as the American technology industry is deeply dependent on the talent of high-skilled immigrants. More than [20 percent](http://www.census.gov/prod/2011pubs/acsbr10-06.pdf) of all Americans with degrees in science and engineering are foreign-born, meaning that immigrants are [two-times overrepresented](http://research.stlouisfed.org/fred2/graph/?g=c0e) in these fields. It's even more concentrated in computer science and engineering: Immigrants make up almost a third of all degree holders in these sectors, both of which currently face severe shortages of talent.

The best economic research on high-skilled immigration, recently assembled [here](http://www.growthology.org/growthology/2012/10/high-skill-immigration-a-resource-part-2.html) by the Kauffman Foundation, suggests extensive economic gains from growing America’s stock of human capital. For just one example, a disproportionate fraction of American startups and patents -- and that means jobs, too -- come from the entrepreneurship and ingenuity of our immigrants.

A new STEM visa program would be good, but it would be better to simply expand the number of green cards issued based on "[employment-based preferences](http://travel.state.gov/visa/immigrants/types/types_1323.html)." These visas go to immigrants who come here to do work with outstanding qualifications in their fields. They are scientists of "sustained national or international acclaim and recognition." They are the world's best teachers and researchers, who want to work in our universities. They are holders of advanced degrees with five years or more of professional experience or have at least two years' worth of training in specialized fields.

And yet, we only admit about [140,000](http://www.dhs.gov/sites/default/files/publications/immigration-statistics/yearbook/2011/ois_yb_2011.pdf) of them a year. That's just [13 percent](http://www.dhs.gov/sites/default/files/publications/immigration-statistics/yearbook/2011/ois_yb_2011.pdf) of the total number of permanent-residency visas granted in 2011. Why on Earth do we not want this talent? The world's brightest want to bring their human capital to the U.S., and we turn them away. All we have to do is open the door: These employment immigration visa programs are [routinely oversubscribed](http://www.travel.state.gov/visa/bulletin/bulletin_5664.html), and the number of visas available has [not grown in ten years](https://explore.data.gov/Other/Persons-Obtaining-Legal-Permanent-Resident-Status-/h4td-dyxk), as shown by the accompanying graph.

Let's hope we don't realize the magnitude of our error only when we stop winning Nobel prizes in science, or when the next tech breakthrough comes from a graduate of an American university who we've forced to live and work abroad. If the U.S. wants to lead the world in research and innovation, we have to let the innovators come here and work.

#### High skilled immigration key to growth and competitiveness.

Adam Ozimek and Noah Smith, 6/13/2012. Associate at an economics consulting firm and a blogger with [Modeled Behavior](http://modeledbehavior.com/); PhD Candidate in Economics at the University of Michigan, blogs at [Noahpinion](http://noahpinionblog.blogspot.com/). “Give Us Your Geniuses: Why Seeking Smart Immigrants Is a No-Brainer,” The Atlantic, http://www.theatlantic.com/business/archive/2012/06/give-us-your-geniuses-why-seeking-smart-immigrants-is-a-no-brainer/258451/.

Historical anecdotes aside, the economic benefits of HSI are clear. "Human capital" -- economist jargon for the skills and knowledge of the labor force -- is one of the key inputs of GDP. Put in more human capital, and your nation produces more. And high-skilled immigrants are bursting with human capital, like an oil field waiting to be tapped. Economists may argue back and forth about fiscal stimulus, or monetary policy, or tax rates (and in fact the two of us often do!), but very few would disagree that an inflow of geniuses is good for the economy.

High-skilled immigrants are not just good at their jobs. They create jobs. Research by the Kaufmann Foundation has documented that immigrants are unusually entrepreneurial, and High-Skilled Immigrants even more so. More than half of the start-ups in Silicon Valley, for instance, were started by immigrants, along with 25% of venture-backed companies that went public between 1990 and 2006.

In addition, high-skilled immigrants are innovators as well. Economists Jennifer Hunt and Marjolaine Gauthier-Loiselle find that a 1% increase in the share of immigrant college graduates in the population increases patents per capita by as much as 9-18%, after accounting for the "positive spillovers" by which HSI boost innovation by native-born inventors.

Conservatives should be eager to see American businesses and investors get their hands on such an unparalleled source of high-quality labor. But there is an economic benefit from HSI that should be particularly enticing to liberals: High-skilled immigration works against inequality.

Nowadays, the talk is all about "the 1 percent," top executives, and the finance industry. But equally important is the divergence of America's middle class that occurred in the 1980s. As returns to education skyrocketed, an educated upper middle class pulled away from a medium-skilled lower middle class. The disparity stopped increasing after the 80s, but it has never gone away.

HSI will fight this trend. Boosting the supply of high-skilled workers makes low- and mid-skilled workers proportionately more scarce, increasing their relative incomes. Economist Enrico Moretti [finds](http://www.amazon.com/The-Geography-Jobs-Enrico-Moretti/dp/0547750110/ref=sr_1_1?ie=UTF8&qid=1339599565&sr=8-1&keywords=new+geography+of+jobs) that earnings of a high school graduate increase 7% for every 10% increase in the percent of people in a city that are college graduates. While having more high-skilled workers around tends to raise everyone's salaries, Moretti's research shows that low-skilled workers benefit four to five times more than college graduates. Even as liberals work to find a way to counteract the problem of the 1 percent, they should view HSI as a step toward turning America back into a true middle-class society.

WINDOW OF OPPORTUNITY

If all this makes HSI sound like an unbelievable bargain, it's because that's exactly what it is. What voters and policymakers need to realize is that we are standing at a unique moment in our history, where both the supply of High-Skilled Immigrants and the need for them are at historic highs. Salaries for software engineers have doubled, signaling high demand. And the number of educated immigrants clamoring to move here from countries like India is extremely high. The only thing keeping employers from employees is the U.S. Border Patrol.

But this opportunity may not last. As countries develop, high-skilled people can earn decent salaries at home, or start businesses more cheaply than in America. Already, a growing number of high-skilled Chinese people are choosing to return to China after going to graduate school in the U.S.

We still have a window of opportunity to grab HSI from India and Southeast Asia, but that window will not be open forever. A well-documented thicket of visa restrictions and skilled immigration quotas is leaving would-be American geniuses on the outside looking in. A report by the Technology Policy Institute found that visa restrictions kicked out enough foreign graduates of U.S. universities to slice $13.6 billion off of our GDP from 2003 through 2007. Meanwhile, countries like Canada, Australia, and the UK are actively wooing the immigrants we shut out; although the U.S. still attracts the greatest percentage of High-Skilled Immigrants, these other countries, especially our neighbor to the north, are catching up fast.

### AT: resilient

#### New collapse triggers total collapse – the economy is structurally weak.

Isidore, CNN Money, 11

(Chris, 8/10/2011, “Recession 2.0 would hurt worse,” http://money.cnn.com/2011/08/10/news/economy/double\_dip\_recession\_economy/index.htm, accessed 1-6-12, CMM)

And while economists disagree on just how likely the U.S. economy is to fall into another downturn, they generally agree on one thing -- a new recession would be worse than the last and very difficult to pull out of.¶ "Going back into recession now would be scary, because we don't have the resources or the will to respond, and our initial starting point is such a point of weakness," said Mark Zandi, chief economist at Moody's Analytics. "It won't feel like a new recession. It would likely feel like a depression."¶ Zandi said the recent sell-off in stocks have caused him to raise the odds of a new recession to 33% from 25% only 10 days ago.¶ Other economists surveyed by CNNMoney are also raising their recession risk estimates. The survey found an average chance of a new recession to be about 25%, up from a 15% chance only three months ago.¶ Of the 21 economists who responded to the survey, six have joined Zandi in increasing their estimates in just the last few days. The main reason: the huge slide in stocks. Standard & Poor's downgrade of the U.S. credit rating is another concern.¶ "The correction in equity markets raises the risk of recession due to the negative hit to wealth and confidence," said Sal Guatieri, senior economist for BMO Capital Markets.¶ Even with a 430-point rebound in the Dow Jones industrial average Tuesday following the Federal Reserve meeting, major U.S. stock indexes have lost more than 11% of their value over the last 12 trading days.¶ Recovery at risk¶ A plunge in stocks doesn't necessarily mean a new recession. The economy avoided a recession after the stock market crash of 1987.¶ "Stock price declines are often misleading indicators of future recessions," said David Berson, chief economist of BMI Group.¶ But with the economy already so fragile, the shock of another stock market drop and resulting loss of wealth could be the tipping point.¶ "It really does matter where the economy is when it gets hit by these shocks," said Zandi. "If we all pull back on spending, that's a prescription for a long, painful recession," he said.¶ Most economists say they aren't worried that S&P's downgrade makes recession more likely, although a few said any bad news at this point increases the risk.¶ "The downgrade has a psychological impact in terms of hurting consumer confidence," said Lawrence Yun, chief economist with the National Association of Realtors.¶ On shakier ground¶ Another recession could be even worse than the last one for a few reasons.¶ For starters, the economy is more vulnerable than it was in 2007 when the Great Recession began. In fact, the economy would enter the new recession much weaker than the start of any other downturn since the end of World War II.¶ Unemployment currently stands at 9.1%. In November 2007, the month before the start of the Great Recession, it was just 4.7%.¶ And the large number of Americans who have stopped looking for work in the last few years has left the percentage of the population with a job at a 28-year low.¶ Various parts of the economy also have yet to recover from the last recession and would be at serious risk of lasting damage in a new downturn.¶ Home values continue to lose ground and are projected to continue their fall. While manufacturing has had a nice rebound in the last two years, industrial production is still 18% below pre-recession levels.¶ There are nearly 900 banks on the FDIC's list of troubled institutions, the highest number since 1993. Only 76 banks were at risk as the Great Recession took hold.¶ But what has economists particularly worried is that the tools generally used to try to jumpstart an economy teetering on the edge of recession aren't available this time around.¶ "The reason we didn't go into a depression three years ago is the policy response by Congress and the Fed," said Dan Seiver, a finance professor at San Diego State University. "We won't see that this time."¶ Three times between 2008 and 2010, Congress approved massive spending or temporary tax cuts to try to stimulate the economy. But fresh from the bruising debt ceiling battle and credit rating downgrade, and with elections looming, the federal government has shown little inclination to move in that direction.¶ So this new recession would likely have virtually no policy effort to counteract it.

### US Key

#### And the US is key to economic recovery

Caploe 9 [David, CEO of the American Centre for Applied Liberal Arts and Humanities in Asia, Focus still on America to lead global recovery, April 7, The Strait Times, lexis]

IN THE aftermath of the G-20 summit, most observers seem to have missed perhaps the most crucial statement of the entire event, made by United States President Barack Obama at his pre-conference meeting with British Prime Minister Gordon Brown: 'The world has become accustomed to the US being a voracious consumer market, the engine that drives a lot of economic growth worldwide,' he said. 'If there is going to be renewed growth, it just can't be the US as the engine.' While superficially sensible, this view is deeply problematic. To begin with, it ignores the fact that the global economy has in fact been 'America-centered' for more than 60 years. Countries - China, Japan, Canada, Brazil, Korea, Mexico and so on - either sell to the US or they sell to countries that sell to the US. This system has generally been advantageous for all concerned. America gained certain historically unprecedented benefits, but the system also enabled participating countries - first in Western Europe and Japan, and later, many in the Third World - to achieve undreamt-of prosperity. At the same time, this deep inter-connection between the US and the rest of the world also explains how the collapse of a relatively small sector of the US economy - 'sub-prime' housing, logarithmically exponentialised by Wall Street's ingenious chicanery - has cascaded into the worst global economic crisis since the Great Depression. To put it simply, Mr Obama doesn't seem to understand that there is no other engine for the world economy - and hasn't been for the last six decades. If the US does not drive global economic growth, growth is not going to happen. Thus, US policies to deal with the current crisis are critical not just domestically, but also to the entire world. Consequently, it is a matter of global concern that the Obama administration seems to be following Japan's 'model' from the 1990s: allowing major banks to avoid declaring massive losses openly and transparently, and so perpetuating 'zombie' banks - technically alive but in reality dead. As analysts like Nobel laureates Joseph Stiglitz and Paul Krugman have pointed out, the administration's unwillingness to confront US banks is the main reason why they are continuing their increasingly inexplicable credit freeze, thus ravaging the American and global economies. Team Obama seems reluctant to acknowledge the extent to which its policies at home are failing not just there but around the world as well. Which raises the question: If the US can't or won't or doesn't want to be the global economic engine, which country will? The obvious answer is China. But that is unrealistic for three reasons. First, China's economic health is more tied to America's than practically any other country in the world. Indeed, the reason China has so many dollars to invest everywhere - whether in US Treasury bonds or in Africa - is precisely that it has structured its own economy to complement America's. The only way China can serve as the engine of the global economy is if the US starts pulling it first. Second, the US-centred system began at a time when its domestic demand far outstripped that of the rest of the world. The fundamental source of its economic power is its ability to act as the global consumer of last resort. China, however, is a poor country, with low per capita income, even though it will soon pass Japan as the world's second largest economy. There are real possibilities for growth in China's domestic demand. But given its structure as an export-oriented economy, it is doubtful if even a successful Chinese stimulus plan can pull the rest of the world along unless and until China can start selling again to the US on a massive scale. Finally, the key 'system' issue for China - or for the European Union - in thinking about becoming the engine of the world economy - is monetary: What are the implications of having your domestic currency become the global reserve currency? This is an extremely complex issue that the US has struggled with, not always successfully, from 1959 to the present. Without going into detail, it can safely be said that though having the US dollar as the world's medium of exchange has given the US some tremendous advantages, it has also created huge problems, both for America and the global economic system. The Chinese leadership is certainly familiar with this history. It will try to avoid the yuan becoming an international medium of exchange until it feels much more confident in its ability to handle the manifold currency problems that the US has grappled with for decades. Given all this, the US will remain the engine of global economic recovery for the foreseeable future, even though other countries must certainly help. This crisis began in the US - and it is going to have to be solved there too.

### 1nr Yes

#### Will pass – politics key to getting over the hurdles

FRAGA 3 – 4 – 13 NC Register Staff [Brian Fraga, Obama’s Immigration Plan Faces Obstacles (2929), <http://www.ncregister.com/daily-news/obamas-immigration-plan-faces-obstacles/>]

A comprehensive immigration-reform bill may pass through Congress this year, but significant obstacles remain, including the Obama administration’s intent to extend the bill’s legal protections to same-sex couples.

The proposed frameworks for immigration reform that have emerged thus far from the White House and a bipartisan group of U.S. senators share many of the same basic components. Both plans include the so-called pathway to citizenship — which critics decry as amnesty — that would grant legal residency to the estimated 11 million undocumented immigrants in the United States.

“We’re very optimistic that something is going to be done, finally. I think both sides have a lot of political cover to get it done,” said Allen Sanchez, executive director of the New Mexico Conference of Catholic Bishops.

However, there are still difficult issues to be worked out, especially as to whether the pathway to citizenship should be contingent on securing the border.

“We are certainly sensitive to those issues in making sure we have a secure border, but I don’t think you make any progress on the immigration issue by making things contingent on each other. These are pretty straightforward, important issues that should be pursued independently of one another,” said Jeffery Patterson, executive director of the Texas Catholic Conference.

The politics also remain tricky; the leading Republican senators in the bipartisan group, nicknamed the Gang of Eight, were rankled recently by the White House leaking drafts of its own bills to the press. Meanwhile, any legislation granting legal residency to undocumented immigrants — even with a bipartisan imprimatur — will probably still face opposition from conservative members in the Senate and House of Representatives.

Patterson said the Catholic Church, at the state and national levels, has advocated for a sensible immigration policy that keeps families together and grants opportunities for undocumented immigrants who want to become American citizens.

“I think the Catholic Church’s position in the United States has been consistent,” Patterson said. “Immigration reform has to be done in an open, transparent process in which people’s lives and dignity are upheld.”

#### Will pass – politics are key

ACIERNO 3 – 7 contributing writer at Highbrow Magazine. [Gabrielle Acierno, Why Comprehensive Immigration Reform Should Matter to Every American, <http://highbrowmagazine.com/2231-why-comprehensive-immigration-reform-should-matter-every-american>]

There is reason for activists to remain optimistic going into President Obama’s second term. Following an unprecedentedly liberal inauguration speech outlining an assertive progressive agenda, President Obama gave a powerful speech in the end of January reclaiming the demand for immigration reform as the next logical step in the American story. He reframed the debate over immigration as one of American values, history, and identity. Obama responded directly to conservative criticisms, recasting the idea of granting of citizenship as not a capitulation to lawbreakers, but as an act of mercy and compassion entrenched in American tradition, and something that has made the country stronger. Obama also alluded to previous waves of diligent immigrants who “built this country hand by hand, brick by brick,” a couched rebuttal to the conservative argument that legalizing undocumented immigrants will create a class of Americans forever dependent on government welfare programs, and by proxy the Democratic Party.

The plan outlined on the White House website contains four major components, including strengthening border security; cracking down on employers hiring undocumented workers; earned citizenship; and streamlining legal immigration. The concept of “earned citizenship” is controversial and responsible for stalled reform in the past, so its execution must be handled with care.

Following Obama’s speech, a bipartisan group of senators known as the "Gang of Eight," presented their plan, which also offers a path to citizenship. Although bipartisan attempts at a path to citizenship are not novel, this time around there is a more expansive and diverse coalition backing the measure. The group is made up of Senators Charles Schumer (D-NY), Lindsey Graham (R-SC), John McCain (R-AZ), Richard Durbin (D-IL), Robert Menendez (D-NJ), Michael F. Bennet (D-CO), Marco Rubio (R-FL), and Jeff Flake (R-AZ). Both President Obama and the Gang of 8 will hold undocumented immigrants seeking citizenship to certain responsibilities, including passing a national security and criminal background checks, paying taxes, and learning English. The framework has drawn praise from the U.S. Chamber of Commerce, a key business lobby, and the AFL-CIO union. The tension between business leaders and union leaders has thwarted reform in the past, so their mutual consensus will be crucial to the legislative process.

The senators’ announcement comes as a bipartisan group of House members is also working on an immigration proposal. House Speaker John A. Boehner (R-OH) said that they “basically have an agreement.” House Majority Leader Eric Cantor (R-VA) also appears to have recalibrated his rhetoric surrounding immigration, recently to support provisions of the DREAM Act, which he previously voted against, an inference that he intends to cooperate with looming comprehensive reform.

President Obama appeared resolute to accomplish immigration reform in his State of the Union speech on February 12th saying, “If you send me a bill, I will sign it.” The weekend following the State of the Union, a copy of the White House’s draft immigration proposal was leaked. Predictably, Republicans like Marco Rubio with political gains to be made by publicly defying the President, rebuffed the plan. Rubio, who has been anointed “The Republican Savior” by TIME magazine, issued a statement saying that if the president's eventual proposal follows the draft described in the leak, it "would be dead on arrival in Congress.” This dramatic and reflexive statement comes despite the fact that the leaked draft was just that, a draft. President Obama called the lack of CIR “the biggest regret” of his first term, and he is likely trying to send a message to the legislative branch that he does not want CIR to become another legacy of a “do-nothing” Congress.

According to USA Today, the leaked proposal creates a “Lawful Prospective Immigrant” visa that puts undocumented immigrants on a path to legal permanent residency within eight years if they pass a background check, pay a fine and back taxes, learn English and wait in line (just like the earned citizenship requirements in the Gang of 8’s plan). It also expands security funding and requires business owners to check the legal status of new employees. Republicans complain the draft omits any provisions involving future flow of immigration. Spokespeople for the White House emphasize that there is still time for bipartisan agreement, but the President will simply not stand for inaction this time around.

Republican complaints with the draft do speak to a central caveat of the bill yet to be fleshed out, whether undocumented immigrants would have to wait to begin acquiring citizenship until the U.S. border with Mexico is secure. The Senate bipartisan plan makes a pathway to citizenship conditional on border security first, while Obama's immigration proposals do not. However, it is incredibly difficult to explicitly define how secure the border really is. President Obama has followed through with almost all of the border security that the Bush administration had requested. Violent crime in border cities has also dropped steadily in recent years. However, it is tricky to gauge exactly how any policies have contributed to border security, and it will be crucial to define the parameters that make for a “secure border.” Immigration activists fear that Republicans will obstruct passage of a bill by placing unreasonable and out-of-reach constraints on the border security clause. Supporters of reform are insistent upon addressing root problems of immigration, rather than continuing to invest and pour resources into what has become a never-ending cycle.

Illegal (and legal) immigration from Mexico is at a historic low, something border security proponents should be comforted by. Although draconian security measures have escalated over the last several decades, there’s another arguably more compelling explanation for the decline in illegal immigration. The phenomenon is likely less a result of border security than it is of economics. What drives immigration from Mexico and Latin America is the drastic imbalance of social and economic opportunity among the nations. In the past several years, with the U.S. economy struggling, that disparity has grown less glaring, and illegal immigration is now at a net 0.

Protracted recession should not be lauded as an ideal border-control strategy. It is a reminder that mass migration is driven by economics, which is why such issues with Canada are virtually nonexistent. A huge component often left out of the immigration discussion is the idea that in order to control immigration we must address its economic roots. Putting undocumented immigrants on a path to citizenship, regulating immigration flows to suit the needs of industry and agriculture, and finally holding employers fully accountable for the legal status of their employees are the most effective border-safety strategies the U.S. could put in place.

Thus, the true triumph of immigration reform isn’t contingent on first “securing the border.” What must be accomplished first is a system that ensures the legal status of workers, with a regulated supply of migrants and strident penalties for employers who violate the law. The notion that the border can be made fully secure by law enforcement and technology alone is a farce perpetuated by the imaginations of misguided groups like the Minutemen. If we want to secure the border, Congress and the President must first secure Comprehensive Immigration Reform.

Pitching immigration reform to many white, conservative Americans, who would be largely responsible for pushing a candidate through a presidential primary in 2016, is a delicate dance for Republicans like Rubio who recognize the demographic gravity of the times. Even Mitt Romney was praised in the 2012 primaries by the GOP base for his hardline opposition to immigration reform and use of incendiary terms like “self-deportation.”

As a response to concerns that immigrants detract from the economy, weighing down already frail social services and “stealing jobs” from “real” Americans, policymakers must appeal to studies that show CIR would in fact boost the economy. Although immigrants are usually associated with menial labor, studies show the industrious spirit of 19th century immigrants engrained in textbooks and oral history still holds true for today’s newcomers.

A 2012 study by the Fiscal Policy Institute, “found that there were 900,000 immigrants among small-business owners in the United States, about 18 percent of the total, ” a higher percentage than the total immigrant share of the population, which is 13 percent. Hamilton Place Strategies, a Washington research group, argued in a recent paper that low-skilled immigrant workers in agriculture also boost the economy by increasing work for Americans in other sectors, such as transportation and marketing.

Any objection to immigration reform is likely a relic of a prejudiced and provincial attitude about those who are different from us. This attitude has oppressed and challenged every wave of immigrants entering the United States since our inception, and it is one that no longer resonates. The American Dream prescribes this nation as a beacon of hope, presenting opportunity and freedom for anyone willing to work for it. To continually punish people who have sought that opportunity is directly antagonistic to our very most fundamental ideals and values. There is no justice in keeping millions of hardworking people in perpetual fear and uncertainty, there is no justice in destroying families, there is no justice in denying opportunity to people who treasure the American Dream.

American policymakers have a historic opportunity to answer for the mistakes and inertia of the past. The only remaining barrier is the cowardice of politicians, who cower to xenophobia and grandstand for political gamesmanship. "Can we leave 11 million people in the shadows forever?" John McCain asked at a recent conference in Washington, "The people that wash our dishes, cut our lawns, take care of our children -- is it right to leave them in the shadows forever? I don't think so."

#### Will pass – multiple reasons

TPM 3 – 5 – 13 <http://tpmdc.talkingpointsmemo.com/2013/03/5-reasons-immigration-reform-looks-like-it-might-actually-pass.php>

No one would blame supporters of immigration reform if they were pessimistic about the chances of getting a comprehensive bill passed this year. After all, in recent years they’ve already seen one bill go down in flames, another never get off the ground, and just last year endured a presidential election in which Republican candidates were attacked for showing even the slightest sympathy towards undocumented immigrants.

And yet, activists and politicians working on a bill are sounding increasingly confident — even cocky — about their chances. There’s a bipartisan Senate plan already making the rounds, a House group readying a bill of their own, and a broad coalition of powerful interests from churches to big business to Republican fundraisers marketing the whole project.

But most importantly, the months since the election have seen a number of unexpected developments that indicate a bill may have more momentum than its backers initially hoped.

Everything comes with the caveat that it’s still early and there’s plenty that could go wrong in the months before a final draft of legislation, let alone a final vote. But the points in its favor are piling up too fast to ignore.

Here are five reasons that the prospects for immigration reform are looking a lot better than they were even a few weeks ago:

The House Is Actually Passing Stuff

It used to be assumed that Republican leaders would not schedule a vote on any bill that didn’t have the support of its own caucus, a group not exactly known for its warm relationship with undocumented immigrants. Barely two months into 2013, that assumption is already kaput. Since the election, Speaker John Boehner (R-OH) has passed a tax deal, Sandy relief, and this week the Violence Against Women Act, all with large chunks of his own party voting nay. In doing so, he’s established a new de facto rule: when bills become a political albatross around the national GOP, he’ll pass them any way he can.

No issue falls under that category more than immigration reform, which Boehner, Majority Leader Eric Cantor (R-VA), and Budget Committee Chairman Paul Ryan (R-WI), among other Republican leaders, have all expressed strong interest in passing in some form and soon. Should House conservatives stall reform while the Senate passes a bill with a strong bipartisan vote, there will be enormous pressure on Boehner to follow the route he took on the Violence Against Women Act and bring it to the floor.

“Boehner is ruling the House in a way we didn’t think was possible just three months ago,” Angela Kelley, vice president for immigration policy and advocacy at the liberal Center for American Progress, told TPM. “It’s a good precedent.”

Politicians Are Fighting Away From The Ledge

Republicans raised hell after a draft of the White House’s own immigration bill leaked last month. And no one was madder than Sen. Marco Rubio (R-FL), who called it a “half baked” bill that was “dead on arrival” in the House.

Bad news for immigration reform, right? Well, here’s the funny part. Rubio’s own Senate plan isn’t all that different in concept than the White House’s. And the source of the fiercest attacks on reform in general is border security, an area that Obama’s leaked plan would bolster. too. In fact, Sens. John McCain (R-AZ) and Lindsey Graham (R-SC) — not exactly Obama’s best friends lately — emerged from a White House meeting singing the president’s praises on exactly that issue.

Few pro-reform activists seem to think that the Senate plan’s biggest difference with Obama’s bill, a “trigger” that woud only let undocumented immigrants apply for a green card and subsequently citizenship after border security measures took effect, is enough to threaten a bill. Instead, the argle-bargle over the White House draft had more to do with the politics of passing a bill, where it’s important for conservatives like Rubio to keep their distance from Obama, than any actual policy differences. Which brings us to the next green shoot for reform….

Immigration Opponents Are Keeping Quiet

So that thing Rubio is doing, where he rips the White House’s immigration plan then tells conservatives they should stick it to Obama by passing his own (mostly similar) version? It might actually be working.

Rubio’s been making the rounds with the same radio hosts, TV commentators, and columnists who helped kill immigration reform in 2007, using his popularity with the tea party right to make the case that his bipartisan Senate plan is neither “amnesty” nor a sop to Democrats. At the very least, he’s gotten a pretty respectful welcome, even from hosts like Rush Limbaugh who are still overtly anti-reform. And in some cases, he’s gotten something approaching begrudging support.

Meanwhile, Fox News is largely getting on the immigration reform train, with Rupert Murdoch, Sean Hannity, and Bill O’Reilly all saying nice things about legalizing undocumented immigrants. And so far there isn’t anyone close to the equivalent of Lou Dobbs during the last immigration debate, a widely watched commentator who makes killing a bill their raison d’etre.

“The screamers and haters are not dominating the debate they way they did last time,” Frank Sharry, executive director of the pro-reform America’s Voice Education Fund, told TPM. “Rubio has had a lot to do with that: he’s engaged the conservative press in a thoughtful way and it’s been beneficial.”

Labor And Business Aren’t Killing Each Other

Farm, hotel, and meatpacking companies are looking to immigration reform to give them a legal route to hire cheap foreign labor, something that reformers say needs to happen in order to prevent another buildup of undocumented immigrants. But unions are worried that they’ll end up using a guest worker program to undercut American workers with easily exploited scabs.

Senators working on a bill have bitter memories of watching their 2007 reform efforts go down in flames as labor groups opposed its guest worker program and business groups complained that it didn’t go far enough. This time they’ve asked the two sides to negotiate their own solution as a possible model, which is no easy task.

So far, however, they’ve actually made some progress: last month the AFL-CIO and Chamber of Commerce put out a statement of principles indicating a possible compromise built around a temporary visa for workers and an independent federal agency to track labor shortages so workers can tell whether industry’s claims of labor shortages are legit. Both sides warn that the details are far from complete, but as long as they keep talking, immigration reform’s chances for passage are vastly improved.

There’s A Path To A Path To Citizenship

Along with the guest worker fight, the next most contentious issue is a path to citizenship for undocumented immigrants. Democrats and immigration activists say they’ll walk without a clear route to citizenship at some point, even if it’s not an immediate one (Obama’s plan would take at least 13 years to kick in). It’s less clear how the Senate’s plan works, but it does commit to a path to citizenship as well, including an expedited route for young undocumented immigrants and agricultural workers.

The House side is still a mystery, though. There’s a bipartisan group working on a bill that contains an odd mix of pro-reform progressives and border hawk conservatives and they’ve yet to leak any significant details about their plan. There’s a lot more skepticism about a path to citizenship on the House side, but key Republicans are leaving at least some wiggle room for them to adopt one. This is made somewhat easier by the fact “path to citizenship,” like “amnesty” is a vague, malleable term. Some Republicans, for example, say they’re against a “special path to citizenship,” but that they’d let undocumented immigrants “get in the back of the line” behind legal applicants for green cards and citizenship under a process that actually might give them a chance of being approved.

As for House leadership, top Republicans including Boehner, Cantor, and especially Ryan are going out of their way to encourage bipartisan talks, even if they haven’t pledged to support the results.

Add it all up and immigration reform, while nowhere near passage, is gliding along about as smoothly as supporters could hope so far.

#### Will pass – multiple groups getting on board

LATINO POST 3 – 7 – 13 Immigration Reform News 2013: Support for Reform Coming From Unexpected Sources, <http://www.latinospost.com/articles/13851/20130307/immigration-reform-news-2013-support-coming-unexpected-sources.htm>

As both parties wrangle over immigration reform, proponents are gaining new allies, sometimes from unexpected sources.

The Obama White House is reaching out to the tech industry to support the Senate's bipartisan reform bill, which would offer a path to citizenship for many of the 11 million undocumented immigrants in the country.

Tech companies tend to prefer more lax immigration restrictions, since many immigrants have advanced technical skills useful in Silicon Valley, but often companies cannot win approval from the federal government to sponsor highly-skilled workers.

Obama is offering additional help to get companies the people they need in exchange for support from the industry for legalizing the status of immigrants who may not have had the same educational opportunities. In the past tech leaders have tended to focus solely on their own industry and not the immigration issue as a whole, but the White House is trying to change that, and influential and wealthy tech sector could provide strong support.

Bloomberg reports that evangelical Christians are also gathering support for immigration reform. There are perhaps half a million Latino evangelicals in the country, and perhaps 40 percent of the ones who identify as Southern Baptist are undocumented.

Traditional conservative churches are finding themselves on the progressive side of the immigration issue, as they are forced to confront the difficult situations of many people in their own congregations.

Phone calls to the office of Republican Florida Senator Marco Rubio now include a recorded message referencing Biblical admonitions to "welcome the stranger" before connecting to a receptionist.

Evangelicals and socially conservative Christians have a huge public relations network in place, and pro-immigration members of the community are trying to convince legislators that they will have the support of the evangelical community if they support a path to citizenship.

Finally, the immigration reform movement is gaining support from the LGBT community. Many Latinos and undocumented immigrants have been strong supporters of the fight for gay rights and same-sex marriage, and the LGBT community is becoming more aware of and active in immigration issues. Perhaps 5 percent of undocumented immigrants are LGBT, and many originally came to the United States fleeing persecution or physical threats in their home countries.

In addition, the Obama administration wants to allow same-sex partners of American residents to apply for residency, though the Senate bill does not contain that provision.

### 1nr A2 Thumpers

#### No thumpers – immigration has avoided the budget fights

FOX NEWS 3 – 4 – 13 http://www.foxnews.com/politics/2013/03/04/recurring-budget-crises-could-put-squeeze-on-obama-second-term-priorities/

Rep. Luis Gutierrez, D-Ill., a vocal advocate for immigration reform, voiced confidence Monday that the administration and Congress could handle the busy agenda.

"The spirit of bipartisan cooperation that is keeping the immigration issue moving forward has not been poisoned by the sequester and budget stalemate, so far," he said in a statement. "The two sets of issues seem to exist in parallel universes where I can disagree with my Republican colleagues strenuously on budget matters, but still work with them effectively to eventually reach an immigration compromise. ... I remain extremely optimistic that immigration reform is going to happen this year."

Immigration reform efforts are still marching along despite the budget drama. Obama met last week on the issue with Sens. John McCain, R-Ariz., and Lindsey Graham, R-S.C., who both are part of a bipartisan group crafting legislation.

However, work on gun control before the Senate Judiciary Committee last week was postponed.

Carney on Monday voiced optimism that the president could pass new legislation even with a divided Congress.

Obama, at the first Cabinet meeting of his second-term, said Monday that his administration would try to manage the sequester's impact "the best we can."

The president said Friday: "We can't let political gridlock around the budget stand in the way of other areas where we can make progress." The president said that, "even with the sequester unresolved," Washington could make progress elsewhere.

"I'm going to keep pushing for high-quality preschool for every family that wants it. I'm going to keep pushing to make sure that we raise the minimum wage so that it's one that families can live on. I'm going to keep on pushing for immigration reform, and reform our voting system, and improvements on our transportation sector. And I'm going to keep pushing for sensible gun reforms because I still think they deserve a vote," he said.

#### Obama making calls and spending capital on immigration RIGHT NOW

ABC NEWS 2 – 20 – 13 [Rubio and Obama: Are They Talking Immigration Yet?, <http://abcnews.go.com/blogs/politics/2013/02/immigration-bill-squabble-are-we-talking-yet/>]

President Obama made his first direct overture to Republicans on immigration tonight, placing calls to the three key GOP players on the issue in the Senate: John McCain, Lindsey Graham and Marco Rubio.

The calls come after Rubio called a White House immigration plan that leaked over the weekend “half-baked and seriously flawed”.

Rubio says he appreciated the call (even though he may have been roused from bed to take it; he’s in Israel):

“Senator Rubio appreciated receiving President Obama’s phone call to discuss immigration reform late tonight in Jerusalem,” according to a statement from Rubio’s office. “The Senator told the President that he feels good about the ongoing negotiations in the Senate, and is hopeful the final product is something that can pass the Senate with strong bipartisan support.”

So, is the White House talking to Republicans on immigration or not?

The leading Republican on the issue is Senator Marco Rubio, R-Fla., and his office told reporters today that they’ve had no consultation with the White House on the issue of immigration.

“President Obama and the White House staff are not working with Republicans on immigration reform,” Rubio spokesman Alex Conant said in an email to reporters. “Senator Rubio’s office has never discussed immigration policy with anyone in the White House.”

White House Press Secretary Jay Carney disputed that. ”We have been in contact with everybody involved in this effort on Capitol Hill,” he said.

In fact, the White House claims the president’s aides have had no fewer than five meetings with the staffs of the bi-partisan group of Senators working on an immigration bill – including Rubio’s staff.

### A2 Guns

#### Obama not focusing on congress for guns agenda

AP 1 – 25 – 13 [Obama to bypass Congress on guns, <http://www.japantimes.co.jp/news/2013/01/25/world/obama-to-bypass-congress-on-guns/#.UTjHhKV2H04>]

The White House has decided to circumvent Capitol Hill as it concentrates its gun-control efforts on speeches and other public appearances by President Barack Obama and Vice President Joe Biden outside of Washington, according to officials with knowledge of the plans.

With Obama’s gun agenda dependent on centrist Democratic senators nervous about their re-election prospects, the administration has calculated that the president is better off helping build a groundswell of popular support within their states rather than negotiating directly with the lawmakers, officials said.

The emerging strategy represents a more combative approach than the one taken during Obama’s first term, when the White House frequently worked directly with congressional leaders in attempts to strike a compromise. This time, Obama has laid out the measures he wants Congress to pass and is now setting out to expend political capital selling them.

The approach also underscores the limits of Obama’s influence on Capitol Hill, where he must rely on the votes of Democrats from states that backed Republican Mitt Romney and where many voters are hostile to his progressive second-term agenda.

#### Guns don’t thump immigration - alongside

NYT 2 – 21 <http://www.nytimes.com/2013/02/22/us/politics/white-house-memo-for-obama-an-air-of-confidence-not-crisis-in-the-latest-fiscal-battle.html?_r=0>

As a result, the sense of urgency from earlier budget fights, which included all-night meetings and dueling news conferences at the White House and on Capitol Hill, have given way to more of a business-as-usual feeling in the West Wing. The budget debate is taking place alongside immigration and gun control discussions, rather than overtaking them.

#### Obama not pushing gun control in Congress – public speeches

LA TIMES 2 – 4 – 13 [Kathleen Hennessey and Christi Parsons, Obama urges 'common sense' action on gun violence in Midwest stop, <http://www.latimes.com/news/politics/la-pn-obama-gun-violence-speech-20130204,0,4960103,full.story>]

Standing in front of an imposing backdrop of police officers and troopers in blue and khaki uniforms, President Obama on Monday touted his gun violence proposals using an appeal to “common sense” and bipartisanship — and a bit of stagecraft.

“We don’t have to agree on everything to agree it’s time to do something,” Obama said to applause from an audience of law enforcement officials. “I need everybody who is listening to keep the pressure on your member of Congress to do the right thing.”

Obama’s brief day trip to a Minneapolis Police Department facility was his first venture outside of Washington on behalf of his gun measures — the informal launch of the bully-pulpit campaign he’s vowed to wage on behalf the package. The president again called for universal background checks for gun sales, as well as a ban on assault weapons and high-capacity ammunition magazines.

But Obama’s campaign-style promotion of his second-term agenda is well underway. Even before his swearing-in, the president vowed to focus his efforts on swaying public opinion, working Washington from the outside with speeches delivered to average voters but aimed at his political opponents in Washington.

The president's advisors say it’s the best tactic they’ve got.

### Link

#### STAR THIS CARD – the politics have changed. Chu and supporters are misleading the public about the popularity of the plan. The GOP hates the aff and previous supporters asked the loan guarantee be stopped.

USA TODAY 3 – 8 – 12 [<http://usatoday30.usatoday.com/news/washington/story/2012-03-06/congress-letters-support-energy-loans/53406730/1>]

At one hearing last Nov. 17, Chu testified that he had received nearly 500 letters from members of Congress supporting the loan programs. "We appreciate the support that the loan programs receive from many members of Congress who have urged us to accelerate our efforts and to fund worthy projects in their states," he told a House subcommittee.

But in a letter to Chu last week, 19 GOP members of Congress — including Pitts, DesJarlais and Myrick — defended those letters, accusing Chu of "intentionally making misguided and far-reaching statements to cover your own failures."

"These letters should in no way give you and your staff the belief that members are specifically asking you to 'accelerate' taxpayer funds and push them out the door without proper oversight," they wrote.

Rep. Marsha Blackburn, R-Tenn., crafted that letter. She said in an interview that the main point was to request information about the decision-making process that led to the failed loans. And while she did not send letters supporting loan guarantees, she also defended members who did write Chu.

"He ought to go back and look at the dates on those letters," Blackburn said. If they were sent before Sept. 6, 2011 — the date of Solyndra's bankruptcy — they "went on behalf of a company in a member's district looking to receive fair consideration for available federal funding."

A spokeswoman for Myrick noted the loan guarantee application she supported was pending for three years and "it's not unreasonable to ask for a 'yes' or 'no'" after so long. "That being said, the letter in no way asks that 'rapid consideration' be given at the expense of taxpayer dollars or proper oversight by OMB," Myrick aide Taylor Stanford said in an e-mail.

The 19 House Republicans, including six members of the House committee investigating the loan guarantees, also said they no longer support the program and want the money returned to the Treasury.

To DesJarlais, that includes the loan guarantee he once supported for USEC Inc., whose American Centrifuge project would create jobs in neighboring Oak Ridge, Tenn. "Unfortunately, it has become painfully evident that DOE either cannot or will not properly administer this loan guarantee program," he said in a statement. Though he still supports the project, he now wants some "alternate funding mechanism."

Energy spokesman Damien LaVera said the letters didn't influence the administration. "What these letters show is that until very recently there was a bipartisan commitment to ensuring these clean energy loan programs are moving quickly," he said.

#### Plan will require congressional approval – horsetrading and lobbying to get done.

USA TODAY 5 – 18 – 12 [House preserves 'backdoor earmark' for Ohio nuclear facility, <http://usatoday30.usatoday.com/news/washington/story/2012-05-18/USEC-earmark/55056188/1>]

The provision in the defense programs bill doesn't name USEC and therefore isn't an earmark under new House rules barring members from steering pork to their districts. But it does make the money available for "domestic national-security-related enrichment technologies," and USEC subsidiary United States Enrichment Corp. is the sole American-owned provider of enriched uranium to the government.

"This company should actually be renamed the United States Earmark Corp.," said Rep. Ed Markey, D.-Mass., a longtime nuclear critic.

Rep. Steve Pearce, R-N.M., compared USEC to the failed solar company that went bankrupt after a $535 million loan guarantee from the Energy Department. "USEC is Solyndra on steroids," he said.

Pearce's district includes centrifuges operated by URENCO, which invested $3 billion in a centrifuge plant in New Mexico— without federal subsidies.

URENCO is owned by the Dutch government and German and British energy companies.

Rep. Michael Turner, R-Ohio, a nuclear supporter who represents a district neighboring USEC, said the issue is one of national security. "This is for our nuclear weapons programs. This is not like for a truck fleet," he said. "If you're not going to be doing domestic, you're going to have the United States be subject to foreign sources, and again these are critical components for our nuclear infrastructure and our nuclear Navy."

The vote follows a high-stakes, behind-the-scenes lobbying effort this week. Rep. Jean Schmidt, R-Ohio, sent a letter to colleagues this week pointing out URENCO's ties to A.Q. Khan, the nuclear scientist that stole centrifuge technology secrets for Pakistan. URENCO lobbyist Clint Williamson accused USEC supporters — which include Republicans and Democrats — of "picking winners and losers" in the uranium market.

The provision still must be negotiated with the Senate, which included similar language in a 2012 transportation bill.

The measure wouldn't require the Energy Department to spend the money, but Energy Secretary Steven Chu has already said he would do so if given a "clear signal" from Congress. "Over the last three years, the Obama administration has worked tirelessly to support the American Centrifuge Plant," said DOE spokeswoman Jen Stutsman in a statement before the vote. "The administration is focused on advancing this technology in a way that protects the taxpayers."

#### Agencies no longer shield

Wallison 3 (Peter J., Resident Fellow—American Enterprise Institute, “A Power Shift No One Noticed”, AEI Online, 1-1, http://www.aei.org/publications/pubID.15652/pub\_detail.asp)

Control over independent regulatory agencies has traditionally resided with Congress, which created all of them. The recent controversy over the Securities and Exchange Commission suggests, however, that now Congress, the White House, and the public all take for granted that the independent agencies are the president's responsibility. The political frenzy surrounding Enron's collapse and other corporate scandals may have produced--or at least exposed--a significant shift in the relationship between Congress and the White House. The efforts of congressional Democrats to pin some of the blame for the scandals on the president and the head of the Securities and Exchange Commission--and President Bush's willingness to act as though the SEC is his responsibility--may signal the end of more than a century of experimentation with independent regulatory agencies as a so-called "fourth branch" of government. History of Independent Agencies Independent agencies such as the SEC have always been regarded as "arms of Congress," outside the control of the executive branch. The president appointed the members and the chairman, but the terms for these officials overlapped presidential administrations, allowing--and encouraging--them to act without policy direction from the White House. The political fallout from the recent scandals has turned all this on its head. These independent agencies are creatures of Congress, not the Constitution. The first, the Interstate Commerce Commission (ICC), was established in 1887 to control the powerful railroad industry. Later, especially during the Progressive and New Deal eras, a number of other agencies were created, several of which still exist--including the SEC, the Federal Trade Commission, and the Federal Communications Commission. Several others, such as the Federal Power Commission and the Civil Aeronautics Board, went out of business a quarter-century ago. The ICC closed its doors in 1995. There was no clear reason, or constitutional rationale, why the duties of these bodies could not have been performed by regular executive branch departments. Presidents have expressed their unhappiness with this diminution of their authority, and some have tried to influence agency policies through the appointments process, but they have not confronted Congress on the issue. And Congress--always jealous of its prerogatives in the face of the executive branch's growing power--has never conceded that the independent regulatory agencies could take policy direction from the president. Then, in 1971, the status quo was called into question. The President's Advisory Council on Executive Organization--known as the Ash Council after its chairman, Roy L. Ash of Litton Industries--recommended that almost all of the functions of these bodies be transferred to single administrators, appointed by the president and accountable to him. The Ash Council's rationale for this reform was simple: If the president's policy control did not extend to these independent agencies, then his responsibility for them could not be clearly fixed and voters could not hold him accountable. Moreover, the president's policies, even if adopted by Congress, could be frustrated through contrary actions by the independent agencies. The Ash Council's proposal, like many reform ideas, went nowhere. There was no support in Congress for enhancing the president's power, and the Nixon administration--beset first by economic problems and then by the Watergate scandal--had no stomach for challenging Congress. (The Ash Council's report did lead, however, to the creation of the Environmental Protection Agency, headed by an administrator who answers to the president.) During the Reagan administration, however, the executive branch became more assertive. The Justice Department took the Constitution's separation of powers seriously, which by implication challenged the very legitimacy of the independent regulatory agencies. Nevertheless, because of congressional sensitivities and the continuing sense that these bodies were quasi-judicial in nature, White House officials were warned that all contacts with the independent regulatory agencies had to be approved in advance--or actually carried out--by the White House counsel's office. The Reagan administration never seriously considered taking on Congress through a legislative proposal that would bring these independent agencies within the constitutionally established structure. The Presidential Role All this history appears to have been forgotten in the politics of 2002. The Democrats, hoping to make an election issue out of the SEC's "failure" to stop "corporate corruption," proceeded to blame a Republican president for events that were solely within the authority of the SEC. There was no indication that departments or agencies unquestionably controlled by the president had any role for policing either the securities industry or the companies under scrutiny. So if President Bush was somehow responsible for what happened at Enron, WorldCom, Tyco, and the rest, it had to be as a consequence of some presidential authority over the SEC. To be sure, the president had appointed the chairman and the other members of the SEC, but that in itself would not make him blameworthy unless one assumed that he was also directly responsible for how the SEC acted before, and after, the scandals erupted. That is the nub of the important but largely unnoticed change that has occurred: the unchallenged assumption on the part of all parties--in Congress, in the media, among the public, and even in the White House itself--that the president was fully accountable for an agency that has always been viewed as independent. The significance of this change in the grand government scheme of things can hardly be overstated. Without legislation or judicial decision, the president has suddenly become electorally responsible for the decisions of bodies that were considered to be within the special purview of Congress, susceptible only to congressional policy direction. Of course, this functional revolution did not give the president any new powers with respect to the independent regulatory agencies. But the die is now cast. The way the American people look at the president's responsibilities apparently is changing, and that will affect the attitude of Congress. If the American people believe that the president should be responsible for the actions of the SEC, it will be difficult to convince them otherwise. Significantly, since Harvey Pitt's resignation as SEC chairman in November, the media have routinely referred to the president's choice to head the SEC, investment banker William H. Donaldson, as a member of the Bush "economic team."

### AT: Hirsch (Long)

#### 1. Obama is working to shape the bill behind the scenes and going public – both things that have MASSIVE academic support

BECKMANN & KUMAR 11 Professor of Political Science, UC, Irvine [Matthew N. Beckmann and Vimal Kumar, How presidents push, when presidents win: A model of positive presidential power in US lawmaking, Journal of Theoretical Politics 2011 23: 3

Fortunately for those inside the West Wing, some researchers paint a more optimistic picture regarding presidents’ potential for passing important planks of their legislative agenda. Covington et al. (1995), Barrett and Eshbaugh-Soha (2007), Edwards III and Barrett (2000), Kellerman (1984), Light (1982), Peterson (1990), and Rudalevige (2002) all observe that presidents secure greater support for their ‘priority’ items, and when they exert ‘effort’ pushing them. In addition, Covington (1987) concludes that White House officials can occasionally win greater support among legislators by working behind the scenes, while Canes-Wrone (2001, 2005) shows that presidents can induce support from a recalcitrant Congress by strategically ‘going public’ when advocating popular proposals (see also Kernell (1993)). Sullivan (1987, 1988) finds that presidents can amass winning congressional coalitions by changing members’ positions as a bill moves through the legislative process.

However, even among these relative optimists, the prescription for presidents appears to be an ephemeral combination of luck and effort, not a systematic strategy. In discussing the challenge for a president looking to push legislation on Capitol Hill, Samuel Kernell offers a comparable assessment. He writes, The number and variety of choices place great demands upon [presidents’] strategic calculation, so much so that pluralist leadership must be understood as an art…an ability to sense ‘right choices’. (Kernell, 1993: 36) Furthermore, the seemingly paradoxical findings noted above, that is, a general (if modest) pattern of president-supported legislative success on passage and policy content, but not on ‘key’ roll-call votes, remain unexplained.

This paper aims to demystify the White House’s legislative strategies, both their logic and their effects. Developing a non-cooperative game in which the president allocates scarce ‘political capital’ to induce changes in legislators’ behavior, we deduce two lobbying strategies White House officials may execute and, in turn, investigate their impact on the laws that result. Interestingly, we theorize that presidents’ foremost influence comes from bargaining with congressional leaders over policy alternatives before bills reach the floor, not bargaining with pivotal voters for their support once they do. Precisely because so much of the presidents’ influence comes in the legislative earlygame (rather than the endgame), we theorize that typical roll-call-based tests of presidents’ legislative influence have missed most of it.

#### 2. We’ll read two cards on the theory – BOTH from Professors of Presidential Politics citing studies – NOT from a blogger at the Daily Beast

#### A. Insiders believe it’s true – so it de-facto is

SCHIER 11 Dorothy H. and Edward C. Congdon Professor of Political Science at Carleton College [Steven E. Schier, The Contemporary Presidency: The Presidential Authority Problem and the Political Power Trap, Presidential Studies Quarterly, Volume 41, Issue 4, pages 793–808, December 2011]

The concept of political capital captures many of the aspects of a president's political authority. Paul Light defines several components of political capital: party support of the president in Congress, public approval of the president's conduct of his job, the president's electoral margin, and patronage appointments (Light 1999, 15). Light derived this list from the observations of 126 White House staff members he interviewed (1999, 14). His indicators have two central uses. First, Light's research reveals that they are central to the “players' perspective” in Washington. That is, those “in the game” view these items as crucial for presidential effectiveness. Second, they relate to many central aspects of political authority as defined by Skowronek. So on both theoretical and practical levels, the components of political capital are central to the fate of presidencies. The data here will reveal that presidents over the last 70 years have suffered from a trend of declining levels of political capital, a trend that is at the heart of their political authority problem.

Many scholars have examined particular aspects of presidential political capital, from congressional support (for example, Bond and Fleisher 1992, 2000; Mayhew 2005; Peterson 1993) to job approval (Brace and Hinckley 1991; Kernell 1978; Nicholson Segura and Woods 2002). From these, we know that presidential job approval is influenced by economic performance, tends to drop over time, and that divided government can boost job approval. Also, job approval and control of Congress by fellow partisans boosts presidential success in floor votes but does not produce more important legislation than does periods of divided government. These “micro” findings, however, comport with a “macro trend” of declining presidential political capital over time. This analysis explores that macro trend and relates it to previous micro findings.

#### B. Losing capital hurts

BECKMANN & KUMAR 11 Professor of Political Science, UC, Irvine [Matthew N. Beckmann and Vimal Kumar, How presidents push, when presidents win: A model of positive presidential power in US lawmaking, Journal of Theoretical Politics 2011 23: 3

Before developing presidents’ lobbying options for building winning coalitions on Capitol Hill, it is instructive to consider cases where the president has no political capital and no viable lobbying options. In such circumstances of imposed passivity (beyond offering a proposal), a president’s fate is clear: his proposals are subject to pivotal voters’ preferences. So if a president lacking political capital proposes to change some far-off status quo, that is, one on the opposite side of the median or otherwise pivotal voter, a (Condorcet) winner always exists, and it coincides with the pivot’s predisposition (Brady and Volden, 1998; Krehbiel, 1998) (see also Black (1948) and Downs (1957)). Considering that there tends to be substantial ideological distance between presidents and pivotal voters, positive presidential influence without lobbying, then, is not much influence at all.11

#### 3. Hirsh admits that controversial actions HURT the presidents agenda – here is an article FROM HIM that fighting for Rice’s nomination would have hurt Immigrations chances

HIRSH 12 – 14 – 12 [Michael Hirsh, Obama Gets a Solution to His Susan Rice Problem, <http://www.nationaljournal.com/whitehouse/obama-gets-a-solution-to-his-susan-rice-problem-20121213>]

It was a classic Washington exit: stealthy and swift, with few fingerprints. President Obama didn’t want to be seen as backing down. So Susan Rice — one of his most devoted aides since 2007 — gave him the way out, seemingly all on her own.

“If nominated, I am now convinced that the confirmation process would be lengthy, disruptive, and costly — to you and to our most pressing national and international priorities,” Rice wrote on Thursday in a letter withdrawing her name from consideration as secretary of State.

In a statement in response, Obama said that “while I deeply regret the unfair and misleading attacks on Susan Rice in recent weeks,” he “accepted her decision.” He added that Rice will continue as his U.N. ambassador for the time being.

This was all the part intended for public consumption. The underlying reality is this: The president is almost certainly furious about this turn of events — which represents the first major defeat he’s suffered since his reelection — but he’s a savvy enough politician to know how to back off without seeming to back down. While floating Rice’s name for secretary of State in the media was always something of a trial balloon — she was never formally nominated or even publicly declared by the administration to be the leading candidate to replace Hillary Rodham Clinton — Obama appeared to really want to appoint her, calling her “extraordinary” and excoriating GOP attacks on her with unusual (for him) personal pique.

But as the weeks passed, it became clearer that Rice’s biggest political problem was no longer just the klatch of Republican senators, led by John McCain, who were fiercely criticizing her for allegedly misleading statements on the attack at the U.S. consulate that killed U.S. Ambassador Christopher Stevens and three other Americans in Benghazi, Libya on Sept. 11.

After a series of strikingly unsuccessful meetings on Capitol Hill in which she failed to impress even moderate Republicans such as Susan Collins of Maine, Rice also found herself facing resistance from foreign-policy elites who questioned her temperament and her record. In addition, human-rights critics were up in arms over her behavior toward African dictators, particularly her role in allegedly holding up publication of a U.N. report that concluded the government of Rwandan President Paul Kagame, with whom she has a long and close relationship, was supplying and financing a brutal Congolese rebel force known as the M23 Movement.

That may have been the tipping point, though an official on Rice's team declined to say so. As she put it herself in her letter to Obama, the president had some other “pressing national international priorities.… It is far more important that we devote precious legislative hours and energy to enacting your core goals, including comprehensive immigration reform, balanced deficit reduction, job creation, and maintaining a robust national defense and effective U.S. global leadership.”

In other words, the Obama team was quickly coming to realize that, even though it appeared he had considerable leverage over the Republicans following a more-robust-than-thought reelection victory, a Rice nomination was simply going to cost him too much political capital, especially when it came to a long-term budget deal.

#### 4. Other’s reading of that article to support PC finite

FOURNIER 2 – 8 – 13 National Journal Staff [Ron Fournier, <http://www.nationaljournal.com/politics/stung-by-media-s-focus-on-liberal-agenda-obama-pivots-back-to-economy-20130208>]

“He needs to get back to jobs, jobs and middle-class jobs,” the Democrat said, speaking on condition of anonymity to avoid retribution from the White House.

Regardless of his approval ratings, there are limits to Obama’s political capital, as Michael Hirsh explained in this week’s National Journal magazine. I have been questioning the limits of a presidential mandate since Election Day. But the White House is confident that Obama has the upper hand against a GOP that is significantly less popular than the Democratic Party, according to polls.

#### Energy policies overload

Mann 9—Senior Fellow in Governance Studies at Brookings [Thomas E., “From Campaigning to Governing: Politics and Policymaking in the New Obama Administration”]

New presidents who get off to a good start almost always have agenda control. They focus on a limited number of issues, keep extraneous matters from stepping on their priorities, and avoid overloading the circuits in Congress. Carter sent a flood of proposals to Capitol Hill with little concern for priority or sequencing. He reaped little in the way of legislative harvest from them and the public began to wonder if he was up to the job. Reagan focused relentlessly on cutting taxes and spending, ultimately succeeding in shifting policy for decades. Clinton allowed the issue of gays in the military to overwhelm his policy priorities at the outset of his administration and then misjudged the market for a small economic stimulus in the Senate and suffered a humiliating defeat. Obama identified stabilizing the financial markets and shortening the recession as his highest initial priority. His early efforts to ensure the release of $350 billion in TARP funds, pass a large economic stimulus bill, and develop a new strategy for dealing with the troubled banking system reflected that priority. Nonetheless, he was widely criticized for diluting his focus on economic crisis management by linking it to reform of health policy, energy and education.

Critics argued that his economic recovery leadership and proposals were not up to the seriousness of the crisis, that the staggering costs of the recession and bailout made health, energy and education reform wildly unrealistic, and that his huge agenda would overwhelm the capacity of Congress to deliver on its central components. Obama insisted that the linkage was essential to long-term economic security and prosperity and refused to back down. At his insistence, the stimulus bill contained very generous allocations for health technology, renewable energy and education.

#### Health care disproves and takes too long to rebuild

Lashof 10—director of the National Resource Defense Council's climate center, Ph.D. from the Energy and Resources Group at UC-Berkeley (Dan, “Coulda, Shoulda, Woulda: Lessons from Senate Climate Fail.” NRDC Switchboard Blog, http://switchboard.nrdc.org/blogs/dlashof/coulda\_shoulda\_woulda\_lessons.html)

Lesson 2: Political capital is not necessarily a renewable resource.

Perhaps the most fateful decision the Obama administration made early on was to move healthcare reform before energy and climate legislation. I’m sure this seemed like a good idea at the time. Healthcare reform was popular, was seen as an issue that the public cared about on a personal level, and was expected to unite Democrats from all regions. White House officials and Congressional leaders reassured environmentalists with their theory that success breeds success. A quick victory on healthcare reform would renew Obama’s political capital, some of which had to be spent early on to push the economic stimulus bill through Congress with no Republican help. Healthcare reform was eventually enacted, but only after an exhausting battle that eroded public support, drained political capital and created the Tea Party movement. Public support for healthcare reform is slowly rebounding as some of the early benefits kick in and people realize that the forecasted Armageddon is not happening. But this is occurring too slowly to rebuild Obama’s political capital in time to help push climate legislation across the finish line.