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#### Energy production policy is grounded within a global system of inequality and militarism – Enables continued reactionary violence and environmental destruction in the name of continued economic growth

**Byrne and Toly ‘6** (“Energy as a Social Project: Recovering a Discourse” John Byrne and Noah Toly, pp 1-32, Energy, Environment, and Society in Conflict 2006 Center for Energy and Environmental Policy Established in 1980 at the University of Delaware, the Center is a leading institution for interdisciplinary graduate education, research, and advocacy in energy and environmental policy. CEEP is led by Dr. John Byrne, Distinguished Professor of Energy & Climate Policy at the University. For his contributions to Working Group III of the Intergovernmental Panel on Climate Change (IPCC) since 1992, he shares the 2007 Nobel Peace Prize with the Panel's authors and review editors. Dr. Toly’s chief interests are in urban and global environmental governance. He has co-edited three books and has authored numerous other publications on topics such as global cities, environmental issues, and religion. He is editor of the Routledge series, Cities and Global Governance and was selected to the Chicago Council on Global Affairs Emerging Leaders Program for 2011-2013. His expertise includes issues related to urban and environmental politics, global cities, and public policy. Dr. Toly directs the Urban Studies and Wheaton in Chicago programs.

From climate change to acid rain, contaminated landscapes, mercury pollution, and biodiversity loss, **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 sometimesexacerbated**—social** inequalities **that its architects promised would be banished** (Smil, 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 12 Transforming 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 cheap to meter” (Lewis Strauss, cited in the New York Times 1954, 1955). In reply to those who fear catastrophic accidents from the “magical fire” or the proliferation 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 (1934: 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. 02Chapter1.pmd 2 1/6/2006, 2:56 PMEnergy as a Social Project 3 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 a life-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-tense 7 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.

#### The impact is Extinction – The K turns and solves the root cause of their impacts – the aff causes error replication

**Ahmed 12** Dr. Nafeez Mosaddeq Ahmed is Executive Director of the Institute for Policy Research and Development (IPRD), an independent think tank focused on the study of violent conflict, he has taught at the Department of International Relations, University of Sussex "The international relations of crisis and the crisis of international relations: from the securitisation of scarcity to the militarisation of society" Global Change, Peace & Security Volume 23, Issue 3, 2011 Taylor Francis

The twenty-first century heralds the unprecedented acceleration and convergence of multiple, interconnected global crises – climate change, energy depletion, food scarcity, and economic instability. While the structure of global economic activity is driving the **unsustainable** depletion of hydrocarbon and other natural resources, this is simultaneously escalating greenhouse gas emissions resulting in global warming. Both global warming and energy shocks are impacting detrimentally on global industrial food production, as well as on global financial and economic instability. Conventional policy responses toward the intensification of these crises have been decidedly inadequate because scholars and practitioners largely view them as separate processes. Yet increasing evidence shows they are deeply **interwoven manifestations** of a global political economy that has breached the limits of the wider environmental and natural resource systems in which it is **embedded**. In this context, orthodox IR's flawed diagnoses of global crises lead inexorably to their ‘securitisation’, **reifying** the militarisation of policy responses, and naturalising the proliferation of violent conflicts. Global ecological, energy and economic crises are thus directly linked to the ‘**Otherisation’** of social groups and problematisation of strategic regions considered pivotal for the global political economy. Yet this relationship between global crises and conflict is not necessary or essential, but a function of a **wider** epistemological failure to holistically interrogate their structural and systemic causes**.** In 2009, the UK government's chief scientific adviser Sir John Beddington warned that without mitigating and preventive action 'drivers' of global crisis like demographic expansion, environmental degradation and energy depletion could lead to a 'perfect storm' of simultaneous food, water and energy crises by around 2030.1 Yet, for the most part, conventional policy responses from national governments and international institutions have been decidedly inadequate. Part of the problem is the way in which these crises are conceptualised in relation to security. Traditional disciplinary divisions in the social and natural sciences, compounded by bureaucratic compartmentalisation in policy-planning and decision-making, has meant these crises are frequently approached as largely separate processes with their own internal dynamics. While it is increasingly acknowledged that cross-disciplinary approaches are necessary, these have largely failed to recognise just how inherently interconnected these crises are. As Brauch points out, 'most studies in the environmental security debate since 1990 have ignored or **failed** to integrate the contributions of the global environmental change community in the natural sciences. To a large extent the latter has also failed to integrate the results of this debate.\*" Underlying this problem is the **lack** of a **holistic systems approach** to **thinking** about not only global crises, but their causal **origins** in the social, political, economic, ideological and value structures of the contemporary international system. Indeed, it is often assumed that these contemporary structures are largely what need to be 'secured\* and protected from the dangerous impacts of global crises, rather than transformed precisely to ameliorate these crises in the first place. Consequently, policy-makers frequently overlook existing **systemic and structural obstacles** to the implementation of desired reforms. In a modest effort to contribute to the lacuna identified by Brauch, this paper begins with an **empirically-oriented, interdisciplinary exploration** of the **best** available **data** on four major global crises — climate change, energy depletion, food scarcity and global financial instability — illustrating the **systemic interconnections** between different crises, and revealing that their causal origins are not accidental but inherent to the structural failings and vulnerabilities of existing global political, economic and cultural institutions. This empirical evaluation leads to a critical appraisal of orthodox realist and liberal approaches to global crises in international theory and policy. This critique argues principally that orthodox IR reifies a highly fragmented, de-historicised ontology of the international system which underlies a reductionist, technocratic and compartmentalised conceptual and methodological approach to global crises. Consequently, rather than global crises being understood causally and **holistically** in the systemic context of the structure of the international system, they are 'securitised\* as amplifiers of traditional security threats, requiring counter-productive militarised responses and/or futile inter-state negotiations. While the systemic causal context of global crisis convergence and acceleration is thus elided, this simultaneously **exacerbates** the danger of **reactionary violence**, the problematisation of populations in regions impacted by these crises and the naturalisation of the consequent proliferation of wars and humanitarian disasters. This moves us away from the debate over whether resource 'shortages\* or 'abundance\* causes conflicts, to the question of how either can generate crises which undermine conventional socio-political orders and confound conventional IR discourses, in turn radicalising the processes of social polarisation that can culminate in **violent conflict**.

#### VOTE NEG – Interrogating dominant policy frameworks creates space for new ways of approaching energy policy – our role as energy policy researchers should be to interrogating the framing of our policies

**Scrase and Ockwell 10** (J. Ivan - Sussex Energy Group, SPRU (Science and Technology Policy Research), Freeman Centre, University of Sussex, David G - Tyndall Centre for Climate Change Research, SPRU, Freeman Centre, University of Sussex, “The role of discourse and linguistic framing effects in sustaining high carbon energy policy—An accessible introduction,” Energy Policy: Volume 38, Issue 5, May 2010, Pages 2225–2233)

We hope that this article has served to provide an accessible introduction to the ways in which discourse and linguistic framing effects might be playing a role in sustaining **energy policy frameworks** that are **resistant to** the many insightful **changes** often advocated in the pages of Energy Policy. If the influence of such framing effects is accepted, we begin to see how the process of effecting changes in energy policy is not just a technical or economic task, but also a political task. Moreover, this highlights an urgent need for civil society to engage directly with the existing framing of energy policy and the problems it seeks to address in an effort to reframe it around more sustainable, low carbon principles and concerns. The demonstration of the value of a **discourse analytic approach** in this paper, together with other emerging contributions in this field (cited above), also serves to highlight some **important considerations for energy policy researchers**. Moving away from the traditional **linear understanding** of the policy process **requires** researchers to critically reflect on the interplay of values, beliefs, entrenched interests and institutional structures that serve to **facilitate** or constrain **the policy traction** of certain framings of **energy policy problems and solutions**. Further than this, it also highlights the role in this process that we ourselves play as **researchers**, and the extent to which our own values, beliefs and interests influence the **framing of our research practice and communication**. This has important and far reaching implications, both **methodological** and normative, raising considerations that are likely to continue to gain traction as researchers and policy makers alike increasingly appreciate the need for reflexivity in our approach to **framing**, interpreting and implementing **energy policy** in the decades to come.[2](http://www.sciencedirect.com/science/article/pii/S0301421509009471#fn2)

### Oil

#### Saudi would flood the market in response to the plan and crash oil prices

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That’s unlikely to happen, precisely because Riyadh can bring further pricing pressures to bear **if it wants to get its way** in the cartel. The Kingdom’s policy space has admittedly tightened over the past couple of years, but they remain **the only producer capable of significantly increasing or reducing production at will**. Initial tanker data from Europe suggests Riyadh may have started reigning in production that was running around 6% over OPEC quota. It’s also raised July benchmarks for Arab Light grades in Asia. But Iran, Venezuela, Nigeria, Angola and Algeria will want restraint to come far faster and far deeper to firm prices. The line being spun from the ‘free lunch’ brigade is that storage should easily cover any Iranian spikes when EU sanctions come into full effect 1st July, while OPEC quotas should be pared down to 29.5mb/d (or less). Cheap words from petro-hawks, not least because they’ll all continue to cheat on quotas to squeeze out every last drop they have. Riyadh knows that of course; hawks want a price floor to be set at $100/b to sustain political regimes, but to do so entirely at Saudi expense. Russia is no different outside the cartel: free riding 101. Saudi Arabia (and its GCC partners) might be willing to play ball given ongoing concerns from the Arab Awakening, but with some budgetary tweaks and counter-cyclical cash to burn, they could all easily survive at $85/b making Iran et al sweat. Tehran might decide to rip up formal quotas as it did in June 2011, but that would be a costly mistake. If the Saudis let prices fall, political outages across smaller producer states could help to set a floor for them anyway. Iran would have no say in the matter. Given such ‘pricing perils’, Saudi Arabia holds all the aces to settle institutional issues, not to mention giving the global economy more breathing space (and Washington greater leeway over Iranian sanctions). But the real reason to let prices fall a little further isn’t just to make very clear to OPEC states where the ultimate volume and pricing power rests, but to fight Riyadh’s **bigger battle** over the next decade: **Retaining** 40% of **OPEC market share in the midst of supposedly huge non-OPEC supply growth**. It didn’t go unnoticed that despite Saudi production averaging 31 year highs and prices hitting $128/b in March 2012, the forward curve for 2018 was trading at $30/b discounts relative to spot. You’d think with the cartel maxed out and proximate demand side problems looking bleak, five year curves would be exactly the other way, in sharp contango (i.e. far above prompt prices) once the global economy and demand side fundamentals were fixed. The fact they weren’t is principally because the market thinks vast swathes of unconventional production will come online, not just in North America where production is back above 6mb/d, but in Canada, Brazil and even Arctic extremes. At $100/b that was a fair bet to place, but once benchmark prices drop back to two figures, the 6.4 trillion barrels of unconventional reserves sitting in the Americas look a far less certain prospect. Canadian tar distinctly sticky; Brazilian pre-salt horribly deep; Russian Arctic plays simply impossible. So when OPEC meets in Vienna expect Saudi Arabia to call the shots. The new Secretary General will either be a Saudi national, or a compromise candidate Riyadh can live with. Quotas will stay close to 30mb/d with minor reductions possible. Thinly veiled threats of sustained (or increased) production will be made if Iran doesn’t play ball. Yet the long term price point to watch isn’t just one that keeps OPEC in business and Riyadh in control, but where the al-Saud can maintain secular market share. Letting prices **informally slide** to $85-90/b **might be the** kind of warning shot **Riyadh wants** to send to scrub unconventional plays off global balance sheets. Its OPEC colleagues will see that as sailing far too close to the political wind, but a Saudi bloodbath now, might be just the medicine OPEC requires to sustain its long term health, not unless the cartel is absolutely determined to keep pricing itself out of existence.

#### Oil prices are key to Russian military modernization

BENNETT ‘12 – MA from the University of Chicago; Emory University School of Law (John T. “Oil Prices Fueling Russia's Disruption of U.S. Foreign Policy”. April 04, 2012. http://www.usnews.com/news/articles/2012/04/03/oil-prices-fueling-russias-disruption-of-us-foreign-policy)

Russia's return to the fore as a check against America's global whims has escalated in recent months, as Russian Prime Minister Vladimir Putin was elected as President, and is setting his agenda for a third term. U.S.-Russian relations returned to the front pages last week after Obama urged outgoing Russian President Dmitry Medvedev to "give me space" on several issues, including a European missile defense shield that Moscow opposes. Likely GOP presidential nominee Mitt Romney soon after called Russia America's "top geopolitical enemy." "Putin still aspires for Russia to be a superpower," says Steven Pifer, a former U.S. ambassador to Ukraine. "There are only two ways for Russia to achieve that: nuclear weapons, and oil and natural gas sales." The price of a barrel of oil was nearly $105 at midday Tuesday, steadily climbing from a 52-week low of $76.35 per barrel in October. Oil prices began to rise in late 2010, peaking at $113 per barrel in May 2011, before dipping last summer and then rising again. Russia is the world's second-largest oil exporter at 5 million barrels a day, and its the ninth-leading natural gas exporter at 38.2 billion cubic meters a year, according to the CIA World Factbook. Russia rakes in nearly $500 billion annually in exports, with the CIA listing petroleum and natural gas as its top two commodities. Frances Burwell, vice president of the Atlantic Council, says Russia's oil revenues "give it a comfort zone" from which its leaders feel they have the global cache to make things tough for Washington. Burwell says she "places more weight" for Russia's recent global muscularity on "Putin's re-emergence." The Russian once-and-soon-again president "clearly sees playing the national card as the strong guy internationally benefits him," she says. But, make no mistake, bloated national coffers from high oil and gas prices underwrite Putin's muscle-flexing, experts say. Putin made a number of big domestic promises during the presidential race, including plans to usher in sweeping pension and wage hikes. He also put forth "a rather ambitious military modernization program," Pifer says. "If oil prices remain high, he might be able to do all of those things," Pifer says. "If prices come down, however, Putin will have some very tough decisions to make at home ... between guns versus butter." **Should** oil and gas **prices tumble, experts say Putin would** likely **pick butter**. "In 2007 when oil was doing well, Putin [as president] could have modernized the Russian military," says Pifer. Instead, Putin made a number of economic moves, such as the creation of a rainy day fund that was used during the recent global financial crisis," Pifer notes. What's more, Putin returns to power with his sharp eyes locked on his opposition, which is composed of the country's urban, middle-class populations. Experts agree that Putin would be hard-pressed to break his pension and wage promises in favor of a few more missiles. But even an economically weaker Russia would likely pick its spots to block Washington's desires.

#### Impact is Russian nuclear preemption—modernization key to lower nuclear reliance and Russian threat perception

RENZ AND THORNTON 12 – lectures on international security in the Faculty of Social Sciences, University of Nottingham (Bettina., Rod. “Russian Military Modernization Cause, Course, and Consequences” Problems of Post-Communism Volume 59, Number 1 / January / February 2012. P 52-54)

The perceived weakness of this triad means that the Kremlin was pleased with the START agreement of March 2010. The treaty limits favor Moscow in that it does not have to cut any of its own nuclear warheads or delivery systems—the numbers of ICBMs and warheads in its own triad are actually below the negotiated caps. Only the United States has had to bring its numbers down.58 Normally, in the arranging of such international security treaties, negotiating from a position of military weakness—as Russia was—is not conducive to the ability to drive a hard bargain. Moscow has been lucky, however, in that Washington seems not to be too interested in the shape of Russia’s current and future nuclear arsenal. Rather, in terms of perceived security threats, Washington has its eye more on the terrorist ball than on the Russian one. Additionally, under START, Russia does not have to reduce the number of its tactical nuclear weapons. It has more of these than the United States. These are prized and important assets to Moscow, and they have become even more prized and important as Russia’s conventional military has become weaker. They are seen more and more as the fallback option if Russia one day faces some sort of defeat in a conventional conflict—against the likes of Georgia or China. In the largest Russian military exercise held since the end of the cold war—conducted recently in the Russian Far East—**tactical nuclear weapons** (i.e., mines) **were** notionally “**exploded**” as part of the exercise play.59 This fact alone seems to confirm that **Russia’s conventional** military **weakness** has **led to a reduction in its nuclear-use threshold**. Conclusion The current modernization in the Russian military is long overdue. Because it is long overdue, it has to be completed in a rushed, haphazard fashion and against a backdrop of a military–industrial complex unable to fulfill its role in the process. Traditionally, military modernization is not achieved lightly, given the bureaucratic inertia and cultural norms that are always present. When, as in the current situation in Russia, such barriers to change are aided and abetted by any number of additional problems (not to mention the rampant corruption that is endemic across all levels of Russian state institutions, including the military), then it must be expected that Russia’s armed forces will be striving for some time to become truly “modern.”60 In essence, what should have been accomplished as an evolution over many years, and should have begun during the Yeltsin era, is now being attempted as a revolution in the post–Georgian war era. As with any revolutionary change, a good deal of disruption and disaffection has been created. Moreover, the current Russian military is a weakened military. The psychology of the tsarist/Soviet/Russian military has always been that numbers counted, that mass would prevail. Numbers inspired confidence, and numbers could deter. But the current Russian military is losing numbers while not making up for them by creating smaller, more professional forces equipped with the requisite technologies. Quality is not replacing quantity. The military is in a state of flux. Russian **politicians and military** **figures** both now **lack** a genuine **confidence in the armed forces’** ability to deter. This can have two consequences. Either Russia takes large steps to avoid the possibility of military confrontation by stressing diplomatic solutions to possible threat scenarios (as the tsarist government did in 1914), or it goes the opposite way, fearing that if any state is threatening military action against Russia then the hair trigger comes into operation (Israeli-style). That is, the mentality of the first, preemptive strike becomes paramount—taking advantage of surprise—and using what assets Russia now has. The alternative is to take the risk of waiting to be attacked and maybe “losing.” What is clear is that, with its armed forces currently weakened by the process of change, the sense of vulnerability generated has led Russia, in classic confirmation of the security dilemma concept, to magnify the threats it faces, or thinks it faces. Conscious of its vulnerability to threats, real or imagined, Moscow may begin to look more and more toward the inflexible tool of its tactical nuclear weapons as its principal defense mechanism. While no one really supposes that such weapons will be used in any confrontation with the West, the same cannot be said of any possible conflict with the Chinese. Ironically, Beijing’s military still relies on mass. The best modern military counter to mass is to employ either PGMs or tactical nuclear weapons. The Russian military has hardly any of the former but plenty of the latter. Hair triggers and tactical nuclear weapons are not comfortable bedfellows.

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#### CIR pass – top Democrats.

Reuters 2-3. ["Reid predicts Congress will pass immigration legislation" -- news.yahoo.com/reid-predicts-u-congress-pass-immigration-legislation-172812947.html]

The top Senate Democrat on Sunday predicted that Congress will pass and send to President Barack Obama legislation overhauling the U.S. immigration system, saying "things are looking really good."¶ Obama last week expressed hope Congress can get a deal done on immigration, possibly in the first half of the year.¶ The president is proposing to give the roughly 11 million U.S. illegal immigrants - most of whom are Hispanics - a pathway to citizenship, a step that many Republicans have long fought.¶ Obama's fellow Democrats control the Senate, but Republicans control the House of Representatives.¶ Appearing on the ABC program "This Week," Senate Majority Leader Harry Reid was asked whether immigration legislation can win House passage.¶ "Well, it's certainly going to pass the Senate. And it would be a bad day for our country and a bad day for the Republican Party if they continue standing in the way of this. So the answer is yes," Reid said.¶ Obama choose Reid's home state of Nevada, with a sizable Hispanic population, as the site for a major speech last Tuesday pushing Congress to pass an immigration bill.¶ Hispanic voters were crucial in helping Obama beat Republican nominee Mitt Romney - who advocated "self-deportation" of illegal immigrants - in Nevada in November.¶ "It has to get done," Reid said of immigration legislation.¶ "It's really easy to write principles. To write legislation is much harder. And once we write the legislation, then you have to get it passed. But I think things are looking really good," Reid added.¶ After years on the back burner, immigration reform has suddenly looked possible as Republicans, chastened by the fact that more than 70 percent of Hispanic voters backed Obama in the November election, appear more willing to accept an overhaul.

#### Natural gas is politically explosive

Mantius, 11 – DC Bureau staff

(Peter, "Cuomos Hydrofracking Honeymoon Ends July 1," DC Bureau, 6-30-11, l/n, accessed 9-2-12, mss)

Throughout his first legislative session, New York Gov. Andrew Cuomo had the luxury of sitting on the fence on the **politically explosive** question of whether or not his state can safely open its borders to a **controversial** natural gas drilling technique. During that grace period, Cuomo successfully backed gay marriage, watched his approval rating soar above 60 percent and heard buzz about his potential as a 2016 presidential candidate. But the honeymoon ends July 1 when the state Department of Environmental Conservation releases its latest draft of requirements for permits to use high volume hydraulic fracturing when drilling in New Yorks Marcellus Shale formation. According to The New York Times, the Cuomo administration will lift what has been a moratorium on hydraulic fracturing. The governor bought time in the first half of 2011 by insisting that experts at the DEC “not politicians “ write the rules for gas drilling. To address criticism that the DECs previous draft rules on hydrofracking were inadequate, Cuomo, in one of his first acts as governor, gave the agency a quick makeover. He appointed Joseph Martens as DEC commissioner and then turned his attention to other matters. œCuomo made a point of saying that he and Martens had actually never spoken on hydrofracking, said Roger Downs of the Sierra Clubs Atlantic Chapter. œHe wanted a firewall. Meanwhile, New Yorks Republican-controlled Senate took a rigid stance against passing gas drilling legislation in the 2011 session before the DEC issued its latest version of gas drilling rules. That meant that three bills that passed the Democratically-controlled Assembly “ a moratorium on fracking the New York Marcellus until next summer, a œhome rule measure guaranteeing the rights of communities to ban hydrofracking, and a bill to end the oil and gas industrys exemption from rules applying to hazardous waste “ all died quietly in the Senate. Everything was left hanging on the DECs revised rules, due July 1. Those rules are spelled out in a supplemental generic environmental impact statement, or SGEIS. The agency intends to allow drillers to cite the document instead of developing their own environmental impact statements for each gas well they drill, a process that has the potential to greatly speed up the well permitting process. The DECs previous draft of the SGEIS drew criticism from not only environmental groups, but also government agencies such as the federal Environmental Protection Agency, the New York State Department of Health and the New York City Department of Environmental Protection. Critics tended to focus on the drafts scant attention to the cumulative impact of hundreds, if not thousands, of hydrofracked wells and the failure to comprehensively address the regions lack of capacity to deal with millions of gallons of contaminated well flowback water.

#### PC shapes uq

Des Moines Register 1-22-13. www.desmoinesregister.com/article/20130122/OPINION03/301220049/0/NEWS/?odyssey=nav%7Chead&nclick\_check=1

Taken as an agenda for his second term, Monday’s inaugural address included references to immigration, climate change, gay rights, voting rights and safe schools. Achieving those things will require the president mounting his bully pulpit to put heat on Congress to pass comprehensive immigration reform, protections for the rights of gays and lesbians, gun control, environmental regulation and expansion of renewable forms of energy.¶ President Obama again demonstrated his gift of oratory on Monday. He delivered a well-crafted inaugural address with inspiring themes woven throughout and a call to action for our generation to achieve the ideals of previous generations.¶ But Obama should have learned in his first term that it is not enough to state lofty goals in great speeches. It takes hard work, perseverance and tough-mindedness to deal with members of Congress who may not want him to succeed.

#### Comprehensive reform is key to food security

**ACIR ‘7** (December 4, 2007 THE AGRICULTURE COALITION FOR IMMIGRATION REFORM

Dear Member of Congress: The Agriculture Coalition for Immigration Reform (ACIR) is deeply concerned with pending immigration enforcement legislation known as the ‘Secure America Through Verification and Enforcement Act of 2007' or ‘SAVE Act’ (H.R.4088 and S.2368). While these bills seek to address the worthy goal of stricter immigration law enforcement, they fail to take a comprehensive approach to solving the immigration problem. History shows that a one dimensional approach to the nation’s immigration problem is doomed to fail. Enforcement alone, without providing a viable means to obtain a legal workforce to sustain economic growth is a formula for disaster. Agriculture best illustrates this point. Agricultural industries that need considerable labor in order to function include the fruit and vegetable, dairy and livestock, nursery, greenhouse, and Christmas tree sectors. Localized labor shortages have resulted in actual crop loss in various parts of the country. More broadly, producers are making decisions to scale back production, limit expansion, and leave many critical tasks unfulfilled. Continued labor shortages could force more producers to shift production out of the U.S., thus stressing already taxed food and import safety systems. Farm lenders are becoming increasingly concerned about the stability of affected industries. This problem is aggravated by the nearly universal acknowledgement that the current H-2A agricultural guest worker program does not work. Based on government statistics and other evidence, roughly 80 percent of the farm labor force in the United States is foreign born, and a significant majority of that labor force is believed to be improperly authorized. The bills’ imposition of mandatory electronic employment eligibility verification will screen out the farm labor force without providing access to legal workers. Careful study of farm labor force demographics and trends indicates that there is not a replacement domestic workforce available to fill these jobs. This feature alone will result in chaos unless combined with labor-stabilizing reforms. Continued failure by Congress to act to address this situation in a comprehensive fashion is placing in jeopardy U.S. food security and global competitiveness. Furthermore, congressional inaction threatens the livelihoods of millions of Americans whose jobs exist because laborintensive agricultural production is occurring in America. If production is forced to move, most of the upstream and downstream jobs will disappear as well. The Coalition cannot defend of the broken status quo. We support well-managed borders and a rational legal system. We have worked for years to develop popular bipartisan legislation that would stabilize the existing experienced farm workforce and provide an orderly transition to wider reliance on a legal agricultural worker program that provides a fair balance of employer and employee rights and protections. We respectfully urge you to oppose S.2368, H.R.4088, or any other bills that would impose employment-based immigration enforcement in isolation from equally important reforms that would provide for a stable and legal farm labor force.

#### Food insecurity sparks World War 3

**Calvin ’98** (William, Theoretical Neurophysiologist – U Washington, Atlantic Monthly, January, Vol 281, No. 1, p. 47-64)

The population-crash scenario is surely the most appalling. Plummeting crop yields would cause some powerful countries to try to take over their neighbors or distant lands -- if only because their armies, unpaid and lacking food, would go marauding, both at home and across the borders. The better-organized countries would attempt to use their armies, before they fell apart entirely, to take over countries with significant remaining resources, driving out or starving their inhabitants if not using modern weapons to accomplish the same end: eliminating competitors for the remaining food. This would be a worldwide problem -- and could lead to a Third World War -- but Europe's vulnerability is particularly easy to analyze. The last abrupt cooling, the Younger Dryas, drastically altered Europe's climate as far east as Ukraine. Present-day Europe has more than 650 million people. It has excellent soils, and largely grows its own food. It could no longer do so if it lost the extra warming from the North Atlantic.

### CP

#### The United States federal government should establish a regional subgroup for cooperation on climate change

#### Solves environmental signaling

The Brookings Institution 8 (Commission Includes: Ernesto Zedillo, Former President of Mexico, Thomas Pickering, Former US Under Secretary of State“Rethinking US-Latin American Relations” A Hemispheric Parternship for a Turbulent World” November 2008)

Establish a regional subgroup for cooperation on climate change to provide a hemispheric vehicle to coordinate positions in the context of the global climate change negotiations. In cooperation with Brazil and Mexico, the United States should establish a regional subgroup on climate change and seek its recognition as a Subsidiary Body for Scientific and Technical Advice under the United Nations Framework Convention on Climate Change. This subgroup would provide a hemispheric vehicle for coordinating positions in the context of the global climate change negotiations. In joining the regional subgroup, members would commit to price carbon explicitly, through a carbon tax or a cap-and-trade scheme, in accordance with universally agreed-on targets for combating climate change. They would also commit to price carbon implicitly, through greater efficiency in energy use and through alternative fuel standards. Members would support a global investment regime to help develop and share new technology on alternative energies, reduce deforestation, and bring low-carbon-emitting power to poor states. The subgroup would be sensitive to the principle that states have common but differentiated responsibilities, as stated in the Rio Declaration.

### China

#### China attracting foreign experts now- nuclear key to competitiveness

Vasilenkov ‘12 [Sergei Vasilenkov, journalist for Pravda, Russian news service, “World's brightest minds migrate to China,” <http://english.pravda.ru/business/companies/03-10-2012/122332-china_brain_drain-0/>, 3-10-12]

China actively took up the issue of attracting highly skilled professionals, scientists and managers to the country. Foreigners are offered attractive conditions, and observers are already talking of this trend as the "brain drain" into the PRC. China that does not shy away from learning from other countries intends to create the "Chinese dream". The deputy head of the State Administration for Foreign Professionals Liu Yanguo in an interview with China Daily said that China was in a full swing campaign to attract foreign specialists to active participation in the various scientific and economic areas in China. The project designed for 10 years seeks to bring to the country 1,000 highly skilled professionals from around the world. The program was launched last year, and of 40 experts attracted 30 started working, and the rest will be employed by the end of September. Major areas and disciplines where professionals from abroad will work is mathematics, physics, research in the field of chemistry, environment, engineering, energy, life sciences, and business management. Liu Yanguo said that China was very serious about the selection of candidates to work in China. Among the requirements are age under 65, ability to work in China for at least 3 years, as well as living at least 9 months of the year in the country along with high qualifications of the candidate to be monitored by a special commission. Since the beginning of the program 530 applications from candidates to work in China have been submitted. Mostly the interest comes from the countries that have close economic and technological ties with China - the U.S., Japan, UK, Germany and Russia. Yanguo also points out that, in contrast to the "American Dream", the time has come for the "Chinese Dream", which may look attractive to the best talent from around the world. Due to globalization and the rapid development of China, the country is willing to invest in the importation of foreign professional expertise, and create favorable conditions for foreigners qualified for the job. Foreign workers coming to work in China under the project are given a grant in the amount of 1 million yuan (157,700 U.S. dollars) from the government of the PRC. Foreign researchers may also receive grants to conduct research in the amount of 3 to 5 million yuan. China's experience in attracting highly skilled professionals from other countries will be able to raise the country's economy to a new level. Others countries, obviously, can follow the example of China in attracting the world's knowledge and technology. Attracting professionals from abroad, China is focused primarily on the accumulation of knowledge in the most advanced fields in order to effectively use them for the benefit of the economic, military and technological power of China. The idea to attract foreign experts to China is not new. Back in the 1990s, scientists from other countries have come to China. Jeffrey Lehman, rector and professor at the Institute of jurisprudence, University of Michigan, began organizing trips of scientists from Michigan to work at Beijing University. This trend is relevant in light of budget cuts in many Western universities - scientists are forced to seek work in other scientific centers of the world, and China in this regard offers attractive prospects. In 2008, the Chinese Government has also launched a project to attract foreign specialists called "Program thousand talents." As part of the program 1,600 people came into the country, many of whom, however, were ethnic Chinese living abroad. Li Jun, Associate Professor of HK Institute of Education, believes that because the Chinese universities receive major funding from the government, they are able to bring highly skilled scientific work from abroad. Foreign staff working in the universities in China increases their competitiveness and reputation, which is important in terms of competition among universities. This, in turn, contributes to obtaining university research funding. Chinese universities attract mostly professionals from applied scientific fields - mathematics, engineering, and various process industries. The country in the era of technological breakthroughs needs such specialists, providing further technological and economic development of China.

#### Foreign expertise key to competitiveness and China economy- nuclear tech key

Cullinane ’11 [Scott, Staff at House Foreign Affairs Committee, “America Falling Behind: The Strategic Dimensions of Chinese Commercial Nuclear Energy,” Sept. 28, <http://www.ensec.org/index.php?option=com_content&view=article&id=319:america-falling-behind-the-strategic-dimensions-of-chinese-commercial-nuclear-energy&catid=118:content&Itemid=376>]

While America’s nuclear industry has languished, current changes in the world’s strategic layout no longer allow America the option of maintaining the status quo without being surpassed. The drive for research, development, and scientific progress that grew out of the Cold War propelled America forward, but those priorities have long since been downgraded by the US government. The economic development of formerly impoverished countries means that the US cannot assume continued dominance by default. The rapidly industrializing PRC is seeking its own place among the major powers of the world and is vying for hegemony in Asia; nuclear power is an example of their larger efforts to marshal their scientific and economic forces as instruments of national power. The rise of China is a phrase that connotes images of a backwards country getting rich off of exporting cheap goods at great social and environmental costs. Yet, this understanding of the PRC has lead many in the United States to underestimate China’s capabilities. The Communist Party of China (CPC) has undertaken a comprehensive long-term strategy to transition from a weak state that lags behind the West to a country that is a peer-competitor to the United States. Nuclear technology provides a clear example of this. In 1978, General Secretary Deng Xiaoping began to move China out of the destructive Mao era with his policies of 'reform and opening.' As part of these changes during the 1980s, the CPC began a concerted and ongoing effort to modernize the PRC and acquire advanced technology including nuclear technology from abroad. This effort was named Program 863 and included both legal methods and espionage. By doing this, the PRC has managed to rapidly catch up to the West on some fronts. In order to eventually surpass the West in scientific development the PRC launched the follow-on Program 973 to build the foundations of basic scientific research within China to meet the nation’s major strategic needs. These steps have brought China to the cusp of the next stage of technological development, a stage known as “indigenous innovation.” In 2006 the PRC published their science and technology plan out to 2020 and defined indigenous innovation as enhancing original innovation, integrated innovation, and re-innovation based on assimilation and absorption of imported technology in order improve national innovation capability. The Chinese seek to internalize and understand technological developments from around the world so that they can copy the equipment and use it as a point to build off in their own research. This is a step beyond merely copying and reverse engineering a piece of technology. The PRC sees this process of absorbing foreign technology coupled with indigenous innovation as a way of leapfrogging forward in development to gain the upper hand over the West. The PRC’s official statement on energy policy lists nuclear power as one of their target fields. When viewed within this context, the full range of implications from China’s development of nuclear technology becomes evident. The PRC is now competing with the United States in the areas of innovation and high-technology, two fields that have driven American power since World War Two. China’s economic appeal is no longer merely the fact that it has cheap labor, but is expanding its economic power in a purposeful way that directly challenges America’s position in the world. The CPC uses the market to their advantage to attract nuclear technology and intellectual capital to China. The PRC has incentivized the process and encouraged new domestic nuclear power plant construction with the goal of having 20 nuclear power plants operational by 2020. The Chinese Ministry of Electrical Power has described PRC policy to reach this goal as encouraging joint investment between State Owned Corporations and foreign companies. 13 reactors are already operating in China, 25 more are under construction and even more reactors are in the planning stages. In line with this economic policy, China has bought nuclear reactors from Westinghouse and Areva and is cooperating with a Russian company to build nuclear power plants in Taiwan. By stipulating that Chinese companies and personnel be involved in the construction process, China is building up its own domestic capabilities and expects to become self-sufficient. China’s State Nuclear Power Technology Corporation has partnered with Westinghouse to build a new and larger reactor based on the existing Westinghouse AP 1000 reactor. This will give the PRC a reactor design of its own to then export. If the CPC is able to combine their control over raw materials, growing technical know-how, and manufacturing base, China will not only be a powerful economy, but be able to leverage this power to service its foreign policy goals as well. Even though the PRC is still working to master third generation technology, their scientists are already working on what they think will be the nuclear reactor of the future. China is developing Fourth Generation Fast Neutron Reactors and wants to have one operational by 2030. Additionally, a Chinese nuclear development company has announced its intentions to build the “world’s first high-temperature, gas-cooled reactor” in Shandong province which offers to possibility of a reactor that is nearly meltdown proof. A design, which if proved successful, could potentially redefine the commercial nuclear energy trade.

#### China economy collapses causes Taiwan war with the United States

Lewis ‘8 [Dan, Research Director – Economic Research Council, “The Nightmare of a Chinese Economic Collapse,” World Finance, 5/13, <http://www.worldfinance.com/news/home/finalbell/article117.html>]

In 2001, Gordon Chang authored a global bestseller "The Coming Collapse of China." To suggest that the world’s largest nation of 1.3 billion people is on the brink of collapse is understandably for many, a deeply unnerving theme. And many seasoned “China Hands” rejected Chang’s thesis outright. In a very real sense, they were of course right. China’s expansion has continued over the last six years without a hitch. After notching up a staggering 10.7 percent growth last year, it is now the 4th largest economy in the world with a nominal GDP of $2.68trn. Yet there are two Chinas that concern us here; the 800 million who live in the cities, coastal and southern regions and the 500 million who live in the countryside and are mainly engaged in agriculture. The latter – which we in the West hear very little about – are still very poor and much less happy. Their poverty and misery do not necessarily spell an impending cataclysm – after all, that is how they have always have been. But it does illustrate the inequity of Chinese monetary policy. For many years, the Chinese yen has been held at an artificially low value to boost manufacturing exports. This has clearly worked for one side of the economy, but not for the purchasing power of consumers and the rural poor, some of who are getting even poorer. The central reason for this has been the inability of Chinese monetary policy to adequately support both Chinas. Meanwhile, rural unrest in China is on the rise – fuelled not only by an accelerating income gap with the coastal cities, but by an oft-reported appropriation of their land for little or no compensation by the state. According to Professor David B. Smith, one of the City’s most accurate and respected economists in recent years, potentially far more serious though is the impact that Chinese monetary policy could have on many Western nations such as the UK. Quite simply, China’s undervalued currency has enabled Western governments to maintain artificially strong currencies, reduce inflation and keep interest rates lower than they might otherwise be. We should therefore be very worried about how vulnerable Western economic growth is to an upward revaluation of the Chinese yuan. Should that revaluation happen to appease China’s rural poor, at a stroke, the dollar, sterling and the euro would quickly depreciate, rates in those currencies would have to rise substantially and the yield on government bonds would follow suit. This would add greatly to the debt servicing cost of budget deficits in the USA, the UK and much of euro land. A reduction in demand for imported Chinese goods would quickly entail a decline in China’s economic growth rate. That is alarming. It has been calculated that to keep China’s society stable – ie to manage the transition from a rural to an urban society without devastating unemployment - the minimum growth rate is 7.2 percent. Anything less than that and unemployment will rise and the massive shift in population from the country to the cities becomes unsustainable. This is when real discontent with communist party rule becomes vocal and hard to ignore. It doesn’t end there. That will at best bring a global recession. The crucial point is that communist authoritarian states have at least had some success in keeping a lid on ethnic tensions – so far. But when multi-ethnic communist countries fall apart from economic stress and the implosion of central power, history suggests that they don’t become successful democracies overnight. Far from it. There’s a very real chance that China might go the way of Yugoloslavia or the Soviet Union – chaos, civil unrest and internecine war. In the very worst case scenario, a Chinese government might seek to maintain national cohesion by going to war with Taiwan – whom America is pledged to defend.

### Solvency

#### The NRC is not distributing SMR licenses – zero solvency

Tucker 11 (William, energy writer for the American Spectator, "America’s Last Nuclear Hope," March 2011, http://0101.nccdn.net/1\_5/28c/010/2c9/America-s-Last-Nuclear-Hope-Tucker-TAS.pdf-http://0101.nccdn.net/1\_5/28c/010/2c9/America-s-Last-Nuclear-Hope-Tucker-TAS.pdf)

So why isn't there more coordination between the civilian and military efforts? In fact there is some. The first commercial reactor built at Shippingport, Pennsylvania, in 1957 was actually a submarine reactor "beached" by Admiral Rickover's Navy. Since then hundreds of nuclear technicians trained in the Navy have gone on to find jobs in the nuclear industry. One reason most new reactors are now being planned in the South is the large presence of Navy veterans. But beyond that, the Navy's long experience with nuclear does not seem to build anyone's confidence that the technology can be handled in the civilian field. Instead, the great impediment to all this is the Nuclear Regulatory Commission, the gargantuan Washington bureaucracy that regularly wins awards as the "best place to work in the federal government" yet seems unable to deliver on its main purpose, which is to issue licenses for nuclear reactors. The NRC last issued a license for a nuclear reactor in 1976. No one knows if it will ever issue one again. One utility, Southern Electric, has received permission to begin site clearance at the Vogtle plants 3 and 4 in Georgia. But the Vogtle plants will be Westinghouse AP1000s, a model for which the NRC has not yet issued design approval, let alone permission to build particular projects. Four AP1000s are already well under construction in China, with the first scheduled to begin operation in 2013. Yet here the NRC is still trying to figure out how to protect the reactor from airplanes. Even though the containment structure is strong enough to withstand a direct hit from a commercial jet, the NRC asked Westinghouse to put up a concrete shield to protect adjacent buildings. Then after Westinghouse had completed the revision, the NRC decided the shield might fall down in an earthquake. Further revisions are still pending. When Hyperion first approached the NRC about design approval for its small modular reactor in 2006, the NRC essentially told it to go away -- it didn't have time for such small potatoes. Since then the NRC has relented and sat down for discussions with Hyperion last fall. Whether the approval process can be accelerated is still up for grabs, but at least there has been a response from the bureaucracy. OR COURSE, the NRC is only responding to the lamentations and lawsuits from environmentalists and nuclear opponents who have never reconciled themselves to the technology, even though nuclear's carbon-free electricity is the only reliable source of power that promises to reduce carbon emissions. If a new reactor project does ever make it out of the NRC, it will be contested in court for years, with environmental groups challenging the dotting of every i and crossing of every t in the decision-making. It will be a miracle if any proposal ever makes it through the process.

#### And they need to establish a new regulatory pathway- that’s extra topical- or no solvency- their author

Spencer and Loris ’11 (Jack Spencer is Research Fellow in Nuclear Energy in the Thomas A. Roe Institute for Economic Policy Studies, and Nicolas D. Loris is a Research Associate in the Roe Institute, “A Big Future for Small Nuclear Reactors?”, February 2, 2011, LEQ)

• Establish a new licensing pathway. The current licensing pathway relies on reactor customers to drive the regulatory process. But absent an efficient and predictable regulatory pathway, few customers will pursue these reactor technologies. The problem is that the legal, regulatory, and policy apparatus is built to support large light water reactors, effectively discriminating against other technologies. Establishing an alternative licensing pathway that takes the unique attributes of small reactors into consideration could help build the necessary regulatory support on which commercialization ultimately depends.14 • Resolve staffing, security, construction criteria, and fee-structure issues by December 31, 2011. The similarity of U.S. reactors has meant that the NRC could establish a common fee structure and many general regulatory guidelines for areas, such as staffing levels, security require- ments, and construction criteria. But these regulations are inappropriate for many SMR designs that often have smaller staff requirements, unique control room specifications, diverse security requirements, and that employ off-site construction techniques. Subjecting SMRs to regulations built for large light water reactors would add cost and result in less effective regulation. The NRC has acknowledged the need for this to be resolved and has committed to doing so, including developing the budget require- ments to achieve it. It has not committed to a specific timeline.15 Congress should demand that these issues be resolved by the end of 2011.

#### Massive alt cause- NRC is not distributing license until they resolve waste management

Smith and Tracy ’12 (Rebecca Smith and Ryan Tracy, “U.S. Regulator Halts Nuclear-Plant Licensing”, http://online.wsj.com/article/SB10000872396390443517104577575561397701568.html, August 7, 2012)

The U.S. Nuclear Regulatory Commission said it would stop issuing licenses for nuclear plants until it addresses problems with its nuclear-waste policy that were raised by a recent federal appeals court decision. The move, while not expected to affect any nuclear plants right away, shows how the standstill in finding a permanent American nuclear waste dump could undermine the expansion of nuclear power, which is already facing a challenge from cheaper natural gas. License Freeze U.S. reactors with pending license renewal applications In June, the U.S. Court of Appeals for the District of Columbia Circuit said the NRC's approach to managing nuclear waste was inconsistent with federal environmental standards. Until the ruling, the NRC had relied on what is known as the Waste Confidence Decision when issuing new licenses for proposed plants and extending the licenses of existing plants. Under that doctrine, the NRC said it could issue licenses because it had confidence that the U.S. eventually would create a permanent repository. But the Obama administration's elimination of funding for a proposed repository at Yucca Mountain in Nevada made that assertion less believable. The appeals court struck down the NRC's finding that there was "reasonable assurance" a permanent waste site would be created "when needed." It also rejected the NRC's finding that spent fuel could likely be stored safely for as long as 60 years beyond a plant's licensed life, either in pools or giant casks. Even if the NRC thinks pool leaks have been harmless so far, the court said, the NRC must still assess the probability and consequence of bigger leaks and other accidents. The NRC's move on Tuesday could delay licensing decisions for a year or more, depending on how long it takes the agency to fix the problems identified by the court. No such decisions were expected this year. Even a multiyear delay would not cause existing reactors to shut down. They can continue to operate so long as they sought extensions at least five years before their licenses expired. Environmentalists responded positively to the NRC decision, the first major step by incoming Chairwoman Allison Macfarlane, who is a nuclear waste expert. Richard Webster of the Public Justice environmental group said the courts wouldn't allow the NRC to operate under the "illusion" that the existing system of waste storage is sufficient. Diane Curran, an environmental attorney who represented several citizens' groups on the issue, said the NRC has "a lot of homework" and "it is hard for me to see how [the agency's response] could be finished in a year." Ellen Ginsberg, general counsel for the Nuclear Energy Institute, a trade organization for nuclear operators, said the NRC's decision was unavoidable given the court's decision. She said the federal government "has not met its statutory obligation" to relieve utilities of nuclear waste. An NRC spokesman said that within weeks, the agency's staff would send the five-member commission a series of options for dealing with the court decision. Nuclear operators have said they are willing to beef up on-site storage of nuclear waste to ensure that the waste can be safe for longer periods. If the NRC chooses that route, they say they hope that the agency would apply standards to the industry as a whole. Also, if regulators impose additional requirements, Ms. Ginsberg said, "the federal government will be further obligated to reimburse utilities and their ratepayers for those additional costs." Environmentalists are worried about leaking spent fuel pools and the risk of fires if something happens that allows water to boil off or drain away. That fear became more acute in the aftermath of the March 2011 accident at the Fukushima Daiichi nuclear power plant in Japan, which suffered explosions in the vicinity of spent fuel pools. One option for the U.S. is requiring operators to move spent fuel more quickly to dry storage casks.

#### Removing restrictions can’t solve – here are all of the things that are necessary

#### LOAN GUARANTEES

#### **Fertel 9**—35 years of experience consulting for electric utilities on issues related to designing, siting, licensing and managing both fossil and nuclear plants. Worked in executive positions with such organizations as Ebasco, Management Analysis Company and Tenera. In November 1990, he joined the U.S. Council for Energy Awareness as vice president of Technical Programs. (Marvin, Op-Ed: In Energy, Nuclear Leads Transition to Green Jobs,<http://www.nei.org/keyissues/newnuclearplants/economicbenefitsofnewnuclearplants/in-energy-nuclear-leads-transition-to-green-jobs/)>

Limited financial stimulus for wind, solar and advanced nuclear plants is appropriate to jumpstart this economic shift. For example, the federal loan guarantee program passed by Congress for carbon-free energy sources will lower the cost of building new electricity supplies that will in turn keep consumer costs down. Best of all, it doesn’t use U.S. taxpayer money. Those companies that will pursue loan guarantees also will pay the fees associated with implementing the program. However, $18.5 billion in loan guarantee volume approved by Congress in 2005 was swamped by applications from 17 companies seeking a total of $122 billion in loan guarantees for new nuclear plant projects. The loan guarantee program alone doesn’t address the real need for $2 trillion in financing for the electricity sector over the next 15 years. The economic and energy challenges facing our nation are daunting. We must have a national energy policy that develops carbon-free technologies, drives innovation to supply reliable electricity and creates jobs to help stimulate the U.S. economy. Nuclear energy is a vital part of the solution to these goals—producing 73 percent of all carbon-free electricity while creating tens of thousands of stable, high-paying jobs as part of a transition to a greener economy.

#### INVESTMENT

Becker et al 8—article by 6 MIT professors – Department of Physics, Professor Emeritus, MIT—Richard Milner—Director, Lab for Nuclear Science and Professor, MIT–AND—Eric Cosman— Department of Physics, Professor Emeritus, MIT—AND—Peter Demos—Department of Physics, Professor Emeritus, MIT—AND—Bruno Coppi—Prof of Physics, MIT (A Perspective on the Future Energy Supply of the United States: The Urgent Need for Increased Nuclear Power, web.mit.edu/fnl/volume/212/milner.html)

As with the construction of the national highway system, the space program, the Manhattan Project, and the subsequent support of science, especially nuclear science, in the U.S. beginning in the late 1940s, such an ambitious goal can be realized only if it is established as a high national priority, particularly taking into account the fact that dealing with the energy problem is considerably more complex and difficult than any of the aforementioned projects. An urgent call to action is needed by the leadership of this nation. This call to action by our leaders would resonate strongly with the citizens of the United States, especially with the recent 1price of oil at record levels. Successful realization will require streamlining of the permitting process to contain costs. It will require substantial resources from the federal government to implement the most technically advanced reactor designs, and will require the full participation by the best and brightest in private industry, government laboratories, and academic institutions across the nation. A substantial investment to support a new generation of nuclear scientists and engineers must be made to make this realization possible. We have been meeting regularly with colleagues at MIT, Harvard, and BU to consider the fast ramp-up of nuclear power in the U.S. We believe that the new U.S. President must address energy policy as a high priority and that nuclear will be an important component of U.S. energy supply in the coming decades. We would like to see MIT play a significant role in shaping this policy.

#### TAX CREDIT

Freeman 9—Technology Editor, Executive Intelligence Review Magazine and Associate Editor, 21st Century Science and Technology Magazine. Has written in Fusion Magazine, Executive Intelligence Review magazine, 21st Century Science and Technology magazine, Acta Astronautica, Space World magazine, New Federalist newspaper, Science Books and Films, Space Governance Journal, The World and I, Quest Magazine,The Encyclopedia of the Midwest, and other periodicals. (Marsha, Stimulate The Economy: Build New Nuclear Plants!,http://www.21stcenturysciencetech.com/Articles\_2009/Stimulate\_Nucl\_sp09.pdf)

There is no possibility that the dozens of nuclear power plants that need to be started immediately, will be built without Federal support. Contrary to widespread miseducation of the public during the recent 40 years, there can be no recovery of the U.S. economy from its presently ongoing breakdown without a capital-intensive mode which places heavy emphasis on the included role of nuclear power installations. The electric utility industry is the most capital-intensive sector of the U.S. economy, and nuclear power plants are the most capital intensive investments made in the utility sector. Nuclear reactions produce the most energy-dense form of energy; thousands-fold more dense than so-called renewables. 1 To produce usable energy from fission reactions, requires highly skilled labor for the construction and then operation of the plant, and high-quality nuclear-certified materials and components. The majority of the cost of nuclear energy is the construction of the plant. Because the amount of energy-dense fuel used is minimal 1. For details on energy flux density comparisons, see Laurence Hecht, “The Astounding High Cost of ‘Free’ Energy,” http://www.21stcenturysciencetech. com/Articles %202008/Energy\_cost.pdf. compared to any fossil fuel, the operating costs are modest. Today, utilities planning to build new nuclear plants do not have billions of dollars of cash on hand for this investment; they must raise capital, and it is Wall Street which sets the terms by which companies can borrow money. High interest rates on borrowed capital can put nuclear power plant costs out of reach. On Dec. 9, 2008, documents sent to the Nuclear Regulatory Commission revealed that the Tennessee Valley Authority (TVA) estimated that the updated cost of building two new nuclear power plants was in a range of $9.9 to $17.5 billion. This was more than double the original cost estimate, largely because of last year’s artificially created hyperinflationary rise in the price of steel, concrete, metal and copper wiring, and other materials. Responding to queries and disbelief from TVA’s customers that they would have to bear the burden of that inflated cost, Terry Johnson, a TVA spokesman, had a proposal on how to lower it. He explained that if the TVA built the new plants without having to pay interest on a loan, they would cost $4 billion to $5 billion per unit, or about half. Last June, the accounting firm Ernst & Young released research that had been commissioned by the British government, which similarly found that the cost of financing construction of a new nuclear plant amounts to about 55 percent of the final cost of electricity. Bring down the interest rate, and the cost can be cut in half. As commercial credit has been all but frozen, interest rates have risen, putting a further strain on electric utility investments. On Dec. 17, 2008, it was reported that the Virginia Electric and Power Company paid an interest rate of 8.875 percent to sell $700 million of 0-year bonds, which was up from 6.5 percent the year before. This rise in interest rates adds hundreds of millions of dollars to any nuclear power plant cost. The solution is to create a Federally chartered corporation, which will extend long-term credit, with a maximal 2 percent interest rate, for the most efficient construction of new nuclear plants. It is not important how much these power plants cost, per se; it is critical that they get built.

#### D – Framing issue – these are all of the additional policy recommendations that’s necessary to solve to make SMRs commercially deployable – we’ll insert this evidence from ITA

ITA’ 11 – International Trade Administration (U.S. Department of Commerce, February. Manufacturing and Services Competitiveness Report. “The Commercial Outlook for U.S. Small Modular Nuclear Reactors.” http://trade.gov/mas/ian/build/groups/public/@tg\_ian/@nuclear/documents/webcontent/tg\_ian\_003185.pdf)

Policy-makers and U.S. companies can take a number of actions to move toward the com- mercial deployment of SMRs. For policy-makers, these include the following actions:

• Strengthen U.S. government efforts to bring the Convention on Supplementary Compensation for Nuclear Damage into force.

• Consider additional 123 agreements for markets that might be appropriate for SMRs.

• Continue to provide support to countries in their efforts to develop the regulatory infrastructure needed to ensure the safe and secure build- ing and operation of nuclear reactors.

• Explicitly include civil nuclear projects in future clean-energy programs, such as the Advanced Energy Manufacturing Tax Credit Program, and ensure that the terms of such credits are appli- cable to nuclear projects (including allowing for longer lead times).

• Set aside a portion of future nuclear loan guarantee funds to support the rebuilding of U.S. nuclear manufacturing capacity.

• Support NRC’s consideration of adjustments to annual assessments, EPZs, and reactor staffing and security requirements, contingent on U.S. vendors’ demonstration and the NRC’s evaluation that such adjustments will not compromise the safe and secure operation of nuclear reactors.

U.S. SMR companies should consider the follow- ing actions:

• Provide a list of priority markets to the U.S. gov- ernment for additional 123 agreements.

• Report specific trade barriers and policy chal- lenges, both domestic and international, to the Department of Commerce.

• Schedule preapplication reviews for SMR designs with the NRC and provide requested information in a timely manner.

• Ensure that emergency plans include detailed explanations of the technical reasons SMR designs merit NRC adjustment to some requirements, while still meeting safety and security objectives.

• Participate in U.S. government–sponsored nuclear efforts, including multilateral forums such as the International Framework for Nuclear Energy Cooperation; bilateral dialogues with key markets; trade policy and promotion activities, including trade missions and the U.S. Industry Promotion Program at the IAEA general confer- ence; and industry advisory committees, such as the Civil Nuclear Trade Advisory Committee.

#### There are structural flaws that are the root cause of preventing commercialization

Spencer & Loris ’11 [Jack, Research Fellow in Nuclear Energy in the Thomas A. Roe Institute for Economic Policy Studies, Nicolas, Research Associate in the Roe Institute, The Heritage Foundation, 2-2, “A Big Future for Small Nuclear Reactors?” <http://www.heritage.org/research/reports/2011/02/a-big-future-for-small-nuclear-reactors>]

The problem with this approach is that it ignores the larger systemic problems that create the unstable marketplace to begin with. These systemic problems generally fall into three categories:¶ Licensing. The Nuclear Regulatory Commission (NRC) is ill prepared to build the regulatory framework for new reactor technologies, and no reactor can be offered commercially without an NRC license. In a September 2009 interview, former NRC chairman Dale E. Klein said that small nuclear reactors pose a dilemma for the NRC because the commission is uneasy with new and unproven technologies and feels more comfortable with large light water reactors, which have been in operation for years and has a long safety record.[11] The result is that enthusiasm for building non-light-water SMRs is generally squashed at the NRC as potential customers realize that there is little chance that the NRC will permit the project within a timeframe that would promote near-term investment. So, regardless of which attributes an SMR might bring to the market, the regulatory risk is such that real progress on commercialization is difficult to attain. This then leaves large light water reactors, and to a lesser extent, small ones, as the least risky option, which pushes potential customers toward that technology, which then undermines long-term progress, competition, and innovation.¶ Nuclear Waste Management. The lack of a sustainable nuclear waste management solution is perhaps the greatest obstacle to a broad expansion of U.S. nuclear power. The federal government has failed to meet its obligations under the 1982 Nuclear Waste Policy Act, as amended, to begin collecting nuclear waste for disposal in Yucca Mountain. The Obama Administration’s attempts to shutter the existing program to put waste in Yucca Mountain without having a backup plan has **worsened the situation**. This outcome was predictable because the current program is based on the flawed premise that the federal government is the appropriate entity to manage nuclear waste. Under the current system, waste producers are able to largely ignore waste management because the federal government is responsible. The key to a sustainable waste management policy is to directly connect financial responsibility for waste management to waste production. This will increase demand for more waste-efficient reactor technologies and drive innovation on waste-management technologies, such as reprocessing. Because SMRs consume fuel and produce waste differently than LWRs, they could contribute greatly to an economically efficient and sustainable nuclear waste management strategy.¶ Government Intervention. Too many policymakers believe that Washington is equipped to guide the nuclear industry to success. So, instead of creating a stable regulatory environment where the market value of different nuclear technologies can determine their success and evolution, they choose to create programs to help industry succeed. Two recent Senate bills from the 111th Congress, the Nuclear Energy Research Initiative Improvement Act (S. 2052) and the Nuclear Power 2021 Act (S. 2812), are cases in point. Government intervention distorts the normal market processes that, if allowed to work, would yield the most efficient, cost-effective, and appropriate nuclear technologies. Instead, the federal government **picks winners and losers** through programs where bureaucrats and well-connected lobbyists decide which technologies are permitted, and provides capital subsidies that allow investors to ignore the systemic problems that drive risk and costs artificially high. This approach is especially detrimental to SMRs because subsidies to LWRs distort the relative benefit of other reactor designs by artificially lowering the cost and risk of a more mature technology that already dominates the marketplace.¶

#### Not cost competitive – they need to win market perception of SMRs are CHEAPER than BOTH natural gas and large reactors

Biello ‘12 - Associate Editor at Scientific American (David, March 27, "Small Reactors Make a Bid to Revive Nuclear Power", http://www.scientificamerican.com/article.cfm?id=small-reactors-bid-to-revive-nuclear-power)

Regardless of how cheap such Small Modular Reactors may allow nuclear to be in future, it is unlikely to be as **cheap as natural-gas**-fired turbines in the present. In fact, low natural gas prices stalled the U.S. nuclear renaissance outside Georgia and South Carolina, long before the reactor meltdowns at Fukushima Daiichi in Japan. "Because of an unanticipated abundance of natural gas in the United States, nuclear energy, in general, is facing tough competition," noted an analysis of the prospects for small modular reactors from the University of Chicago published last November. The analysis also suggested that small reactors would **be more expensive than large reactors** on a per-megawatt basis until manufacturing in significant quantities has happened. "It [is] unlikely that SMRs will be commercialized without some form of government incentive." But the Department of Energy funding may only support two designs. Innovation spurred by competition seems unlikely. And that may ultimately erode the current U.S. nuclear industry advantage—from design to operation to regulation.

#### A - Perception of natural gas will structurally dominate the SMR market

McMahon ’12 (Jeff McMahon, Contributor for Forbes, “Small Modular Nuclear Reactors By 2022 -- But No Market For Them”, http://www.forbes.com/sites/jeffmcmahon/2012/05/23/small-modular-reactors-by-2022-but-no-market-for-them/, May 23, 2012, LEQ)

A small modular reactor design. The Department of Energy will spend $452 million—with a match from industry—over the next five years to guide two small modular reactor designs through the nuclear regulatory process by 2022. But cheap natural gas could freeze even small nuclear plants out of the energy market well beyond that date. DOE accepted bids through Monday for companies to participate in the Small Modular Reactor program. A number of reactor manufacturers submitted bids, including NuScale Power and a collaboration that includes Westinghouse and General Dynamic. “This would allow SMR technology to overcome the hurdle of NRC certification – the ‘gold standard’ of the international nuclear industry, and would help in the proper development of the NRC’s regulatory framework to deal with SMRs,” according to Paul Genoa, Senior Director of Policy Development at the Nuclear Energy Institute. Genoa’s comments are recorded in a summary released today of a briefing given to Senate staff earlier this month on prospects for small modular reactors, which have been championed by the Obama Administration. DOE defines reactors as SMRs if they generate less than 300 megawatts of power, sometimes as little as 25 MW, compared to conventional reactors which may produce more than 1,000 MW. Small modular reactors can be constructed in factories and installed underground, which improves containment and security but may hinder emergency access. The same summary records doubt that SMRs can compete in a market increasingly dominated by cheap natural gas. Nuclear Consultant Philip Moor told Senate staff that SMRs can compete if natural gas costs $7 to $8 per million BTU—gas currently costs only $2 per MBTU—or if carbon taxes are implemented, a scenario political experts deem unlikely. “Like Mr. Moor, Mr. Genoa also sees the economic feasibility of SMRs as the final challenge. With inexpensive natural gas prices and no carbon tax, the economics don’t work in the favor of SMRs,” according to the summary. The SMRs most likely to succeed are designs that use the same fuels and water cooling systems as the large reactors in operation in the U.S. today, according to Gail Marcus, an independent consultant in nuclear technology and policy and a former deputy director of the Department of Energy Office of Nuclear Energy, simply because the NRC is accustomed to regulating those reactors. “Those SMR designs that use light water cooling have a major advantage in licensing and development [and] those new designs based on existing larger reactor designs, like Westinghouse’s scaled‐down 200 MW version of the AP‐1000 reactor, would have particular advantage.” This is bad news for some innovative reactor designs such as thorium reactors that rely on different, some say safer, fuels and cooling systems. Senate staff also heard criticism of the Administration’s hopes for SMRs from Edwin Lyman, Senior Scientist in the Global Security Program at the Union of Concerned Scientists: The last panelist, Dr. Lyman, provided a more skeptical viewpoint on SMRs, characterizing public discussion on the topic as “irrational exuberance.” Lyman argued that, with a few exceptions, safety characteristics were not significantly better than full‐size reactors, and in general, safety tended to rely on the same sorts of features. Some safety benefits, he stated, also declined as reactor power approached the upper bound of the SMR category…. Lyman argued that the Fukushima disaster should lead to a “reset” in licensing. In his opinion, the incident exposed numerous weaknesses in how nuclear power is regulated, and in order to remedy these oversights, regulation should be revisited.

#### B - Large-scale reactors takes out solvency- this assumes their modularity and stacking arguments

Makhijani and Boyd ’10 (Arjun Makhijani and Michele Boyd, Arjun Makhijani is nuclear engineer who is President of the Institute for Energy and Environmental Research, Institute for Energy and Environmental Research and Physicians for Social Responsibility, Michele Boyd is former director of the Safe Energy Program at Physicians for ... Staff Scientist at the Institute for Energy and Environmental Research, “Small Modular Reactors No Solution for the Cost, Safety, and Waste Problems of Nuclear Power”, <http://ieer.org/wp/wp-content/uploads/2010/09/small-modular-reactors2010.pdf>, September 2010, LEQ)

SMR proponents claim that small size will enable mass manufacture in a factory, enabling considerable savings relative to field construction and assembly that is typical of large reactors. In other words, modular reactors will be cheaper because they will be more like assembly line cars than hand-made Lamborghinis. In the case of reactors, however, several offsetting factors will tend to neutralize this advantage and make the costs per kilowatt of small reactors higher than large reactors. First, in contrast to cars or smart phones or similar widgets, the materials cost per kilowatt of a reactor goes up as the size goes down. This is because the surface area per kilowatt of capacity, which dominates materials cost, goes up as reactor size is decreased. Similarly, the cost per kilowatt of secondary containment, as well as independent systems for control, instrumentation, and emergency management, increases as size decreases. Cost per kilowatt also increases if each reactor has dedicated and independent systems for control, instrumentation, and emergency management. For these reasons, the nuclear industry has been building larger and larger reactors in an effort to try to achieve economies of scale and make nuclear power economically competitive. Proponents argue that because these nuclear projects would consist of several smaller reactor modules instead of one large reactor, the construction time will be shorter and therefore costs will be reduced. However, this argument fails to take into account the implications of installing many reactor modules in a phased manner at one site, which is the proposed approach at least for the United States. In this case, a large containment structure with a single control room would be built at the beginning of the project that could accommodate all the planned capacity at the site. The result would be that the first few units would be saddled with very high costs, while the later units would be less expensive. The realization of economies of scale would depend on the construction period of the entire project, possibly over an even longer time span than present large reactor projects. If the later-planned units are not built, for instance due to slower growth than anticipated, the earlier units would likely be more expensive than present reactors, just from the diseconomies of the containment, site preparation, instrumentation and control system expenditures. Alternatively, a containment structure and instrumentation and control could be built for each reactor. This would greatly increase unit costs and per kilowatt capital costs. Some designs (such as the PBMR) propose no secondary containment, but this would increase safety risks. These cost increases are unlikely to be offset even if the entire reactor is manufactured at a central facility and some economies are achieved by mass manufacturing compared to large reactors assembled on site. Furthermore, estimates of low prices must be regarded with skepticism due to the history of past cost escalations for nuclear reactors and the potential for cost increases due to requirements arising in the process of NRC certification. Some SMR designers are proposing that no prototype be built and that the necessary licensing tests be simulated. Whatever the process, it will have to be rigorous to ensure safety, especially given the history of some of proposed designs. The cost picture for sodium-cooled reactors is also rather grim. They have typically been much more expensive to build than light water reactors, which are currently estimated to cost between $6,000 and $10,000 per kilowatt in the US. The costs of the last three large breeder reactors have varied wildly. In 2008 dollars, the cost of the Japanese Monju reactor (the most recent) was $27,600 per kilowatt (electrical); French Superphénix (start up in 1985) was $6,300; and the Fast Flux Test Facility (startup in 1980) at Hanford was $13,800. 11 This gives an average cost per kilowatt in 2008 dollars of about $16,000, without taking into account the fact that cost escalation for nuclear reactors has been much faster than inflation. In other words, while there is no recent US experience with construction of sodium-cooled reactors, one can infer that (i) they are likely to be far more expensive than light water reactors, (ii) the financial risk of building them will be much greater than with light water reactors due to high variation in cost from one project to another and the high variation in capacity factors that might be expected. Even at the lower end of the capital costs, for Superphénix, the cost of power generation was extremely high—well over a dollar per kWh since it operated so little. Monju, despite being the most expensive has generated essentially no electricity since it was commissioned in 1994. There is no comparable experience with potassium-cooled reactors, but the chemical and physical properties of potassium are similar to sodium.

#### SMRs are a decade away – technical challenges --- there are too many designs and not enough implementation

Andres and Breetz 11. [Richard, Professor of National Security Strategy at the National War College, Senior Fellow and Energy and Environmental Security and Policy Chair in the Center for Strategic Research, Institute for National Strategic Studies, at the National Defense University, Hanna, doctoral candidate in the Department of Political Science at The Massachusetts Institute of Technology, “Small Nuclear Reactors for Military Installations: Capabilities, Costs, and Technological Implications” Institute for National Strategic Studies -- February -- www.ndu.edu/press/lib/pdf/StrForum/SF-262.pdf]

Two general points about these reactors should be ¶ emphasized. First, even within the category of small ¶ reactors without on-site refueling, there are **significant ¶ variations** in electrical output (10–335 MWe), coolants ¶ (water, sodium, lead, molten salt), refueling times (2–30 ¶ years) and procedures (returning the entire module to ¶ the factory, changing out the cassette, recharging the ¶ in-situ pebble bed), construction types (factory-built versus location-built), site footprints, portability, modularity, ¶ staffing requirements, and technological readiness. Small ¶ reactor concepts range from designs like Westinghouse’s ¶ International Reactor Innovative and Secure (IRIS) ¶ model, which mostly uses mature LWR technology in ¶ a stationary, site-constructed 335 MWe plant, to Hyperion’s Power Module, which has been designed as a factorysealed, truck-transportable, 25 MWe “nuclear battery” with ¶ minimal in-core moving mechanical components.¶ 17¶ Second, these reactors today exist only on paper; ¶ as Ingersoll explains, “None of the designs are ready ¶ for construction today or have even initiated the design ¶ certification review process.”¶ 18¶ This means that there are ¶ unresolved economic, technical, and regulatory issues associated with these designs. For some of the more novel ¶ concepts, it may be a decade or more before they get design approval from the NRC.

### Nat Gas

#### No more natural gas volatility- laundry list

Skutnik, 12 -- University of Tennessee nuclear engineering professor

(Steve, "The End of Natural Gas Price Volatility?" 2-13-12, theenergycollective.com/skutnik/76356/end-natural-gas-price-volatility, accessed 10-5-12, mss)

Conoco Phillips recently put up a great video on youtube making the point that NG has been volatile in the past due to reasons mostly having little to do with the nature of production (instead, the nature of the use), and that the volatility will be less in the future given **recent developments**. Here is the video: Because these are such important points that get to the core of the issue, I want to list them. I'm going to tackle the 2 arguments I mentioned above. Why Natural Gas is Volatile in the first place: It's a commodity and all commodities have price volatility It is a margin fuel for power production (because it has the highest variable cost) Once before, the long-term price of NG made a major move upward after much investment into NG power plants that left decision makers regretting that and leaving them skeptical of NG commitment in the future Why it will be less volatile in the future: We have more storage than in the past We can bring in LNG (liquified natural gas, a way to import the commodity) to up to 25% of our demand Shale gas is like a manufacturing process, and it's something you can ramp up very rapidly The on-shore production is not subject to weather related disruptions, like hurricanes which have **historically been the reasons for major disruptions** The abundance of resources and diversity of supply makes long-term price **much more stable and confident**

#### Status quo solves- efficiency

Young, 9-18 -- ACEEE assistant to the directors

(Rachel, American Council for an Energy-Efficient Economy, "Energy Efficiency Looks Beyond the Natural Gas Boom," Energy Collective, 9-18-12, theenergycollective.com/rachel-young/113776/energy-efficiency-looks-beyond-natural-gas-boom, accessed 10-5-12, mss)

Even as sources of natural gas continue to increase, energy efficiency is still the number one new resource. Many states and utilities **already recognize** the benefits of energy efficiency. Over the past 15 years, there has been a **rapid increase** in the use of energy efficiency (see Figure 1), and this trend is **expected to continue**. Natural gas has been a historically volatile fuel, vulnerable to storage and distribution constraints, and accidents and production disruptions. New fracking regulations and an anticipated increase in natural gas exports are adding to the risk factors. Deploying energy efficiency measures lowers the demand for natural gas, which in turn **reduces** the threat of future price **volatility**, helps prevent natural gas price spikes, and assists in maintaining electrical grid reliability. Efficiency lessens a utility’s exposure to fuel price volatility by diversifying energy resources across multiple small and moderate-sized projects. Efficiency also reduces the need to deploy peaking generation resources, which prevents outages by lessening the load and stress of the power distribution network. Energy efficiency can **significantly cut into the demand** for natural gas in the power sector and lessen the need for construction of new natural gas power plants. New natural gas power plants require a large upfront investment and take time to come online; costs are transferred to ratepayers. Since energy efficiency is still the most cost-effective resource compared to new combined-cycle natural gas plants, energy efficiency should be deployed by states as the first measure to prevent costly construction of new natural gas plants thereby saving ratepayers money. And while natural gas is a less dirty fossil fuel with nearly half the emissions compared to coal, natural gas still emits pollutants. Energy efficiency is a zero emission energy resource.

#### Nuclear doesn’t solve- uranium volatility

Sovacool, 11 -- National University of Singapore public policy professor

(Benjamin, Centre on Asia and Globalisation Energy Governance Program research fellow, "Second Thoughts About Nuclear Power," Jan 2011, spp.nus.edu.sg/docs/policy-briefs/201101\_RSU\_PolicyBrief\_1-2nd\_Thought\_Nuclear-Sovacool.pdf, accessed 10-5-12, mss)

Conventional thinking: Nuclear power could stabilize the cost of electricity by reducing dependence on natural gas which is subject to price volatility. Think twice: Nuclear power is reliant on uranium availability and uranium prices like those of oil and natural gas are **highly volatile**. This means that uncertain uranium prices can have a grave impact on plant operating costs. Such price movement is hard to anticipate when, some of the countries now responsible for more than 30% of the world’s uranium production: Kazakhstan, Namibia, Niger, and Uzbekistan 5 , are politically unstable.

#### Decade of volatility proves the impact is empirically denied and spurred counter-measures

Graves, 10 – Brattle Group principal

(Frank, and Steven Levine, "Managing Natural Gas Price Volatility," www.cleanskies.org/wp-content/uploads/2011/08/ManagingNGPriceVolatility.pdf, accessed 10-5-12,mss)

The volatility in natural gas prices over the course of the past **10 years** has resulted in an **increased emphasis on risk management** activities by industry participants. Several **major price spikes** occurred during the decade, and a general tightening of the supply-demand balance in U.S. gas markets resulted in higher natural gas prices and higher price volatility for U.S. gas consumers relative to the experience of the 1990s. Some have suggested that speculation also contributed to high price levels and volatility – though there is no general agreement on this view. 1 Since natural gas is also the marginal or price-setting fuel in electricity markets in many regions of the country, the volatility in natural gas prices over the past decade also had a **pronounced impact on retail electricity prices**, and probably vice versa as well, since natural gasfired generation has been the predominant source of increased gas demand over the past 15 years.

#### conomy’s resilient – can survive shocks

Bloomberg 12 (“Fed’s Plosser Says U.S. Economy Proving Resilient to Shocks,” 5-9, http://www.bloomberg.com/news/2012-05-09/fed-s-plosser-says-u-s-economy-proving-resilient-to-shocks.html)

Philadelphia Federal Reserve Bank President Charles Plosser said the U.S. economy has proven “remarkably resilient” to shocks that can damage growth, including surging oil prices and natural disasters. “The economy has now grown for 11 consecutive quarters,” Plosser said today according to remarks prepared for a speech at the Philadelphia Fed. “Growth is not robust. But growth in the past year has continued despite significant risks and external and internal headwinds.” Plosser, who did not discuss his economic outlook or the future for monetary policy, cited shocks to the economy last year, including the tsunami in Japan that disrupted global supply chains, Europe’s credit crisis that has damaged the continent’s banking system and political unrest in the Middle East and North Africa. “The U.S. economy has a history of being remarkably resilient,” said Plosser, who doesn’t have a vote on policy this year. “These shocks held GDP growth to less than 1 percent in the first half of 2011, and many analysts were concerned that the economy was heading toward a double dip. Yet, the economy proved resilient and growth picked up in the second half of the year.” Plosser spoke at a conference at the Philadelphia Fed titled, “Reinventing Older Communities: Building Resilient Cities.” Urban Resilience His regional bank’s research department is working on a project to measure the resilience of different cities, to learn more about the reasons that some urban areas suffer more than others in downturns, Plosser said. He mentioned one early finding of the study: Industrial diversity increases a city’s resilience. “I do want to caution you that resilient and vibrant communities are not just about government programs or directed industrial planning by community leaders,” Plosser said. “The economic strength of our country is deeply rooted in our market- based economy and the dynamism and resilience of its citizenry.”

#### empirics disprove war

Pickering 7 – Assistant Professor of Political Science at Kansas State University (Jeffrey, Emizet F. Kisangani, “Diverting with Benevolent Military Force: Reducing Risks and Rising above Strategic Behavior,” International Studies Quarterly 51, 277–299, JSTOR)

Our results underscore the utility of broadening the conception of diversionary force and using the agenda setting framework to understand leaders’ decisions to divert. As the agenda setting approach anticipates, we find that leaders in democracies and mixed regimes tend to prefer a comparatively low-risk, low-profile type of military force when they attempt diversion. They use what we term SEI in their attempt to clear the domestic policy agenda. They presumably hope that the use of such seemingly controllable, low-scale force will provide a brief reprieve from the public and the media’s focus on issues that have damaged their political reputations and threatened their terms in office. If low politics force succeeds in providing leaders with the window they seek, they can be expected to do all they can to reshape the policy agenda in the hope of saving their political careers. Autocratic leaders, in contrast, do not appear to use any form of external armed force to bolster their domestic standing when they encounter domestic unrest or economic difficulty. Our results also highlight the need for further theoretical development of the SCA framework. In our cross-national sample of democracies, SCA does not seem to constrain democratic leaders to the extent that is implied in the literature. For example, we find no evidence that SCA prevents democratic leaders from using PSI, and democratic leaders often used SEI even when SCA was present (see especially Table 5). The only time SCA seems to obstruct democratic leaders is when they attempt SEI in the face of rising levels of inflation or mass unrest. We did not expect target states to be able to employ SCA to inhibit SEI, but this result at least provides some evidence for the theoretically compelling and logical influence of SCA on democracies. This outcome and the unanticipated influence of SCA on autocracies suggest that the SCA framework requires greater precision. As noted previously, adding measures that capture extant relations or affinity levels among potential actors and targets may enhance the explanatory power of SCA. Another possibility is that we are trying to generalize a phenomenon that has limited scope. It may be that target states only worry about diversion from extremely powerful states and perhaps some unstable, unpredictable autocracies, which might explain why David Clark (2003) and Benjamin Fordham’s (2005) results diverge from those found in this paper and by Christopher Sprecher and Karl DeRouen (2005). Careful empirical study will have to determine if this is the case, and if it is not why SCA appears to constrain certain types of actors experiencing certain types of domestic troubles but not others. Different methods will have to be used to pinpoint the prevalence and the impact of SCA. While powerful and suggestive, the ZIP method is based on a theoretical assumption: that SCA is the exogenous influence that prevents leaders from using military force. Although this is plausible and the evidence presented by David Clark (2003) and Benjamin Fordham (2005) is extremely compelling for the United States case, there could be other exogenous influences that have similar effects on leaders in other countries. Powerful opposition parties (Schultz 1998) or increasing tensions or instability within the government itself could, for example, tie leaders’ hands in a way that prevents the use of military force. Given the significant institutional variation that characterizes democracies and mixed regimes across the globe, both detailed qualitative and country-specific quantitative analyses will be necessary to trace the empirical boundaries of SCA and to refine the theory. In sum, this paper adds to the growing body of literature that suggests that leaders in democracies and mixed regimes use armed forces overseas for diversionary purposes. It just may not be the type of high profile, confrontational military force we typically envision. It is often armed force deployed over low politics issues like humanitarian suffering. Making this simple distinction between the types of armed force states use abroad may go some way toward uniting extant empirical research on diversion and perhaps even producing more cumulative research in the future.

### Enviro

#### Enviro leadership causes binding CO2 cuts

**Friedman 10/10** (Lisa Friedman, NYT, “Nations Heading to Durban Climate Talks Remain Deeply Divided”, <http://www.nytimes.com/cwire/2011/10/10/10climatewire-nations-heading-to-durban-climate-talks-remai-1993.html>, October 10, 2011, LEQ)

U.N. climate chief Christiana Figueres lauded a climate change meeting in Panama as "good progress" this weekend, even as environmental activists warned that the world's only structure for curbing greenhouse gas emissions appears about to crumble. More News From ClimateWire The next time diplomats meet, it will be in Durban, South Africa, in December for the year's final climate change summit. There, countries must finally decide what they have put off for several years: the future of the Kyoto Protocol. "South Africa is the tipping point in terms of the future of the climate regime," said Tasneem Essop, international climate policy advocate for the World Wildlife Fund in South Africa. The 1997 treaty requires carbon emission cuts from industrialized countries, and the first phase of the agreement ends in 2012. Developing countries are adamant that a second commitment period is non-negotiable. Moreover, they insist any follow-up should closely hew to the original agreement: Wealthy countries must agree unilaterally to cut steeper emissions, and poorer ones would cut carbon voluntarily after financial assistance from the rich. "Much as some rich countries like to repeat that discussing scenarios that they oppose is not 'realistic' or 'practical,' they must recognize that there is no point in insisting on a solution outside of the Kyoto Protocol when 132 parties have strongly declared that they can only accept a second commitment period as a meaningful outcome," Jorge Argüello of Argentina, speaking for the G-77 group of developing countries, said in a statement. Does Kyoto treaty end or not? Japan, Canada and the Russian Federation have made it equally clear that such an agreement is a pipe dream. No new treaty is possible, they say, unless all major economies -- including the United States and China -- agree to the same legal terms. Positioning itself in the middle is the European Union, which has left the door open to a second commitment period. Under a proposal the European Union has been floating, it would agree to a second phase only if it were linked to a solid agreement detailing out how and when other countries' pledges would be placed into a legally binding agreement.

#### Turn – Binding cuts cause global protectionism

**Competitive Enterprise Institute** 12-2-**97** (“Kyoto Media Advisory,” http://www.cei.org/gencon/003,02747.cfm)

Still, policy does have implications. To sanction anti-energy use policies anywhere will have ramifications everywhere. If Kyoto leads to further energy restrictions in the U.S. the world will notice the impacts of declining economic and technological progress. Kyoto is all too likely to produce what CEI President Fred Smith terms "a baby step on the escalator to oblivion." Even such initial economic costs would likely exacerbate already troubling protectionist tendencies in the U.S. and elsewhere. Any effort by the U.S. to use the Kyoto Treaty to curtail energy would mobilize the business community into arguing for treaty enforcement via trade sanctions. David Montgomery, an economist with Charles River Associates, discussed this protectionist risk at the Competitive Enterprise Institute’s Costs of Kyoto conference. He noted that the pressures and the tools for enforcing climate treaty measures will be trade -- not environmentally -- driven. Few outside the environmental establishment believes that trade wars will prove beneficial. In a world of "differentiated" compliance, the Byrd-Hagel resolution may well evolve into a new force for protectionism.

#### Nuke war

CNS, ’99 [Copley News Service, December 1]

For decades, many children in America and other countries went to bed fearing annihilation by nuclear war. The specter of nuclear winter freezing the life out of planet Earth seemed very real. Activists protesting the World Trade Organization's meeting in Seattle apparently have forgotten that threat. The truth is that nations join together in groups like the WTO not just to further their own prosperity, but also to forestall conflict with other nations. In a way, our planet has traded in the threat of a worldwide nuclear war for the benefit of cooperative global economics. Some Seattle protesters clearly fancy themselves to be in the mold of nuclear disarmament or anti-Vietnam War protesters of decades past. But they're not. They're special-interest activists, whether the cause is environmental, labor or paranoia about global government. Actually, most of the demonstrators in Seattle are very much unlike yesterday's peace activists, such as Beatle John Lennon or philosopher Bertrand Russell, the father of the nuclear disarmament movement, both of whom urged people and nations to work together rather than strive against each other. These and other war protesters would probably approve of 135 WTO nations sitting down peacefully to discuss economic issues that in the past might have been settled by bullets and bombs. As long as nations are trading peacefully, and their economies are built on exports to other countries, they have a major disincentive to wage war. That's why bringing China, a budding superpower, into the WTO is so important. As exports to the United States and the rest of the world feed Chinese prosperity, and that prosperity increases demand for the goods we produce, the threat of hostility diminishes.

#### Turn – Binding cuts decimate hegemony and readiness

**Carlucci**, Former Secretary of Defense & Chair of the Carlyle Group, 5-18-**98** (Frank, “Making military sense out of Kyoto,” Washington Times)

Prior to the 1997 Kyoto meeting on global climate change, Defense Secretary William Cohen issued this stern warning: "America's national security requires that its military forces remain ready. While global climate change may be a serious threat to the nation's long-term interests, there are other threats we must not forget. We must not sacrifice our national security to achieve reductions in greenhouse gas emissions." Regrettably, the administration has failed to heed that warning from its own top defense official and agreed to a climate treaty that fails to spell out the impact on the U.S. military. While Congress initially raised questions about the economic impact of the accord, there is growing concern in the Senate, which must ratify the treaty, about agreeing to a treaty that imposes unprecedented restraint on military action and training. By agreeing to restrict greenhouse gas emissions, and leaving the accord's impact on military operations ambiguous, the administration has effectively hamstrung the Defense Department's ability to protect national security interests and invited mischief by foes who can now use the accord to press for U.S. military cutbacks. Here's how: Under the Kyoto accord, the administration has committed to reduce greenhouse gas emissions to essentially 1979 levels. The U.S. government is the nation's largest energy user, and the Pentagon is the largest energy user within the government. By signing the treaty, the administration has agreed to scale back fuel use by the U.S. military - a dangerous commitment that could have a disastrous impact on force readiness. The Pentagon itself warned that a 10 percent reduction in Army fuel use would "downgrade readiness and require up to six additional weeks to prepare and deploy. Strategic deployment schedules would be missed, placing operations at risk." A similar reduction by the Air Force "would result in the loss of over 210,000 flying hours per year" and a Navy cutback "would cut some 2,000 steaming days per year for deployed ships, causing cancellation of both bilateral and multilateral exercises." The Committee to Preserve American Security and Sovereignty - a concerned group of former U.S. foreign policy advisers -strongly urges the administration to clarify the impact of the treaty on U.S. force readiness and preparation. Thus far, there has been a troubling lack of clarity and candor on the administration's part over what it committed the Pentagon to in Kyoto. For example, the Kyoto accord fails to explain what U.S. military operations would count toward U.S. greenhouse gas limits. Operations conducted or sanctioned by the U.N. are not included within a country's greenhouse gas limits. However, the administration has seemingly failed to take into consideration the possibility that the U.S. might be forced to act alone to protect our national security. In recent congressional testimony, Deputy Undersecretary for Environmental Security Sherri Goodman said that unilateral operations are "quite rare." True, but certainly the U.S. must have the capability to engage in unilateral operations without environmental issues posing an obstacle to deployment. Miss Goodman stated military operations such as Panama and Grenada would be exempt. What she fails to remember is that the Panama operation was denounced by the chairman of the Senate Foreign Relations Committee as a "unilateral" operation - opening up the possibility it would not be exempt from fuel-limitation restrictions included in the Kyoto accord. There is also significant concern about the impact the treaty will have on domestic military operations, training, facilities and nontactical vehicles. The administration believes it won a key victory by avoiding language in the protocol on these issues. But without clarifying language specifically exempting domestic operations from U.S. greenhouse limits, the administration has opened the door to international criticism that the United States is not living up to its Kyoto commitments. Had Kyoto been in effect in 1990, critics would have certainly demanded that the Panama operation count toward our greenhouse gas limit - a controversy an administration doesn't need in the middle of a military conflict. Deputy Secretary Goodman raised expectations that fuel used in domestic military operations would be included within U.S. greenhouse limits when she testified in March that the Pentagon does not "seek special treatment." She said the Defense Department "can and should reduce its greenhouse gas emissions in the same way the rest of the nation will be called to do." Of particular concern is that the treaty will open the door for hostile nations to seek to hamper U.S. military operations. It is conceivable that every movement made by the Army, Navy, Air Force, Marines and Coast Guard will become subject to controversy over whether the operations are in violation of the Kyoto accord. That would be a diplomatic and military nightmare. Before Kyoto's dangerous principles go into effect, it is crucial for the administration to dispel concerns about military readiness issues by clarifying its impact on the Pentagon. Such a clarification must detail how the treaty will affect military training, readiness and operations. Regardless of how the administration interprets the treaty; the Senate must demand a blanket exemption for all military operations. Our national security deserves no less. In 1992, then-Sen. Al Gore called global climate change the "most serious threat we have ever faced." COMPASS respectfully, but vigorously, disagrees. While environmental issues must be addressed, the U.S. cannot afford to drop its military shield today because of an unproven environmental threat that may loom in the 22nd Century.

#### Nuke war

Khalilzad, Rand Corporation 95 (Zalmay Khalilzad, Spring 1995. RAND Corporation. “Losing the Moment?” The Washington Quarterly 18.2, Lexis.)

Under the third option, the United States would seek to retain global leadership and to preclude the rise of a global rival or a return to multipolarity for the indefinite future. On balance, this is the best long-term guiding principle and vision. Such a vision is desirable not as an end in itself, but because a world in which the United States exercises leadership would have tremendous advantages. First, the global environment would be more open and more receptive to American values -- democracy, free markets, and the rule of law. Second, such a world would have a better chance of dealing cooperatively with the world's major problems, such as nuclear proliferation, threats of regional hegemony by renegade states, and low-level conflicts. Finally, U.S. leadership would help preclude the rise of another hostile global rival, enabling the United States and the world to avoid another global cold or hot war and all the attendant dangers, including a global nuclear exchange. U.S. leadership would therefore be more conducive to global stability than a bipolar or a multipolar balance of power system.

#### Obama solves

ENS 9 (March 10 2009, Environmental News Service, http://www.ens-newswire.com/ens/mar2009/2009-03-10-01.asp)

President Barack Obama and UN Secretary-General Ban Ki-moon today agreed on the potential for stepped up cooperation between the United Nations and the United States on climate change. During their talks, the two leaders underscored the importance of reaching an international agreement on climate change to both save the Earth and promote sustainable economic recovery. At the annual UN climate conference in Copenhagen in December, nations are expected to agree on an ambitious pact that will limit greenhouse gas emissions after the Kyoto Protocol's first commitment period expires in 2012. Secretary-General Ban, who arrived in Washington from a visit to Haiti with former U.S. President Bill Clinton, told journalists that "the whole world is looking" to the U.S. President for leadership on climate change. President Barack Obama welcomes UN Secretary-General Ban Ki-moon to the White House. (Photo by Eskinder Debebe courtesy UN) “Climate change, as, Mr. President, you have said, is a priority for the United Nations and for the whole international community. I am going to focus and work together with the leaders of the world to address this issue, to unlock all of this massive investment for green economic recovery, and also to save our planet," said the secretary-general. "This is an issue of our era," Ban said. "I count on your strong commitment and leadership. The whole world is now looking at your leadership. And I'm committed to work together with you." "The United Nations and the United States share common visions and objectives for peace, stability, development and human rights," Ban told reporters after the meeting at the White House.

#### No solvency – CAFE and Kyoto are key

Walter 2 (Norbert, Chief Economist – Deutsche Bank Group, New York Times, 8-28, Lexis)

No one can expect the United States to provide any quick fixes, but **one would like to see America make a credible and sustained effort**, along with other countries, to address global environmental problems. This should happen on two fronts**. The** first **is at home in the** United States, **through more environmentally friendly policies, for example greater fuel-efficiency standards** for cars and light trucks and better insulation for buildings. **The** second **is international, through a more cooperative approach** to multilateral attempts at safeguarding the environment. Simply **rejecting** international treaties (like the **Kyoto** Protocol) then failing to offer a better proposal **cannot be an acceptable option** for American policymakers. Much of the world has come together to help the United States in the fight against terrorism, out of the realization that a common threat can only be beaten through a cooperative effort. **It is high time for the** United States, metaphorically speaking, **to** get out of its oversized, gas-guzzling S.U.V. -- and **join the rest of the world in doing more to combat global warming** and protecting the planet.

#### Environmental leadership fails

Matthew 96 (Richard A., Assistant Professor of Environmental Politics and International Relations – Georgetown University, Issues in Science & Technology, Fall, 13(1), p. 39)

Moreover, the **foreign counterparts** of U.S. officials **often are** uncomfortable **with U.S. leadership**, even when little can be accomplished without it. **Especially in the Third World, aggressive environmental initiatives tend to be perceived as attempts to fix the status quo by** burdening **the development process with** constraints **and** shifting the costs **of the North’s “mistakes” onto the South. China, Indonesia, Brazil, and many other states are** wary **of proposals** that seek to modify the strategies through which they are pursuing economic growth. And although **the** United States is the only superpower, it **is no longer able to control the global agenda** as it did after World War II. It now has to persuade other countries that environmental policies are in their interest.

No impact to the environment

Easterbrook 95 (Gregg, Distinguished Fellow @ The Fullbright Foundation and Reuters Columnist, “A Moment on Earth,” p. 25)

In the aftermath of events such as Love Canal or the Exxon Valdez oil spill, every reference to the environment is prefaced with the adjective "fragile." "Fragile environment" has become a welded phrase of the modern lexicon, like "aging hippie" or "fugitive financier." But the notion of a fragile environment is profoundly wrong. Individual animals, plants, and people are distressingly fragile. The environment that contains them is close to indestructible. The living environment of Earth has survived ice ages; bombardments of cosmic radiation more deadly than atomic fallout; solar radiation more powerful than the worst-case projection for ozone depletion; thousand-year periods of intense volcanism releasing global air pollution far worse than that made by any factory; reversals of the planet's magnetic poles; the rearrangement of continents; transformation of plains into mountain ranges and of seas into plains; fluctuations of ocean currents and the jet stream; 300-foot vacillations in sea levels; shortening and lengthening of the seasons caused by shifts in the planetary axis; collisions of asteroids and comets bearing far more force than man's nuclear arsenals; and the years without summer that followed these impacts. Yet hearts beat on, and petals unfold still. Were the environment fragile it would have expired many eons before the advent of the industrial affronts of the dreaming ape. Human assaults on the environment, though mischievous, are pinpricks compared to forces of the magnitude nature is accustomed to resisting.

#### Soil and environment impact don’t cause extinction

Tudge 89 (Colin, Biologist, Scientifict Fellow @ the Zoological Society of London, Fellow @ the Linean Society of London, Former Visiting Fellow @ Centre for the Philosophy of the Natural and Social Sciences, London School of Economics, has given many lectures and seminars at the Zoological Society of London; the Sanger Centre, the Linnean Society of London, the Royal Society, the Royal Society of Medicine, The Royal Institution, the Oxford Union, the Darwin Seminars, London School of Economics, the University of Leeds, the University of East Anglia; The Eden Project, Cornwall, The Macaulay Institute, “The rise and fall of Homo sapiens sapiens,” Published by the Royal Society, JSTOR, EMM)

The possibility of human extinction has certainly been suggested of late, on several grounds, including nuclear winter, epidemic (such as AIDS), and - the matter that concerns us here - because of our own destruction of the planet. In particular, it has been suggested that we are sowing the seeds of our own destruction by destroying so many other species; that we need a planet that is in ecological 'balance'; and that that balance depends upon the multitude of other species, perhaps between 10 and 30 million, that the Earth is thought to contain. If that argument were true, it would be very powerful from a conservationist point of view. I take it to be self-evident that human beings are important; even being exaggeratedly detached, we can hardly deny that our species is an interesting biological experiment, and it would be a pity if it were snuffed out before its time. But I take it also to be self-evident that ours is not the only important species; that other creatures have a ' right' to occupy this planet, and that we at times have to bow to their needs, even at cost to ourselves. Those self-evident 38 [ 239 ] Vol. 325. B 480 C. TUDGE truths are the basis of' Green' philosophy. But most people, I think, take only the first of those premises to be self-evident. Most people, if pressed, would probably maintain in a way that is not incompatible with much of the apparent teaching of the Bible, that other animals and plants were 'put on Earth' for our convenience, and that although we shouldn't be cruel to them, we may dispose of them at our will. In other words, the moral philosophy of the Greens is not exclusively anthropocentric, whereas that of most of humanity is. If you are in a minority, of whatever kind, then it pays as far as possible to demonstrate that your philosophy is compatible, and preferably congruent, with that of the majority. Thus it is that Greens have been anxious to show, these past few years, that a moral philosophy that is not entirely anthropocentric is coincident in its effects with one that is exclusively anthropocentric. Specifically, to bring the discussion down to earth, they have tried to show that human beings benefit from the variousness of other creatures. Well, do we? The answer, after we've run the gauntlet of devil's advocacy, is 'up to a point'; which is Evelyn Waugh's euphemism for 'not really'. The arguments that affect to show that a wealth of other species is good for us are of two kinds, specific and general. Specifically, it's pointed out, for example, that new drugs might be found in the roots of plants as yet unexamined, or in the glands of tree frogs; or that the wild relatives of present-day crops - or even, in these days of genetic engineering, the non-relatives of crops - contain genes that may confer resistance to disease; or that people could derive income from wild animals, by attracting tourists, for example, or by allowing limited hunting of animals such as the black rhinoceros. All these arguments are true. The examples abound, or at least make an impressive list. But none of them is critical. The human species is not dying for lack of drugs, and if you should say, 'what about AIDS?' we might answer 'does anyone believe that the best strategy for seeking an AIDS therapy is to search among the glands of tree-frogs? Wild ground nuts from South America recently supplied breeders at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in India with genes that protected the domestic crop against rust (Gibbons I985). Very valuable, but not critical; and if it came to a toss-up between saving wilderness for its possible complement of genes, and planting that same wilderness with crops of known value, it would be perverse (if the extra food were really needed) to opt for the wild species. Some Africans do make money from elephants, but if oil is discovered beneath the reserves, what price the wildlife? Besides, we might argue that saving particular species may itself help to perpetrate mass extinction. True, the coat-tail effect is well known; a reserve designed to harbour some particularly charismatic' species will also contain a huge number of hangers-on, just as some of the tiger reserves in India also provide homes for jungle cats. But this can work the other way. The bontebok of South Africa, a rare subspecies of the blesbok, very properly has its own small national park. It is good for the bontebok, but the park was established on land that once was fynbos, with its fabulous assemblage of species based upon proteas and ericas. But the fynbos has been banished locally, because bontebok prefer grass. The more general argument in favour of natural variety is that human beings in some way depend upon the natural food webs that almost invariably are highly complex and rich in species. For example, it is commonly argued - in essence - that if tropical forest is removed or decimated so that the number of species is reduced, then what remains degenerates into desert, which is of no use to anyone. But this argument simply isn't true. A greatly simplified forest, dominated by commercial species of Eucalyptus, dipterocarp or Aralcaria, stands up just as well, [240 ] THE RISE AND FALL OF HOMO SAPIENS SAPIENS 481 and as far as we know for just as long, as pristine tropical forest that contains hundreds of species of tree. True, if you replace tropical forest with grassland and then overgraze it, the grass is liable to degenerate. But it's not the loss of species that counts, it is the change of habit; that and a level of husbandry that probably isn't properly matched to the demands of the tropics. Mangroves seem to provide a cast-iron example of natural variety leading intricately but nonetheless inexorably to human benefit. Mangroves contain several species of trees which, in Queensland at least, according to studies by Tom Smith at the Australian Institute of Marine Science (T. Smith, personal communication), in turn depend oddly enough upon un- prepossessing crabs to spread their propagules; there are algae in there, and detritus, and a host of insect larvae and Protozoa; all providing food and shelter, eventually, for the larvae of fish that grow into the kind that people love to eat. Take the mangrove away - or indeed, take individual elements away, such as the crabs - and the edible fish disappear as well. There can be no argument with this. Yet a conscientious devil's advocate would point out that the fish that are nurtured in mangroves are for the most part eaten by rich people who are over-fed to start with; and indeed might point out that fish as a whole, including the apparently vital tilapias of Africa and the enormous yields of cod and the like from high latitudes, contribute a remarkably small proportion of the total protein and energy intake of human beings, and that most of what is consumed is indeed consumed by people who don't need it. An average monetarist - nothing so grand as a devil's advocate, which is a sacred office - could point out that most of the luxury species that Queenslanders or Floridians love to eat can perfectly well be farmed (salmon, turbot, catfish, abolone, giant clams, oysters, and numerous prawns are among the animals that take well to life in a pond or a cage); and if they are farmed they can be fed on ground beef, raised in Illinois. The mangroves can then be given over to hotels, as in Miami; and the tourists will pay to visit the fish farms, which can easily be turned into theme parks, and generate far more wealth, with far more human comfort, than miles of pristine and singularly inhospitable mangrove. Indeed, when you think about it, it is obvious that the people-need-natural-variety argument is false, on two grounds. The first is that cultivated systems, whether of intensive grain or for fish, are always more productive than wild systems because they absorb a much higher level of nutrient, and process it much more efficiently into human food. Most wild plants hate being over-nourished; and indeed, fertilizer escaping from arable farms, even in small amounts, is in many places the greatest single threat to the marvellous,,natural variety of the Australian bush. But because they prefer infertile conditions, the output of wild plants is bound to be relatively meagre. Indeed, cultivated systems often out-produce wild systems by 100-fold or more. But cultivated systems are inevitably simplified. They should not, of course, be monocultures, but there is no deep ecology in that; it's just a matter of sensible husbandry. But few cultivated systems contain more than a dozen or so species; orders of magnitude fewer than the wild environment. Secondly, the argument that humans need the variety of other species is, when you think about it, a theological one. It would be likely to be true only if the Lord had indeed created the world for our express benefit. If we reject that notion, as Green thinkers do on moral grounds and as post-Darwinian scientists are bound to do, then we must concede that other species are for the most part totally detached from any consideration of human welfare, and that the loss of most of them would do us no demonstrable harm, while the loss of several - [ 241 ] 38-2 482 C. TUDGE including many of the genus Anopheles - would be a definite plus. The loss of the Large Copper butterfly from the English Fens has done the British people no material harm at all, and unless the Fens had been drained they could not have become one of the world's most intensive foci of arable farming. Most societies through most of history have persecuted the wolf, and it is impossible to show that the demise of dozens of subspecies, and one or two full species, of wolf- like animals, has had the slightest adverse effect on human material wellbeing. I wish it were not so. I wish we could demonstrate that people need Large Coppers and wolves. But we cannot. Thus my first conclusion in this diabolically adversarial role is that the elimination of all but a tiny minority of our fellow creatures does not affect the material wellbeing of humans one iota; and indeed, that if human beings really want to take over the world, then they are obliged to tidy most other living creatures away. This is what the European colonialists set out to do when they first encountered the fauna of Africa, and it is what all farmers have done, assiduously and deliberately, since the neolithic revolution began around 10000 years ago. In fact, if we were to appoint a committee to make a short list of creatures that truly contributed to human wellbeing, then I doubt if it would contain more than 10000 species; one tenth of one per cent of the number conservatively estimated now to be on Earth. And that list would include the black rhino for millionaires to hunt, and the Lady Amherst pheasant for ordinary people to look at. There has never been such a mass extinction; but if human beings care only about their material wellbeing and a little sport, they would not need to worry about it at all. Indeed the only concern that human beings need have about their fellow creatures, a competent devil's advocate would point out, is whether there are enough. Never mind the species, what's the biomass? Provided we can produce enough cellulose, then in an age of biotechnology we can feed ourselves. And here there are two questions that are linked but are none the less separate, and should be treated separately. First, there is the matter of human numbers; can the world as it now is, or as we may contrive to make it, support all the people there are liable to be in the next few decades and centuries? Secondly, are we by our activities reducing the capacity of the world to provide biomass, and is this putative reduction irredeemable? The two issues of course compound each other, but they are separate issues nonetheless. Human numbers are, of course, staggering. - There is an ecological law - a simple extrapolation of bedrock physics - which says that' large, predatory animals are rare. We break that law: we are large and have a penchant for pTedation, yet our population now stands at five billion; and of all feasible demographic projections the one that comes nearest to consensus says that this will double to around 10 billion by the middle of the 21st century, that it will remain at such a figure for several centuries, and that it will then begin to decline, in theory to some figure that our distant descendants feel is appropriate. Nuclear war or some form of super-AIDs could of course make nonsense of such figures. But these figures do represent the ground state. If the fabric of the Earth stayed as it is throughout that time, and if we add a little more science (as we will), and organize, the world a bit better, reducing some of the awful inequities between north and south, for example, then there is no doubt that the world could accommodate such numbers without difficulty. Britain's farming is as intensive as any in the world, but agricultural scientists agree that with present technologies, and without claiming more land, output could easily be increased by at least 2500 Along with most western [242 ] THE RISE AND FALL OF HOMO SAPIENS SAPIENS 483 countries, we give the greater proportion of our home-grown cereal and pulses to livestock. So if we farmed competently and ate less meat we could probably feed around 200 million people in Britain alone. Much of the rest of the world is incapable of such intensive output, but on the other hand, most of the rest makes a far worse job of realizing whatever potential it has, than we do here. If the world really pulled its socks up and if some of us were less greedy, then even with present techniques we could probably feed not 10 but 20 billion people fairly comfortably. This, however, is where we run into the second consideration; whether the world can continue to be as productive as it is now. The issues are not simple. It isn't true to argue, for example, as some Green philosophers like to, that intensive food production inevitably and invariably leads to soil degradation. There are fields at Rothamsted, in Hertfordshire, that have produced cereal every year for 140 years, without added manure, and they are in better heart now than at the beginning. Though the straw and grain have been harvested, organic matter has been maintained by the rotting roots. You cannot treat heath in this way, but any soil can go on being productive, and indeed improve in agricultural terms, provided you stay within its limits; and the limits of some soils are very high indeed. On the other hand, we cannot ignore the general argument of Paul Ehrlich, of Stanford (Ehrlich & Ehrlich I987), that much of present-day food production depends not upon sustaining soil but on mining it; that in many soils, if not most, there is a steady loss of 'heart', and indeed of the soil itself, as it washes or blows into the sea; that there is a net increase of undesirables, such as soil salinity, which can be very hard to correct; that some useful commodities such as fossil fuels are being destroyed forever, while others, such as phosphorus and many metals, are being spread around the planet and will become increasingly difficult to harvest. Overall, there is a degradation of the planet's fabric. To a large extent this could be arrested, or circumvented: soil salination can be reversed, as is happening in places in Australia; the loss of fossil fuels need not matter, as there is enough energy in surplus straw to run a tractor and fix nitrogen. But it is clear that the technologies to correct the ill effects of over-farming are not being applied fast enough, and won't be in the foreseeable future. It is obvious, then, that human numbers would have had to stop increasing at some point; and Professor Ansley Coale at Princeton has pointed out that our population would have reached 17 trillion (1018) within 700 years if the rate of increase of the 1960s had been maintained (Coale I974, I987). It is clear, too, that the numbers will level out sooner than optimists might have hoped, as the planet's capacity to produce is underminded. Exactly where the cut-off will be, and when we will reach it, is no& clear. What does seem to me extremely likely is that the monetarist argument that the human species will back away from disaster for economic reasons - that as production becomes difficult so demand will reduce - is simply nonsense. Human beings are just as capable as any other species of breeding their way into trouble; and in fact they are more so because of the principle of momentum, which says that in a species with a generation time as long as ours the effects of overbreeding at any one time are not felt until 30 years later, by which time the fabric of the planet could have changed dramatically for the worse (Coale I974, I987). The general point, then, is that we cannot say that disaster for the human species and for the planet as a whole is inevitable; the tragedy of Ethiopia in the 1980s will not necessarily be rehearsed on a global scale. But as Paul Ehrlich has pointed out, it is simply feeble-minded to dismiss out of hand the possibility that at some time in the next few hundred years - in a very short time, indeed - human numbers will exceed the capacity of the world to provide support [243] 484 C. TUDGE (Ehrlich I987). What happens at that point really is anybody's guess. Mathematicians versed in the intricacies of chaos are perhaps best qualified to comment. In fact, the likely fate of the human species over the next few hundred years might profitably be modelled mathematically, as has been done for nuclear winter. Every known factor that might influence our material wellbeing, and every known interaction, would be fed into a computer, to see what turns up. In practice the models would be far more complicated than those for nuclear winter, partly because there are more material factors to feed in, but partly because there are other dimensions to take into account. The nuclear-winter models are purely physical; they attempt to assess what will happen after the bombs have fallen, and after human beings have done their worst. If we modelled the fate of the human species and our fellow creatures, we would also have to take into account future intentions: what kind of a world do we, and our immediate descendants, want to create; and also human fallibility: to what extent are we capable of achieving the end results we find desirable? The physical factors to be fed into the human future model are complicated, as I have already said, but they are to some extent quantifiable. But it is a sad fact, a reflection on the discipline of sociology, that to my knowledge we have no information at all on the second set of factors we would need to feed in: information on human intention. We don't know what kind of a world human beings want. We may guess in a general way that people nowadays are saddened by the poaching of rhinoceroses, and wish it didn't happen; but it is doubtful if many people know that there are two distinct races of white rhino, for instance, or indeed that there's any difference between the African species and the Asian. And when the Javan tiger was officially declared extinct only a few years ago, the matter hardly featured in national newspapers, though it did feature - significantly - on children's television. It is doubtful if anyone cares, in any positive way, about the reduction in species in tropical forest; secondary forest, or even a plantation, tastefully laid out, looks much the same as a natural wood to the untrained eye. Indeed I suspect that when politicians - Margaret Thatcher, Neil Kinnock, George Bush - use the word 'environment', as now is mandatory in all campaigns, that all they have in mind is generalized green-ness, a golf-course and a bit of Repton-style landscaping, or even a Disney-style theme park with, to quote the blurb of Disney-World, 'clownish baboons and madcap macaws'. It's one thing to get politicians ostensibly on the side of environment, but it's another thing again to determine what actually goes on inside their heads. But what does go on inside their heads, and those of the electorate, matters; and we just don't know what kind of a world people think is 'desirable. However, the point of nuclear winter models is not that they unequivocally predict the future, as a soothsayer would do, but that they show a range of possibilities. More specifically, they differentiate the possible from the impossible, and the likely from the less likely. In fact, present nuclear-winter models show that nuclear war is likely to have some effect on climate, and that this could be disastrous if, for example, it led to midsummer frosts in the north, and delayed monsoons in the south. Extreme scenarios - a new mini-Ice Age, as in the seventeenth century, or the total elimination of the human species - are shown to be on the cards, but very much at the extreme tips of the probability curve. And if we made a model of future human possibilities, feeding in intention (if we knew it) and putting an arbitrary figure on fallibility, we too would finish up with a curve, or rather a three-dimensional curve, of possibilities. And I suspect - this being pure guess work, but I hope reasonably sensible guess work - that among the many scenarios on that curve would be the following six: [244 ] THE RISE AND FALL OF HOMO SAPIENS SAPIENS 485 1. Superabundance. High human population; many other species; lush vegetation. 2. Most people's ideal (the 'populist' scenario). High human population; small, select variety of other species; abundant vegetation. 3. Fall-back position: the 'Crete' scenario. Low but stable human population; small but select variety of other species; scenery devastated but acceptable, as in modern Crete. 4. Failure. Low human population, but unstable; small variety of other species, with many 'desirable' types already gone, and extinctions continuing; scenery devastated and continuing to degrade. Human extinction conceivable, though extremely unlikely. 5. Green and pleasant. Low, stable human population arrived at by voluntary means; high variety of other species, lush vegetation. 6. Green and unpleasant. The same as (5), but arrived at by coercion. I should like to comment briefly on these points. I think we can say that (1) is extremely difficult and perhaps impossible to achieve. The growth of the human population is eliminating other species, and it is hard to see how that trend could immediately stop. Scenario (2) is the kind alluded to above; and probably what politicians have in mind, insofar as they have anything in mind, when they start pushing environmentalism. The select band of species envisaged in (2) would be the 10000 that competent biologists might identify. Scenario (3) represents the likely fall-back position if (2) fails. The proposal is that the world as a whole might come to resemble present-day Crete. Crete is stunningly beautiful. But it is, ecologically speaking, a mess. The Minoans finished off the devastation that the farmers of the neolithic began. In a hundred years time the hillsides of Malaysia might look like those of Crete, and we may draw comfort - cold comfort - from the fact that they will be beautiful; bare rock, after the soil is gone, shining in the sun; not so much like Crete, perhaps, as Utah. Clearly, if we treat all the world as the Minoans treated Crete, then we will perforce have a much smaller population than now (and Crete's population is only half what it was in its heyday) but life for those that are left could be highly agreeable, even though their lifestyle was arrived at by insouciance. On the other hand if things go very badly wrong - in the way that Paul Ehrlich suggests is easily to be envisaged - then we would finish up with scenario (4). Human extinction seems unlikely even in this, the worst conceivable scenario, because even though extinction is very difficult to predict (Jablonsky, this symposium) we can make commonsense observations. And a species like ours that is numerous, ubiquitous, heterogeneous and individually adaptable, and yet shares a common gene pool so that different surviv'ing bands can swap genes, must be a very strong candidate for survival. But if we reach the stage of (4), then we will never be the same again. As Paul Ehrlich has pointed out, recovery in a devastated world, with easily obtainable raw materials already gone, will not be possible; or at least it's very difficult to see how. The Green scenario is (5). It has been described both by Paul Ehrlich and by Michael Soule (Ehrlich I987; Soule I987). Paul Ehrlich envisages a final human population of around one to two billion, while Michael Soule puts the figure much lower, at about 100 million, the likely world population at around the time of Christ; a time, as he points out, of flowering genius. Both Ehrlich and Soule are humanitarians, and envisage such low populations being achieved by voluntary means. The means need not be draconian; if married couples averaged two children, as people in rich countries generally seem happy to do, then the population would inexorably drop, given-that some people will elect not to have children at all, and some will die before they have children. The only problem is that a non-draconian policy would take hundreds of years to bring about a significant decline in population, and would not prevent the [ 245] 486 C. TUDGE rise that is imminent. Conservation thus would become a matter of tiding as many creatures as possible over the centuries of human populousness: a period that Michael Soule has called the 'demographic winter'. Ehrlich and Soule both argue that the diminution of human numbers is compensated by the increased quality of life of the people that are on Earth, and by the probable increased longevity of the human species as a whole; for (5) is almost undoubtedly the 'safest' of the scenarios here envisaged. I agree with Soule and Ehrlich that (5) is the most desirable of the envisagable scenarios; and so, I suspect, do most people reading this paper. But although it's not known what people at large think, I'm sure that many people would not agree that (5) is good. Some feel that to contemplate reduction in human numbers is ipso facto inhumane, and others feel it's a kind of blasphemy. On a more secular level, people seeking public office in South Florida at this instant, in Everglades country, are arguing the case for growth and more growth; to quote from a political advertisement on Florida television in 1988, 'growth leads to greater consumer choice': Taco Bell as well as Kentucky Fried. Many people would argue, in short, that (2) is the most desirable scenario, one that has lots of people, albeit living dangerously; and that (3), which is probably more likely than (4), is not too bad as a fall-back. Crete is beautiful, after all; and so, for that matter, is Utah. The burden of this paper, though, is that if we want (5) to come about - and this is the only realistic scenario that allows for a reasonable proportion of our fellow species to survive - then we have to persuade vast numbers of other people that this is worth aiming for. We cannot, however, simply rely on the materialist arguments that say that we should preserve our fellow creatures because they are of direct benefit to us, for three reasons. The first, as I suggested earlier, is that these arguments are, for the most part, simply untrue. The human species could survive just as well if 99.9 % of our fellow creatures went extinct, provided only that we retained the appropriate 0.1 % that we need.

#### Fish stocks recovering

Economist 9 (“Grabbing It All”, 1-3, Lexis)

A variety of remedies have been tried, usually in combination. Thus regulations have been issued about the size and type of fish to be caught, the mesh of nets to be used, the number of days a month that boats may go to sea, the permissible weight of their catch and so on. In some countries fishermen are offered inducements to give up fishing altogether. Those that continue are, at least in theory, subject to monitoring both at sea and in port. Large areas are sometimes closed to fishing, to allow stocks to recover. Others have been designated as marine reserves akin to national parks. And some of the technology that fishermen use to find their prey is now used by inspectors to monitor the whereabouts of the hunters themselves. Most of these measures have helped, as the recovery of stocks in various places has shown. Striped bass and North Atlantic swordfish have returned along America's East Coast, for instance. Halibut have made a comeback in Alaska. Haddock, if not cod, have begun to recover in Georges Bank off Maine. And herring come and go off the coasts of Scotland. Those who doubt the value of government intervention have only to look at the waters off Somalia, a country that has been devoid of any government worth the name since 1991. The ensuing free-for-all has devastated the coastal stocks, ruining the livelihoods of local fishermen and encouraging them, it seems, to take up piracy instead.

#### Recent data concludes no collapse

Economist 9 (“Plenty More Fish in the Sea?”, 1-3, Lexis)

An even gloomier assessment came in an article by 14 academics in Science in 2006. The accelerating erosion of biodiversity, often associated with overfishing, presaged a "global collapse" to the point, in 2048, where all species currently fished would be gone, they said. Even many scientists who are alarmed by the evidence of overfishing find such conclusions controversial. Most non-scientists are unmoved. For a start, fish appears to be in plentiful supply. Even cod is available; over 7m tonnes of cod-family (Gadidae) fish are caught each year. Sushi bars have spread across the world. To cater for the aversion to red meat, and a new-found need for omega-3 fatty acids, fish dishes are on every menu, even in steak houses. Supermarkets and restaurants boast of "sustainable" supplies, and sandwiches are reassuringly labelled "dolphin-friendly", however threatened the tuna within them may be. Best of all, for the ethical consumer, fish are now farmed (see box below). Salmon has become so plentiful that people weary of its delicate taste. Moreover, fishermen themselves seem sceptical of any long-term scarcity. They clamour for bigger quotas and fewer restrictions (except on foreign competitors), and complain that the scientists are either ignorant or one step behind the new reality. Those with long memories can cite previous collapses that have been followed by recoveries. And, in truth, not all collapses are due solely to overfishing: the sudden crash of California's sardine industry 60 years ago is now thought to have been partly caused by a natural change in the sea temperature. Plenty of figures seem to support the optimists. Despite the exploitation round its coasts, Britain, for instance, still landed 750,000 tonnes of Atlantic fish in 2006, two-thirds of what it caught in 1951; even cod is still being hauled from the north-east Atlantic, mostly by Norwegians and Russians. Some British fishing communities—Fraserburgh, for example—are in a sorry state, but others still prosper: the value of wet fish landed in Shetland, for example, rose from £21m in 1996 to £54m ($33m-99m) in 2006. Earnings from fishing in Alaska, in whose waters about half of America's catch is taken, rose from less than $800m in 2002 to nearly $1.5 billion in 2007. And for the world as a whole, the catch in 2006 was over 93m tonnes, according to the UN's Food and Agriculture Organisation, compared with just 19m in 1950 (see chart on next page). Its value was almost $90 billion.

# 2NC

## China

### Link

#### There is a direct trade-of

Tao ‘12 [Ivy, Berkeley Energy and Research Collaborative researcher, “CHINA’S POST-FUKUSHIMA ATTITUDE TOWARD NUCLEAR ENERGY,” <http://berc.berkeley.edu/chinas-post-fukushima-attitude-toward-nuclear-energy/>, 10-2-12]

In conclusion, China is more determined in using nuclear energy, both economically and politically, in comparison with its many western counterparts. Its domestic development and oversea investment are likely to support a flurry of technology innovations and the relocation of talented researchers in the nuclear sector. The contrast reminds me of a comment made by an indignant specialist speaker at the Summer Institute on Sustainability and Energy. “The political impasse on a definite nuclear energy plan is brain-draining the US and all the brilliant young minds that went into nuclear engineering”, he said. Learning from the Chinese and some Europeans countries, maybe it is time for the US to evaluate objectively its nuclear energy potential as a renewable resource, and come up with a more definite development path – be it the phase-out of nuclear or the implementation of more third-generation plants.

#### 2AC Card

Cullinane ‘11 (Staff at House Foreign Affairs Committee. Graduate student at the Institute of World Politics (Scott, America Falling Behind: The Strategic Dimensions of Chinese Commercial Nuclear Energy, 9/28/11)

Due to a confluence of events the United States has recently focused more attention on nuclear weapons policy than it has in previous years; however, the proliferation of commercial nuclear technology and its implications for America’s strategic position have been largely ignored. While the Unites States is currently a participant in the international commercial nuclear energy trade, America’s own domestic construction of nuclear power plants has atrophied severely and the US risks losing its competitive edge in the nuclear energy arena. Simultaneously, the People’s Republic of China (PRC) has made great strides in closing the nuclear energy development gap with America. Through a combination of importing technology, research from within China itself, and a disciplined policy approach the PRC is increasingly able to leverage the export of commercial nuclear power as part of its national strategy. Disturbingly, China does not share America’s commitment to stability, transparency, and responsibility when exporting nuclear technology. This is a growing strategic weakness and risk for the United States. To remain competitive and to be in a position to offset the PRC when required the American government should encourage the domestic use of nuclear power and spur the forces of technological innovation. America: dominant no longer History has recorded well American wartime nuclear developments which culminated in the July 1945 Trinity Test, but what happened near Arco, Idaho six years later has been overlooked. In 1951, scientists for the first time produced usable electricity from an experimental nuclear reactor. Once this barrier was conquered the atom was harnessed to generate electricity and permitted America to move into the field of commercial nuclear power. In the next five years alone the United States signed over 20 nuclear cooperation agreements with various countries. Not only did the US build dozens of power plants domestically during the 1960s and 1970s, the US Export-Import Bank also distributed $7.1 billion dollars in loans and guarantees for the international sale of 49 reactors. American built and designed reactors were exported around the world during those years. Even today, more than 60% of the world’s 440 operating reactors are based on technology developed in the United States. The growth of the US civilian nuclear power sector stagnated after the Three Mile Island incident in 1979 – the most serious accident in American civilian nuclear power history. Three Mile Island shook America’s confidence in nuclear power and provided the anti-nuclear lobby ample fuel to oppose the further construction of any nuclear power plants. In the following decade, 42 planned domestic nuclear power plants were cancelled, and in the 30 years since the Three Mile Island incident the American nuclear power industry has survived only through foreign sales and merging operations with companies in Asia and Europe. Westinghouse sold its nuclear division to Toshiba and General Electric joined with Hitachi. Even the highest levels of the American government came to cast nuclear power aside. President Bill Clinton bragged in his 1993 State of the Union Address that “we are eliminating programs that are no longer needed, such as nuclear power research and development.” America’s slow pace of reactor construction over the past three decades has stymied innovation and caused the nuclear sector and its industrial base to shrivel. While some aspects of America’s nuclear infrastructure still operate effectively, many critical areas have atrophied. For example, one capability that America has entirely lost is the means to cast ultra heavy forgings in the range of 350,000 – 600,000 pounds, which impacts the construction of containment vessels, turbine rotors, and steam generators. In contrast, Japan, China, and Russia all possess an ultra heavy forging capacity and South Korea and India plan to build forges in this range. Likewise, the dominance America enjoyed in uranium enrichment until the 1970s is gone. The current standard centrifuge method for uranium enrichment was not invented in America and today 40% of the enriched uranium US power plants use is processed overseas and imported. Another measure of how much the US nuclear industry has shrunk is evident in the number of companies certified to handle nuclear material. In the 1980s the United States had 400 nuclear suppliers and 900 holders of N-stamp certificates (N-stamps are the international nuclear rating certificates issued by the American Society of Mechanical Engineers). By 2008 that number had reduced itself to 80 suppliers and 200 N-stamp holders. A recent Government Accountability Office report, which examined data from between 1994 and 2009, found the US to have a declining share of the global commercial nuclear trade. However, during that same period over 60 reactors were built worldwide. Nuclear power plants are being built in the world increasingly by non-American companies. The American nuclear industry entered the 1960s in a strong position, yet over the past 30 years other countries have closed the development gap with America. The implications of this change go beyond economics or prestige to include national security. These changes would be less threatening if friendly allies were the ones moving forward with developing a nuclear export industry; however, the quick advancement of the PRC in nuclear energy changes the strategic calculus for America. The shifting strategic landscape While America’s nuclear industry has languished, current changes in the world’s strategic layout no longer allow America the option of maintaining the status quo without being surpassed. The drive for research, development, and scientific progress that grew out of the Cold War propelled America forward, but those priorities have long since been downgraded by the US government. The economic development of formerly impoverished countries means that the US cannot assume continued dominance by default. The rapidly industrializing PRC is seeking its own place among the major powers of the world and is vying for hegemony in Asia; nuclear power is an example of their larger efforts to marshal their scientific and economic forces as instruments of national power. The rise of China is a phrase that connotes images of a backwards country getting rich off of exporting cheap goods at great social and environmental costs. Yet, this understanding of the PRC has lead many in the United States to underestimate China’s capabilities. The Communist Party of China (CPC) has undertaken a comprehensive long-term strategy to transition from a weak state that lags behind the West to a country that is a peer-competitor to the United States. Nuclear technology provides a clear example of this. In 1978, General Secretary Deng Xiaoping began to move China out of the destructive Mao era with his policies of 'reform and opening.' As part of these changes during the 1980s, the CPC began a concerted and ongoing effort to modernize the PRC and acquire advanced technology including nuclear technology from abroad. This effort was named Program 863 and included both legal methods and espionage. By doing this, the PRC has managed to rapidly catch up to the West on some fronts. In order to eventually surpass the West in scientific development the PRC launched the follow-on Program 973 to build the foundations of basic scientific research within China to meet the nation’s major strategic needs. These steps have brought China to the cusp of the next stage of technological development, a stage known as “indigenous innovation.” In 2006 the PRC published their science and technology plan out to 2020 and defined indigenous innovation as enhancing original innovation, integrated innovation, and re-innovation based on assimilation and absorption of imported technology in order improve national innovation capability. The Chinese seek to internalize and understand technological developments from around the world so that they can copy the equipment and use it as a point to build off in their own research. This is a step beyond merely copying and reverse engineering a piece of technology. The PRC sees this process of absorbing foreign technology coupled with indigenous innovation as a way of leapfrogging forward in development to gain the upper hand over the West. The PRC’s official statement on energy policy lists nuclear power as one of their target fields. When viewed within this context, the full range of implications from China’s development of nuclear technology becomes evident. The PRC is now competing with the United States in the areas of innovation and high-technology, two fields that have driven American power since World War Two. China’s economic appeal is no longer merely the fact that it has cheap labor, but is expanding its economic power in a purposeful way that directly challenges America’s position in the world. The CPC uses the market to their advantage to attract nuclear technology and intellectual capital to China. The PRC has incentivized the process and encouraged new domestic nuclear power plant construction with the goal of having 20 nuclear power plants operational by 2020. The Chinese Ministry of Electrical Power has described PRC policy to reach this goal as encouraging joint investment between State Owned Corporations and foreign companies. 13 reactors are already operating in China, 25 more are under construction and even more reactors are in the planning stages. In line with this economic policy, China has bought nuclear reactors from Westinghouse and Areva and is cooperating with a Russian company to build nuclear power plants in Taiwan. By stipulating that Chinese companies and personnel be involved in the construction process, China is building up its own domestic capabilities and expects to become self-sufficient. China’s State Nuclear Power Technology Corporation has partnered with Westinghouse to build a new and larger reactor based on the existing Westinghouse AP 1000 reactor. This will give the PRC a reactor design of its own to then export. If the CPC is able to combine their control over raw materials, growing technical know-how, and manufacturing base, China will not only be a powerful economy, but be able to leverage this power to service its foreign policy goals as well. Even though the PRC is still working to master third generation technology, their scientists are already working on what they think will be the nuclear reactor of the future. China is developing Fourth Generation Fast Neutron Reactors and wants to have one operational by 2030. Additionally, a Chinese nuclear development company has announced its intentions to build the “world’s first high-temperature, gas-cooled reactor” in Shandong province which offers to possibility of a reactor that is nearly meltdown proof. A design, which if proved successful, could potentially redefine the commercial nuclear energy trade. The risk to America The international trade of nuclear material is hazardous in that every sale and transfer increases the chances for an accident or for willful misuse of the material. Nuclear commerce must be kept safe in order for the benefits of nuclear power generation to be realized. Yet, China has a record of sharing dangerous weapons and nuclear material with unfit countries. It is a risk for America to allow China to become a nuclear exporting country with a competitive technical and scientific edge. In order to limit Chinese influence and the relative attractiveness of what they can offer, America must ensure its continuing and substantive lead in reactor technology. The PRC’s record of exporting risky items is well documented. It is known that during the 1980s the Chinese shared nuclear weapon designs with Pakistan and continues to proliferate WMD-related material. According to the Office of the Director of National Intelligence to Congress, China sells technologies and components in the Middle East and South Asia that are dual use and could support WMD and missile programs. Jane’s Intelligence Review reported in 2006 that China, Despite a 1997 promise to Washington to halt its nuclear technology sales to Iran, such assistance is likely to continue. In 2005, Iranian resistance groups accused China of selling Iran beryllium, which is useful for making nuclear triggers and maraging steel (twice as hard as stainless steel), which is critical for fabricating centrifuges needed to reprocess uranium into bomb-grade material. China sells dangerous materials in order to secure its geopolitical objectives, regardless if those actions harm world stability. There is little reason to believe China will treat the sale of nuclear reactors any differently. Even if the PRC provides public assurances that it will behave differently in the future, the CPC has not been truthful for decades about its nuclear material and weapons sales and hence lacks credibility. For example, in 1983 Chinese Vice Premier Li Peng said that China does not encourage or support nuclear proliferation. In fact, it was that same year that China contracted with Algeria, then a non-NPT [Non-Proliferation Treaty] state, to construct a large, unsafeguarded plutonium production reactor. In 1991 a Chinese Embassy official wrote in a letter to the The Washington Post that 'China has struck no nuclear deal with Iran.' In reality, China had provided Iran with a research reactor capable of producing plutonium and a calutron, a technology that can be used to enrich uranium to weapons-grade. It has been reported that even after United Nation sanctions were put on Iran, Chinese companies were discovered selling “high-quality carbon fiber” and “pressure gauges” to Iran for use in improving their centrifuges. In 2004 the PRC joined the Nuclear Suppliers Groups (NSG), gaining international recognition of their growing power in the nuclear field. In spite of this opportunity for China to demonstrate its responsibility with nuclear energy, it has not fulfilled it NSG obligations. The PRC has kept the terms of its nuclear reactor sale to Pakistan secret and used a questionable legal technicality to justify forgoing obtaining a NSG waiver for the deal. Additionally, China chose to forgo incorporating new safety measures into the reactors in order to avoid possible complications A further consequence of China exporting reactors is that these countries may wish to control the fuel cycle which provides the uranium to power their new reactors. The spread of fuel cycle technology comes with two risks: enrichment and reprocessing. Uranium can be enriched to between 3% and 5% for reactor use, but the process can be modified to produce 90% enriched uranium which is weapons-grade. Even if a country only produces low enriched uranium they could easily begin enriching at a higher level if they so choose. Every new country that nuclear technology or information is spread to exponentially increases the risk of material being stolen, given to a third party or being used as the launching point for a weapons program. China’s history of proliferation and willingness to engage economically with very unsavory governments seems likely to increase the risks involving nuclear material. Strategy and policy In the context of US – PRC relations, nuclear energy is more than a matter of generating electrical power; it is a critical issue of national and global security. The direct consequences of China’s proliferation of commercial nuclear technology are accompanied by even larger issues which require new responses from the United States. China’s ability to connect and integrate economic and energy policy with their grand strategy is as impressive as it is menacing. The PRC leadership has established a coherent policy of economic diplomacy to leverage their economic and technological advancements in a way currently unmatched by the US government. The US in contrast has not matched its strategy with actions. The US National Security Strategy (NSS), released in 2010, recognizes that economic competitiveness is the “wellspring of American power.” The strategy cites American’s enduring need for a “strong, innovative, and growing” economy, yet these words are hard to reconcile with the current state of the US nuclear and related industries. The NSS goes further and explicitly spells out that: The United States has a window of opportunity to lead in the development of clean energy technology… If [the United States does] not develop the policies that encourage the private sector to seize the opportunity, the Unites States will fall behind and increasingly become an importer of these new energy technologies. Yet, this recognition from the highest levels of the US government has not done enough to substantially alter the situation or effect the bureaucratic operations of government. A Government Accountability Office report released after the NSS was written found that the US government still lacked a well defined strategy to support and promote US nuclear exports, and the domestic nuclear industry is being stifled by an "outdated and unclear… authorization process" from the Department of Energy. It appears that over the past two decades the US government has grown to accept America’s economic soft power as a permanent condition and hence has not felt compelled to promote or actively defend America’s position. The PRC is now showing that America’s economic strength can be mitigated and co-opted. To adequately counter Chinese activities the US will have to make greater efforts to clearly identify the situation and ensure that policy conforms to strategy in order for the US to advance its position. Prudent actions for US government include: • Build a permanent storage facility, either at Yucca Mountain or elsewhere, to dispose of nuclear waste material. The lack of a permanent storage area is a limiting factor on any expansion of domestic nuclear power plants. • Streamline the licensing and authorization process for new reactors. Some recent progress has been made in this area, but more can be done to improve efficiencies. • Continue to build on the incentives for the construction of nuclear power plants that were put in place by the Energy Policy Act of 2005. • Re-write US export controls to guard against PRC industrial espionage, improve US counterintelligence in places of nuclear research, and confront problems associated with deemed-export at US research institutions. • Invest in nuclear energy research, specifically in safer more efficient reactors that reduce the upfront costs that often hamper nuclear power plant construction. Small reactors or modular construction represent two areas with good potential. • Create a whole of government strategy for the construction and export of nuclar reactors and related equipment. • These previous steps will allow the US to engage the PRC from a position of strength and begin a more serious dialogue that links economic cooperation on reactor construction to safer proliferation practices. America cannot stop the PRC from developing and exporting reactors, but the US can present more attractive, more technically sophisticated options and use diplomatic and economic pressure to influence China to act responsibly when exporting nuclear technology. • Perhaps most importantly, consistent and strong leadership from the executive branch will be critical for implementing these policy changes and for framing the issue of nuclear commerce with regards to China in terms of security and international influence, not only in commercial terms. The United States today still holds many advantages, both potential and actual, over the PRC. The innovative culture inherent in America is still pushing forward research. America has the means and tools at its disposal to remain competitive and successful in a world where China is a global power. The question is what America will decide it wants its place in the nuclear world to be. Nuclear energy commerce is important for US energy security with proliferation implications, but it is even more important because it is indicative of larger efforts on both sides of the Pacific to shape the 21st century.

### Impact

#### Disad outweighs and turns the case- Chinese economic collapses causes Taiwan war- fastest timeframe due to investor collapse- that’s Lewis

#### That goes nuclear- draws in the US and causes miscalc- this assumes their defense

Glaser ‘11 [Charles, Professor of Political Science and International Affairs – George Washington University, “Will China’s Rise Lead to War?” Foreign Affairs Vol. 9 Iss. 2, March/April]

THE PROSPECTS for avoiding intense military competition and war may be good, but growth in China's power may nevertheless require some changes in U.S. foreign policy that Washington will find disagreeable--particularly regarding Taiwan. Although it lost control of Taiwan during the Chinese Civil War more than six decades ago, China still considers Taiwan to be part of its homeland, and unification remains a key political goal for Beijing. China has made clear that it will use force if Taiwan declares independence, and much of China's conventional military buildup has been dedicated to increasing its ability to coerce Taiwan and reducing the United States' ability to intervene. Because China places such high value on Taiwan and because the United States and China--whatever they might formally agree to--have such different attitudes regarding the legitimacy of the status quo, the issue poses special dangers and challenges for the U.S.-Chinese relationship, placing it in a different category than Japan or South Korea. A crisis over Taiwan could fairly easily escalate to nuclear war, because each step along the way might well seem rational to the actors involved. Current U.S. policy is designed to reduce the probability that Taiwan will declare independence and to make clear that the United States will not come to Taiwan's aid if it does. Nevertheless, the United States would find itself under pressure to protect Taiwan against any sort of attack, no matter how it originated. Given the different interests and perceptions of the various parties and the limited control Washington has over Taipei's behavior, a crisis could unfold in which the United States found itself following events rather than leading them. Such dangers have been around for decades, but ongoing improvements in China's military capabilities may make Beijing more willing to escalate a Taiwan crisis. In addition to its improved conventional capabilities, China is modernizing its nuclear forces to increase their ability to survive and retaliate following a large-scale U.S. attack. Standard deterrence theory holds that Washington's current ability to destroy most or all of China's nuclear force enhances its bargaining position. China's nuclear modernization might remove that check on Chinese action, leading Beijing to behave more boldly in future crises than it has in past ones. A U.S. attempt to preserve its ability to defend Taiwan, meanwhile, could fuel a conventional and nuclear arms race. Enhancements to U.S. offensive targeting capabilities and strategic ballistic missile defenses might be interpreted by China as a signal of malign U.S. motives, leading to further Chinese military efforts and a general poisoning of U.S.-Chinese relations.

#### Our internal link happens faster- immediate withdrawal of Chinese investment causes collapse- brink now- faster timeframe

Cambell 1/18 (David Campbell, City Wire, Online Investment News Agency,“China on brink of bull market as growth accelerates”, <http://citywire.co.uk/wealth-manager/china-on-brink-of-bull-market-as-growth-accelerates/a651908>, January 18, 2013)

China exited 2012 with its economy accelerating hard out of a year in which it came closer to hitting stall speed than at any time since 1999, in a further tentative sign of recovery in global activity. The country recorded the slowest full-year growth of this century, but the 12 month figure of 7.9% still beat consensus expectations of 7.7% in a Reuters survey of economists. The Shanghai Composite index gained 1.41% on Friday, crowning a month which seems to have signalled a break-out from its two year bear run, gaining 17.16% since mid-December. ‘Should the Shanghai gain another couple percentage points, a new bull market will be at hand, and it will certainly be a welcome relief for Chinese investors, noted Bespoke Investment this week. ‘Last month’s PMIs were upbeat and we think the recovery has a while yet to run,’ said Mark Williams, Asia analyst at Capital Economics. The uptick was driven by a stabilisation of exports, industrial production, which was up 10.3% over 12 months compared to a figure of 10.1% in November, and retail growth, up 15.2% from 14.9%. Two interest rate cuts and the approval of infrastructure projects, as well as the new guard inaugurated at the head of the politburo in November, have helped stabilise outlook and confidence. Investors responded enthusiastically amid hopes the market has shrugged off its extended losing streak, but analysts were sceptical of how long China could maintain re-acceleration. They pointed out that household spending remained sluggish and the state was still doing the heavy lifting. ‘As such, there must be a good chance of disappointment if incoming data fail to meet expectations,’ said Williams.

#### Chinese economic decline causes military aggression and global trade collapse- skilled worker attraction is key

Gorlick ’11 [Adam, communications manager at the Freeman Spogli Institute for International Studies, “China’s economic stability depends on more education, Stanford economist says,” Dec. 1, <http://reap.stanford.edu/news/chinas_economic_stability_depends_on_more_education_stanford_economist_says_20111201>]

Hourly wages – now about $2 – rose by 19 percent in the past year. If China’s growth pattern continues, those wages can hit $10 to $15 by 2030. That trend is pushing China to shift from an economy based on labor-intensive, low-skilled manufacturing to one needing smarter, more literate workers. Facing increasing payroll costs, employers cannot afford to hire workers who don’t have a set of basic skills and an ability to master complicated tasks. If the labor force cannot measure up, businesses – and the jobs they promise – will go elsewhere. And if that happens? “Then,” Rozelle says, “You have Mexico and the crisis that country is facing today.” China is now in much the same situation as Mexico during the late 1980s and early 1990s, when wages began to skyrocket and the country planned to attract and create high-skilled jobs to support them. The idea was to move Mexico from a middle-income nation to a rich one. But there wasn’t a deep enough labor pool to sustain the shift. While just over 80 percent of kids in Mexico’s well-off cities were going to high school, only about 40 percent of those living in rural and poor urban areas were getting a secondary education. Factories paying low wages soon moved to other countries. Job opportunities dried up. Unemployment soared, and so did the power and presence of drug cartels and organized crime. Gang violence is scaring away tourists, foreign investment and domestic business plans. More than ever, Mexico is now swamped with crime and corruption instead of the spoils of an economic windfall that seemed within reach just three decades ago. Should China fall into the same trap, Rozelle warns of a destabilized Asian behemoth that would put a crimp in worldwide trade and global prosperity. And without a strong economy to assure its own population of a rising quality of life, China might begin to assert its military to increase a sense of nationalism, he says. “The world is much better off with a stable and growing China,” says Rozelle, co-director of the Rural Education Action Project at Stanford’s Freeman Spogli Institute for International Studies.

#### China’s uniquely key to the global economy – it’s far more integrated than the U.S.

Bergsten et al ‘9, Director of the Peterson Institute for International Economics, most widely quoted think tank economist in the world and former assistance secretary for international affairs of the US Treasury (C Fred, October, China’s Rise, et al includes Charles Freeman, the Freeman Chair in China Studies at CSIS, and Derek J. Mitchell, the Principal Deputy assistant secretary of Defense Asian and Pacific Security Affairs, pg 1)

China has become a global economic superpower. It has the second largest national economy and is the second largest exporter.2 It has by far the world's largest current account surplus and foreign exchange re­serves. Growth has averaged 10 percent for the past 30 years, the most stunning record in history. Real GDP in 2006 was about 13 times the level of 1978, when Deng Xiaoping initiated economic reforms. A country must meet three criteria to be a global economic superpower. It must be large enough to significantly affect the world economy. It must be dynamic enough to contribute importantly to global growth. It must be sufficiently open to trade and capital flows to have a major impact on other countries. Three economies now meet these criteria. The United States remains the largest national economy, the issuer of the world's key currency, and in most years the leading host (and home) country for foreign investment. The European Union is now the largest economic entity and the largest trader, even excluding commerce within its membership, and its euro in­creasingly competes with the dollar as a global currency. China, however, is far more deeply integrated into the world economy than either of the other economic superpowers. Despite being a continen­tal economy like both of them, and despite three decades of autarky prior to the 1978 reforms, trade accounts for more than twice as much of China's economy as it does for the United States or the European Union as a group. Hence China's dramatic expansion has a powerful effect on the rest of the world. It shared global growth leadership with the much larger United States during the record world expansion of 2004-07 and, with the current US slowdown, China has become the undisputed chief driver of world growth.3 (See box 1.1 on other contenders for economic superpower status.)

## Solvency

### 2nc

#### Plan takes YEARS to get out of the NRC- at the quickest 42 months- that’s 4 years

Spencer ‘8 (Jack Spencer, Jack Spencer is Research Fellow in Nuclear Energy in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation, “Time to Fast-track New Nuclear Reactors”, <http://www.heritage.org/research/reports/2008/09/time-to-fast-track-new-nuclear-reactors>, September 15, 2008)

Nuclear technology can help to meet America's growing demand for reliable, clean, affordable electricity. This has led many politicians, including presidential candidate John McCain, to conclude that the nation needs to start building new nuclear plants now. The electric power industry has already begun plans to start building new reactors. While approximately 20 applications have been filed or are in preparation to build over 30 new reactors, no permits have been issued and no new plants have begun construction. A primary reason is that the regulatory process remains arduous and unknown. To overcome this, Congress should authorize a fast-track permitting process for a limited number of reactor projects. A Slow, Arduous Process The Department of Energy instituted the Nuclear Power 2010 program in 2002 as an effort to address the regulatory and institutional barriers to new reactors' near-term deployment. As its name implies, the original time frame called for new reactor deployment by 2010. Unfortunately, the program has not succeeded in this regard. Most believe that the earliest that a new plant will come on line is the latter half of the next decade. The problem is not technical or economic-new reactors are being built around the globe, and plans for more are being announced every month. The problem is political. The Nuclear Regulatory Commission (NRC), after so many years with no applications for new reactors, does not have a proven process for efficiently licensing new reactors. The NRC estimates that it needs a minimum of 42 months to issue the design, site, and construction/operation licenses required for reactor construction to begin. This includes-in addition to the safety assessments that are NRC's primary responsibility-about two years for environmental reviews, a year for design reviews, and a year for public hearings. And even this time frame is contingent on complete applications and minimal opposition from outside interests. This has led for calls to streamline the process.

#### This also jacks solvency- means SMR’s licensing takes decades

O’ Connor ’11 (Dan O’Connor is a Policy Fellow in AEL’s New Energy Leaders Project and will be a regular contributor to the website, American Energy League, “Small Modular Reactors: Miracle, Mirage, or Between?”, <http://leadenergy.org/2011/01/small-modular-reactors-miracle-mirage-or-medium/>, January 4, 2011, LEQ)

Judging only by this promising activity, it is tempting to dub the SMR a miracle. But the majority of these diverse designs have yet to be demonstrated. In fact, the demonstration stage of the South African project, Pebble Bed Modular Reactor (a HTR), stalled and faded in 2010 after losing government funding due to lack of customer interest. The importance of demonstration, especially in the highly-regulated US industry, cannot be overstated. But even in the stages before the crucial demonstration step, skepticism over the SMR’s promises abounds. The ASME EnComm noted regulatory, financial, operational, and logistical challenges. Treading the uncharted waters of Lego-like power plant construction will not be easy. In a traditional plant, one reactor provides heat for one or a few steam turbines. In an SMR-based plant, each module drives one turbine with its own controls and operators. As such, few of the costs associated with these systems scale down with reactor capacity. The turbines do not come in a complimentary plug-and-play form either – they would have to be built on site. And while decentralization enables partial operation and online refueling, it also introduces the challenge of module co-operation, the need for numerous highly-trained operator personnel, and brand new reviews by the Nuclear Regulatory Commission (NRC). This goes without mentioning the urgent and increased need for a more dynamic national approach to waste storage. Licensing questions remain too. The one-time approval of a module before its mass production, bypassing a regulatory damper for each unit, is a highly-desirable advantage of SMR design. But if a utility would like to increase its capacity over two decades by incrementally adding more modules, will it face the choice between building licensed, though dated, technology or waiting again for a license to build with state of the art modules? Furthermore, as addressed in my past article, “Putting the Cart Before the Horse with Nuclear R&D” and its comments, the waiting time even for a traditional design license is considerable. With each new SMR innovation, from an individualized control room to coolant choice, the licensing duration increases by as much as a decade, pushing the vital demonstration step further away. Additional costs associated with these regulatory complications and non-scalable systems could combine to nullify the SMR’s affordability argument.

#### And NRC shortage of workforce kills solvency

Weaver 7 (Lynn, President Emirtus of Florida Intsitute of Technology, “Fund NRC Nuclear Power Licensing”)

The Nuclear Regulatory Commission has alerted several utilities that license reviews would be delayed at least a year. With all the concern in Congress over global warming, one might think that an increase in the number of nuclear power plants in the United States is inevitable, both to satisfy energy demands and to counter greenhouse-gas emissions. But that, of course, would be wrong. There are about 100 nuclear plants in the United States and they account for about 75 percent of our country's emission-free electricity. Utilities are preparing to build another 33 plants, including two in Florida. These would be the first reactors to be built in this country in many years, and federal and state energy officials agree that it won't be possible to reduce U.S. greenhouse emissions without them. But it now appears that electric utilities might not be able to obtain licenses anytime soon to build new nuclear plants. The reason for the licensing delay is simple-and-straightforward: a critical shortage of manpower at the Nuclear Regulatory Commission - which is expected to become acute within a year. The NRC knows that it needs to expand its workforce, because it's facing a flood of regulatory reviews for new nuclear plants and existing plants that are seeking a renewal of their operating licenses. But it doesn't have the money.

### And

#### Also DOE is not in charge of NRC licensing- it just helps the NRC make its decision

Wheeler 11 (Brian Wheeler - Associate Editor of Power Engineering)

(February 11, “Small Modular Reactors Are "Hot"” proquest. Power Engineering. Volume 115. No. 2)

 The distant timeframe is for numerous reasons. The plan is to build a SMR, start generating power and bring more online to form a larger nuclear plant, as needed. The SMRs are expected to be ready, as the DOE calls it, to "plug and play" when the reactor arrives on-site. Sounds simple? There are still obstacles that need to be defeated before the arrival of a commercial SMR. Licensing is the number one challenge at this point. The Nuclear Regulatory Commission established the Advanced Reactor Program in 2009 to focus on new licensing technologies. NRC is studying several pre-application reviews to identify possible technical issues, such as safety, security and emergency planning. The light water small reactors may be very similar to large designs, but they still must go through a separate licensing process. Vendors that engage the NRC early can resolve these technical issues. To address safety and security concerns, the small reactors will be built with post-9/11 safety concepts into the designs. NRC expects the first application submission by 2012. The funds for the research and development of the SMR could pose a problem as well. But the Obama administration has requested $38.9 million for the 2011 fiscal year budget for the development of SMRs. The DOE supports public and private partnerships to advance mature SMR designs and supports "research and development activities to advance the understanding and demonstration of innovative reactor technologies and concepts." Among other goals, in FY2011 the DOE plans to “solicit, select and award project(s) with industry partners for cost-sharing the U.S. NRC review of design certification document for up to two of the most promising light water SMR concept(s) for near-term licensing and deployment” and “develop recommendations, in collaboration with NRC and industry, for changes in NRC policy, regulations or guidance to license and enable SMRs for deployment in the U.S. And as the general public’s interest in energy continues to grow, so does the interest in SMRs, said Philip Moor, vice president of consulting and management firm High Bridge Associates. If approved, the funding towards the development of small reactors in the U.S. may play a part of the International Atomic Energy Agency’s estimate of between 49 to 97 SMRs built by 2030. Utilities may have more interest in SMRs once the NRC gains more expertise and the uncertainty of deploying these reactors in the U.S. can be addressed. And if the regulator approves any of the designs for licensing, the U.S. may see a stronger nuclear renaissance take place. As we have seen, some operators have scaled back or completely pulled out on plans to build new large reactors due to the cost. The ability to construct these reactors in factories could lead to lower costs and shorter construction times. Of course, the upfront capital to develop and engineer the facility is going to be needed. But after that, the reactors can be built in the controlled environment in repetition to lower cost, which could in return lead to more clean energy on the grid.

#### NRC has explicit jurisdiction and is OUT SIDE federal CONTROL

Jose and Garza 7 Donald E, managing partner of the law firm Jose & Associates in Pennsylvania and Michael A, J.D. from Georgetown University Law Center and his B.A. from Harvard University, “The Complete Federal Preemption of Nuclear Safety Should Prevent Scientifically Irrational Jury Verdicts in Radiation Litigation”, Spring, http://www.temple.edu/law/tjstel/2007/spring/v26no1-Jose-and-Garza.pdf

At the very dawn of the nuclear age, Congress established a federal monopoly over nuclear power. 74 While that monopoly remains to this day for nuclear weapons, the Atomic Energy Act of 1946 relaxed it so public utilities could build and operate nuclear power plants to generate electricity. Still, utilities would not accept the attendant risk unless adequate insurance was available. 75 To address that concern, Congress provided for a system of financial responsibility in the Price-Anderson Act of 1957. 76 That system combined private insurance up to a certain level and then federal responsibility for any amounts over that level. 77 With the 1988 Amendments Act, Congress established a sole and exclusive federal cause of action, the Public Liability Action (“PLA”), for any property damage or personal injury from radiation exposure due to “source, special nuclear or byproduct material” (essentially the source of the fuel, the fuel itself or any byproducts produced by burning that fuel in a nuclear reactor). 78 The DOE production of nuclear weapons is covered by PriceAnderson since plutonium, the radioactive substance potentially contaminating the Cook plaintiffs’ lands, is a byproduct material. 79 According to Price-Anderson, any plutonium contamination on plaintiff’s lands would entitle them to one cause of action— the PLA. For fifty years, the federal government has regulated nuclear power extensively. 80 Indeed, the federal regulation of nuclear power is one of the most comprehensive frameworks of federal regulation ever established. 81 This federal framework precludes states from regulating the safety aspects of nuclear energy. 82 Congress first initiated its regulation of nuclear technology through the Atomic Energy Act of 1946. 83 The Act was designed to transform “atomic power into a source of energy.” 84 Although nuclear technology was originally a government monopoly, within ten years of passing the Atomic Energy Act, Congress concluded “that the national interest would be best served if the Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing.” 85 Thus, the Atomic Energy Act of 1954 86 ended the federal monopoly and permitted private sector involvement under a comprehensive system of federal licensing requirements and regulation.87 The federal government “erected a complex scheme to promote the civilian development of nuclear energy, while seeking to safeguard the public and the environment from the unpredictable risks of a new technology.” 88 The Atomic Energy Commission (the predecessor of the NRC) “was given exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession and use of nuclear materials.” 89 “Upon these subjects, no role was left for the states.”90

**United States Federal Government is composed of 3 branches**

Britannica Online Encyclopedia, 2006, Encyclopedia Britannica, Inc., http://www.britannica.com/search?query=Federal+Government&ct= The government of the United States, established by the Constitution, is a federal republic of 50 states, a few territories and some protectorates. The national government consists of the executive, legislative, and judicial branches. The head of the executive branch is the President of the United States. The legislative branch consists of the United States Congress, while the Supreme Court of the United States is the head of the judicial branch. The federal legal system is based on statutory law, while most state and territorial law is based on English common law, with the exception of Louisiana and Puerto Rico. The United States accepts compulsory ICJ jurisdiction, with reservations of the federal republic.

**'the' is defined as a mass noun.**

American Heritage Dictionary 2000

Used before a singular noun indicating that the noun is generic: The wolf is an endangered species

Dictionary.com No Date

pronoun

the possessive form of it (used as an attributive adjective): The book has lost its jacket. I'm sorry about its being so late.

### 2NC Nuclear Freeze

#### And the NRC has frozen ALL licenses due to the waste confidence act passed in June- no licenses are going to be given out

PowerEngineering 9/7 (Power Engineering, Online Energy Magazine, “The Nuclear License Freeze”, <http://www.power-eng.com/index.html>, September 7, 2012)

With temperatures reaching 115 degrees and eclipsing 100 degrees for almost a month straight in Tulsa, Okla., a long cold front sounds nice to me. Utilities in the region surely are hoping for some reprieve, too. For those utilities seeking license renewals to extend the operating life of their nuclear power plants, and those wanting to build and operate new plants, the Nuclear Regulatory Commission’s order, or ‘freeze’, as it is being referred to, on Aug. 7 may not be the news they wanted to hear. In response to the June ruling from the U.S. Court of Appeals for the D.C. Circuit that it was vacating and remanding the NRC’s waste confidence rule, the five-person commission issued an order stating the regulators would not issue final reactor licenses or 20-year license renewals for existing plants until the agency addresses a recent court ruling on waste confidence. Waste confidence, according to the NRC, is a generic finding that spent nuclear fuel can be safely stored at reactor sites for decades in either spent fuel pools or dry casks, and that a repository will be available for final disposal of the spent fuel. The NRC order, though, also said current licensing reviews and proceedings “should continue to move forward.” “We believe it is appropriate to halt nuclear licensing decisions and stop creating an inter-generational debt of nuclear waste that will burden our children and grandchildren for centuries to come,” said Stephen Smith, executive director of Southern Alliance for Clean Energy. Here’s the kicker. One thing that has been misunderstood is the fact that the ‘freeze’ does not mean staffers of the U.S. NRC will begin packing up their belongings and shutting down shop. In total, the order could impact licensing reviews for as many as 21 new reactors and 12 license renewals for existing reactors. The NRC will continue to review these renewal and COL applications. The order does not affect licenses already issued or renewed, such as the COLs for Plant Vogtle in Georgia and the V.C. Summer station in South Carolina. “Although there may be some delay in issuing some renewed licenses, NRC regulations provide that plant operation can continue beyond the original license term and until there is a decision on the renewal application, so long as it has been filed in a timely manner,” said Ellen Ginsberg, NEI’s vice president and general counsel. That statement sums it up. Some delay in relicensing. But is this decision really going to generate a long delay? Probably not. “The earliest potential final licensing decisions were the Levy County COL and the Indian Point license renewal, but both of those still have a hearing to go through in any case,” said NRC spokesperson David McIntyre in an email. “Those hearings aren't expected to be finished until sometime next year.” As far as issuing new COLs, it does not seem apparent that new plants are moving along quickly anyway. Are those looking to build new nuclear generation really going to be impacted by this? Doesn’t seem likely. The Nuclear Energy Institute, the lobbyist group for the nuclear industry, has also made that clear. Pending applications for new plants are for projects where construction is unlikely to begin before the end of the decade, according to NEI. Yes, another eight years. For those seeking their 20-year license renewals, the plants can continue operating past the original license expiration date until the NRC makes a ruling on said application. On Sept. 6, the NRC announced it is developing an environmental impact statement and a revised waste confidence decision and rule. The EIS and rule are expected to be completed within 24 months. “Resolving this issue successfully is a Commission priority,” said NRC Chairman Allison M. Macfarlane. “Waste confidence plays a core role in many major licensing actions, such as new reactors and license renewals.”

### Wheeler Card – that was in the cx

#### Here is their Wheeler card- the NRC lacks expertise

Wheeler 11 (Brian Wheeler - Associate Editor of Power Engineering)

(February 11, “Small Modular Reactors Are "Hot"” proquest. Power Engineering. Volume 115. No. 2)

The distant timeframe is for numerous reasons. The plan is to build a SMR, start generating power and bring more online to form a larger nuclear plant, as needed. The SMRs are expected to be ready, as the DOE calls it, to "plug and play" when the reactor arrives on-site. Sounds simple? There are still obstacles that need to be defeated before the arrival of a commercial SMR. Licensing is the number one challenge at this point. The Nuclear Regulatory Commission established the Advanced Reactor Program in 2009 to focus on new licensing technologies. NRC is studying several pre-application reviews to identify possible technical issues, such as safety, security and emergency planning. The light water small reactors may be very similar to large designs, but they still must go through a separate licensing process. Vendors that engage the NRC early can resolve these technical issues. To address safety and security concerns, the small reactors will be built with post-9/11 safety concepts into the designs. NRC expects the first application submission by 2012. The funds for the research and development of the SMR could pose a problem as well. But the Obama administration has requested $38.9 million for the 2011 fiscal year budget for the development of SMRs. The DOE supports public and private partnerships to advance mature SMR designs and supports "research and development activities to advance the understanding and demonstration of innovative reactor technologies and concepts." Among other goals, in FY2011 the DOE plans to “solicit, select and award project(s) with industry partners for cost-sharing the U.S. NRC review of design certification document for up to two of the most promising light water SMR concept(s) for near-term licensing and deployment” and “develop recommendations, in collaboration with NRC and industry, for changes in NRC policy, regulations or guidance to license and enable SMRs for deployment in the U.S. And as the general public’s interest in energy continues to grow, so does the interest in SMRs, said Philip Moor, vice president of consulting and management firm High Bridge Associates. If approved, the funding towards the development of small reactors in the U.S. may play a part of the International Atomic Energy Agency’s estimate of between 49 to 97 SMRs built by 2030. Utilities may have more interest in SMRs once the NRC gains more expertise and the uncertainty of deploying these reactors in the U.S. can be addressed. And if the regulator approves any of the designs for licensing, the U.S. may see a stronger nuclear renaissance take place. As we have seen, some operators have scaled back or completely pulled out on plans to build new large reactors due to the cost. The ability to construct these reactors in factories could lead to lower costs and shorter construction times. Of course, the upfront capital to develop and engineer the facility is going to be needed. But after that, the reactors can be built in the controlled environment in repetition to lower cost, which could in return lead to more clean energy on the grid.

### King

#### Here’s the conclusion

King et al 11. [Marcus, Associate Director of Research at The George Washington University's Elliott School of International Affairs, Associate Research Professor of International Affairs, LaVar Huntzinger, CNA Analyst, Thoi Nguyen, Research staff at CNA, "Feasibility of Nuclear Power on US Military Installations" CNA Analysis and Solutions -- March -- www.cna.org/sites/default/files/research/Nuclear%20Power%20on%20Military%20Installations%20D0023932%20A5.pdf]

Designs for small reactors are at various levels of technological readiness and some are about to begin the NRC licensing process, but¶ none have been licensed or constructed yet. Consequently, there are¶ a number of unresolved certification, licensing, and regulatory issues.¶ The size of the emergency planning zone that should surround the¶ reactor is an example of such an issue. Resolving these issues will take¶ time and resources. NRC representatives have indicated that they¶ expect these issues could be resolved by the middle of the decade and¶ that a plant could be built and operating by about 2020.

### Commerc --- 2NC – Solvency – Natural Gas

#### Natural gas kills the SMR market in the short-term – Reactor costs go up as size goes down---first of a kind costs are uniquely expensive

Thomas B. Cochran 12, member of the Department of Energy's Nuclear Energy Advisory Committee, consultant to the Natural Resources Defense Council, was a senior scientist and held the Wade Greene Chair for Nuclear Policy at NRDC, and was director of its Nuclear Program, 5/30/12, “NRDC’s Perspectives on the Economics of Small Modular Reactors,” http://www.ne.doe.gov/smrsubcommittee/documents/NRDC%20Presentation%205-30-12.pptx

In the US, the capital cost/kW of SMRs are **high and the cost of natural gas is low**. The market for SMRs would be far more attractive in countries where capital costs are lower and natural gas prices are higher. Nuclear Power Costs per Kilowatt Increase as Power Decreases: Materials cost per kilowatt of a reactor goes up as the size goes down because the reactor surface area per kilowatt of capacity, which dominates materials cost, goes up as reactor size is decreased; Cost per kilowatt of secondary containment, as well as independent systems for control, instrumentation, and emergency management, increases as size decreases; Cost per kilowatt also **increases** if each reactor has dedicated and independent systems for control, instrumentation, and emergency management; First-of-a-Kind (FOAK) SMRs will be Considerably More Expensive than Large Nuclear Plants, which in Turn are Not Competitive with Combined-Cycle Natural Gas Plants at Current Natural Gas Prices.

#### Reject evidence that doesn’t speak to long term cost estimates – the aff’s evidence is blind optimism while we’ve got we’ve got super qualified analysts

Gonzalez 11 (Low Natural Gas Prices Make Nuclear Power a Losing Investment”) <http://oilprice.com/Alternative-Energy/Nuclear-Power/Low-Natural-Gas-Prices-Make-Nuclear-Power-A-Losing-Investment.html>

Low natural gas prices have thwarted investment in nuclear generators in the US and federal loan guarantees will not help nuclear power reach parity, experts said. Even before the accident at the Fukushima nuclear plant in Japan, nuclear power was seen as a losing investment, with cost estimates continuing to rise while the price of other energy sources fell, said Peter Bradford, former member of the US Nuclear Regulatory Commission and adjunct professor at Vermont Law School. “Wall Street rating agencies were uniformly sceptical,” he said. Last year, utility Constellation Energy abandoned plans to add another nuclear generator to its Calvert Cliffs facility in Maryland. Exelon, which plans to merge with Constellation, withdrew plans for a nuclear expansion in Texas after reviewing its low-carbon options and finding nuclear to be more expensive than its other choices. “Industry spokespeople will use Fukushima to obscure the fact that new nuclear has been priced out of the market in the US for many years,” Bradford said. “Under these circumstances, adding additional exposure to American taxpayers in the form of nuclear loan guarantees now being proposed in Congress can’t be justified.” Likely influenced by the nuclear accident, a March survey by the Civil Society Institute found that 73% of US residents do not want loan guarantees for nuclear plants. “While I know the Senate is very much pro-nuclear, I’m not certain the kind of subsidies that nuclear power needs are going to last very long,” said S. David Freeman, former head of the Tennessee Valley Authority and the Sacramento Municipal Utility District. Nuclear more expensive than coal, gas – Jeffries The cost of building a nuclear plant varies from $4,500 per kW, as estimated by NRG for its cancelled project in Texas, to $6,350/kW estimated by Southern Company for its Vogtle project in Georgia, said Paul Fremont, managing director of equity research at investment banking group Jefferies. Nuclear represents the highest cost option to construct compared to traditional technologies such as coal, at an estimated cost of $2,000-$3,000/kW, and gas combined cycle units at $950/kW.

## Enviro

#### Status quo solves --- Obama’s got it done

WO ‘12, postgraduate student in international affairs at King’s College [“How valuable is multilateral diplomacy in a post-9/11 world?,” <http://worldoutline.wordpress.com/2012/01/24/how-valuable-is-multilateral-diplomacy-in-a-post-911-world/>]

At the turn of the last century, 189 world leaders convened at the Millennium Summit and approved the Millennium Declaration which outlined eight specific goals that the United Nations was to achieve by 2015.[4] Yet, just a year later the 9/11 terrorist attacks tilted the world upon its head. The Security Council was rallied into action after the attacks and unanimously backed the United States against the threat which had caused so much devastation.[5] However, a wounded United States became increasingly relentless and unilateral in their ‘War on Terror’; when the Security Council refused to authorise a US attack upon an allegedly nuclear-armed Iraq, the United States, led by George. W. Bush, launched the assault anyway without UN approval.[6] This has been referred to as the ‘crisis of multilateralism’, as the United States undermined the very institution of which it is the biggest financial contributor and the most influential player.[7] If the founding member of the UN was refusing to follow the guidelines of the institution then why should other states follow the rules? This act set a worrying precedent for the rest of the world and, as Kofi Annan asserted, ‘undermined confidence in the possibility of collective responses to our common problems’.[8] Other instances of American unilateralism are Bush’s abstention from the Human Rights Council, his refusal to sign the Kyoto Protocol and the US departure from the Comprehensive Test Ban Treaty. The United States was losing sight of the benefits that multilateral diplomacy has to offer. However, the arrival of Barack Obama at the Oval Office has **revived multilateral values** within US foreign policy. The Obama administration has realised that it must now engage with the UN and this has marked a ‘*transitional* moment **in** the **history** of multilateralism’.[9] In his 2010 National Security Strategy, Obama acknowledged the fact that the US had been successful after the Second World War by pursuing their interests within multilateral forums such as the United Nations and not outside of them.[10] The global financial crisis of 2008 and the European Union’s sovereign debt crisis have demonstrated just how interdependent the economies of the western world are and these crises have created an age of austerity in which multilateralism is needed more than ever before.[11] The US has overstretched its resources and is now currently winding down two wars in Afghanistan and Iraq; they have realised that they simply do not have the means to conduct their foreign affairs exclusively anymore. Clear indications **of** Washington’simproved **multilateral engagement with the UN** since Obama’s inauguration, and the changing attitude in US foreign policy, are the economic sanctions negotiated over Iran, Obama’s decision for the US to join the Human Rights Council and, more specifically, its participation in the recent Libya mission. In Libya, the US provided support for the mission, yet played a subdued role in the campaign, allowing its European counterparts to take the lead. In contrast to his predecessor, **Obama is displaying pragmatism** rather than sentimentalism in his search for partners, making alliances in order to adapt to the emerging multipolar world; this is typified by Obama’s recent visit to the Asia-Pacific and his tour of South America (Brazil, Chile and El Salvador) in 2010. For the time being, US unipolarity looks to be a thing of the past; its **foreign policy is *changing* from** Bush’s **unilateralism** at the start of the century **to a** more **multilateral** **approach** at the beginning of a new decade under Obama.[12] This is the **correct precedent** that the most powerful nation in the world should be setting for other states to follow. The fact that the US is now engaging with the UN to counter global problems has restored the credibility that the UN had lost after the Iraq debacle and, by setting this example, **other nations will follow suit** and the international community as a whole can only benefit. From this change in US foreign policy, it is clear that multilateral diplomacy is of more value today than it was a decade ago.

#### 1ac ev says squo solved

Shepard, Natural Resources/Water Resources University Laboratory Teacher, 10

[U.S. Environmental Policy and Leadership, http://www.brighthub.com/environment/science-environmental/articles/39623.aspx?p=2]

The Bush administration’s failure to see the big picture in reference to global environmental change can clearly be seen in the resulting outcomes of his eight years as president. The withdrawal of the U.S. from the Kyoto treaty is both an important symbol of American isolationism from Europe and a direct link as to why the country (and perhaps the world as a whole) has not reduced greenhouse gas emissions and other pollutants that affect the global environment. The Kyoto agreement is not without flaws but the unwillingness to negotiate, or inaction, was not conducive to a good outcome for the global environment. "Greenhouse" Gases According to the Energy Information Administration (EIA) the United States greenhouse gas emissions went up by 1.4% in 2007. An article in the LA times states carbon dioxide emissions rose by nearly 2.0% in the U.S. in 2007 while Denmark’s went down by 8%, the U.K. and Germany 3%, and France and Australia 2%. Granted, this is only a single year, but considering the breadth of the consequences and that Bush had been in office since 2000, these numbers sum up rather well the effect of his administration on global environmental change. Bush Environmental Policies Overturned The ironic nature of the Bush administration’s response to environmental change is that the best aspect of it is reflected in policy’s that did not take effect. The administration made a habit of changing environmental regulations, many of which have been overturned by the Supreme Court. It's a tribute to our system that these efforts were not allowed to come to fruition. An example is the blocking of “changes to the rules that govern what kind of logging, mining or other activities can be allowed in national forests.” (Shogren, 2007) Carol Browner, head of the EPA in the Clinton administration and Obama energy “czarina”, is quoted as saying: "As dreadful as the Bush administration has been with respect to clean air and forests and all these environmental issues, the courts have been really our savior. And have time and time again in the last years [it has] stepped in." (Shogren, 2007) Another example of Bush environmental policy being thwarted is President Obama’s retracting of regulations inserted by Bush before he left office. One such regulation “would have opened 2 million acres of public land in Wyoming, Colorado, and Utah for oil-shale drilling.” (O'Carroll, 2009) Environment vs. Economy It appears that Bush was mired in the old ways of pitting the environment against the economy. In an April 2008 speech Bush states “The Kyoto Protocol would have required the United States to drastically reduce greenhouse gas emissions. The impact of this agreement, however, would have been to limit our economic growth…” (The White House Office of the Press Secretary, 2008) I maintain that this did not have to be, and that Obama has offered a glaring contrast to this outdated thinking. Obama campaigned on stimulating the economy in part by creating “green” jobs and fostering energy efficiency that will both save money and reduce fossil fuel use. Moving Forward There are numerous goals and programs of the new administration that were never considered by the Bush administration. These include a national Renewable Portfolio Standard, proposing a carbon cap and trade system, and already making it so states such as California can pass their own automobile fuel mileage standards that will likely be followed by other states. One of the biggest and perhaps controversial measures thus far is the April Environmental Protection Agency ruling making carbon dioxide a pollutant. A fairly novel idea being studied is to provide incentives for land owners (and money for planting in government owned forest land) to plant trees that can provide sinks for carbon. This is being carried out by a new department called the Office of Ecosystem Services and Markets. (Wilkinson, 2009) Will Obama Meet New Standards? Even with these goals and very early achievements it is unclear if the overall “political will”, no matter how different from the last eight years, is sufficient to tackle the challenges of global environmental change, particularly when the will of the presidential administration may not be enough. There are many representatives who do not share Obama’s enthusiasm for environmental issues. As pointed out previously, there have already been compromises made that have decreased funding for environmental initiatives. The American people can help by not letting the environmental agenda once again take a back seat, though only time will tell just how strong the will and influence of the Obama administration is. Opportunity for Leadership in Copenhagen The U.S. is the world superpower. I argue that the latest world economic troubles only serve to accentuate the extent to which this is true, as economies of the world are suffering due to the domino effect triggered by the collapse of the U.S. housing market. The Kyoto treaty was only a piece of paper without the U.S. on board. The other major polluting nations such as China and India will not take the problem of global environmental change seriously until America does. Copenhagen is a chance to right the ship before it is too late. Our nation is just as capable of steering the ship in the right direction as it is in the wrong direction. This means allowing Earth to take the helm, and remembering humanity adapts to her, not her to humanity. Update: Copenhagen; What happened? Dissapointment seems to be the predominant reaction from environmental organizations to the Copenhagen Climate Summit. Indeed, no binding agreement, or even a pledge to make a binding agreement in 2010 was achieved. This was not, however, the true test of the Obama administration's environmental policy. The real test is whether Obama can get a legitimate climate bill through the Senate. U.S. environmental leadership can still be the beacon it needs to be with a strong message from our lawmakers.

#### 1ac card disconnect

Elver 1-29

[Hilal. Research Prof (specializing in Climate Change) at UC-Santa Barbara. Co-Director of the Climate Change, Human Security and Democracy Project. “How serious is Obama about climate change?” 1/29/13 <http://www.aljazeera.com/indepth/opinion/2013/01/20131281401715581.html> //Cal-JV]

During the 2012 presidential campaign, Obama's silence about climate change was troublesome, and his several trips to coal mining states seemed hardly reassuring. Environmentalists lost confidence in Obama on climate change policy, and for that reason, the emphasis in his inaugural speech came as something of a surprise. Perhaps, it should have been expected.¶ Just a few days before election day in early November of last year, superstorm Sandy devastated a portion of the East Coast of the United Sates, and thanks to public officials in New York and New Jersey, Obama was given a fresh opportunity to show leadership and bipartisanship in relation to an environmental crisis. This catastrophic event that comes with more than an $80 billion price tag affected a region that was already struggling to get out of an economic recession. It convinced many Americans, at least briefly, about the seriousness of climate change and its responsibility in the rising frequency of extreme weather events.¶ Right after Sandy, a nationwide poll conducted by Rasmussen showed that 68 percent of American voters see global warming as a serious problem, an increase from 46 percent in 2009. Moreover, just a few days before the inauguration, the "2013 Draft National Climate Assessment Report" - a domestic version of the Intergovernmental Panel on Climate Change (IPCC) reports - was released by the Federal Advisor Committee, and supported through the National Oceanic and Atmospheric Administration (NOAA) setting forth a bleak account of the adverse impacts of climate change in the United States. According to the report, July 2012 was the hottest month of more than 1,400 measured since 1895.¶ These impacts take the form of drought, flood, extreme weather, and as a consequence, cause significant damage to American agriculture and the overall economy.¶ Backed up by convincing scientific evidence and the fact that the American public now expects reasonable attention to climate change from its government, Obama's emphasis on climate change as a growing threat to "future generations", might be interpreted as nothing very special. Many Americans and the international public now expect Obama to take some concrete steps, and only then will they will be truly impressed with his willingness to assume the mantle of environmental leader. In effect, Obama must now convince the world that he is not only talking the talk but walking the walk.

Environmental leadership strong now

Connaughton 4 (James, White House Council on Environmental Quality Chair, State Department, 11-12, Lexis)

Thanks for the question from overseas Alex. The U.S. remains extremely active in countless projects to make real progress in improving the global environment. I was a proud member of the delegation that went to the World Summit on Sustainable Development in Johannesburg, South Africa in the Summer of 2002. It was there that the nations of the world joined in the Johannesburg Plan of Action focused on five priorities of fundamental human importance to the developing world, as well as developed nations: Access to safe drinking water and modern sanitation, access to affordable and increasingly clean energy of all types, advancement of measures to protect public health, deployment of practices and technologies that deliver greater agricultural productivity and availability of nutritious foods, and conservation of biodiversity. I invite you to review the U.S. State Department website on this subject which describes our partnerships and commitments in great detail. Since Johannesburg, I and my colleague Undersecretary Paula Dobriansky have convened meetings of our interagency teams at least once a month to track our progress and look for new opportunities. These include, for example, initiatives to remove lead from gasoline globally, to replace polluting cookstoves with cleaner burning ones, to establish financing mechanisms for large drinking water and sanitation projects, which are providing very inexpensive “point of use” technologies (such as tablets and filters) to make water safer to drink in remote areas. In addition, the Administration is working with our Congress to ratify and is implementing international treaties to cut pollution from diesel marine engines worldwide, ban or control certain persistent organic pollutants, and to protect wildlife and plant species, such as polar bears, whales, and tropical forests. The U.S. is also leading the way in developing a Global Earth Observation System of Systems that will link and advance the individual efforts of nations into a network available to all. On the issue global climate change, though we cannot participate in the Kyoto Protocol for the reasons I described earlier, we are moving forward on substantial common ground both with countries that have obligations under the Protocol and those that do not. The following link provides a summary of these efforts, as do the U.S. State Department, Energy Department, and Environmental Protection Agency Websites.

#### 1AC Card develop key

Hansen, Director NASA Goddard Institute, ’11

(NASA’s Hansen Presses Obama for a Carbon Cost and Nuclear Push, dotearth.blogs.nytimes.com/2011/01/24/nasas-hansen-presses-obama-for-a-carbon-cost-and-nuclear-push/?partner=rss&emc=rss)

It would have made good sense to give energy/climate a high priority right at the start. Solving our fossil fuel addiction and altering the course of global warming can be handled with a good overall strategy, but that strategy would not be based on a compromise that has special interests defining the details. That’s why I wrote a letter to Michelle and Barack Obama [in 2008], starting it while stuck in London, where Anniek [Hansen's wife] had a heart attack. John Holdren agreed to deliver the letter, but not until after he was confirmed, so I made it a public letter. I understand that John told the media that he was not free to discuss what he communicated to the President and what reaction he received. In any case, I never heard back anything from the White House. Another reason for concern: the President’s comment on global warming in his 2009 State of the Union message, which began with something to the effect: I know some of you don’t believe in global warming… It is not a matter of belief. Galileo had to accept the reality that whether the Earth orbited the sun or vice versa was a matter of belief (if he did not want to go to an early grave), so he recanted his statements (probably with his fingers crossed). But we are not living in a time when beliefs should trump science. The President should use his ascendancy to the most powerful position on the planet to help set a new sensible course for the planet and humanity. It would have required being blunt and honest about the situation and what was needed to break our addiction and avoid the tremendous inter-generational injustice that the present path will bring to pass. The path to a clean energy future would not be painful for the public, but it requires standing up to special interests who benefit from business-as-usual. It is both a moral issue and a question of where the United States will stand in the future. Our economic standing is going to become second class this century if we do not move smartly toward a clean energy future. No where is the lame middle-of-the-road go-slow compromise approach clearer than in the case of nuclear power. The Administration has been reluctant to admit that the Carter and Clinton/Gore administrations made a huge mistake in pulling the U.S. back from development of advanced nuclear technology. That is the way to make nuclear power safer (nuclear power already has the best safety record of any major industry in the United States) and resistant to weapons proliferation. The approach to nuclear power is to take a few baby steps with current technology. People such as Bill Gates are despairing at the lack of leadership in Washington — investing his own money in development of advanced reactor designs. But even Bill Gates does not have enough money to make up for the lack of dynamic leadership in Washington. If we took advantage of our brainpower (which is rapidly aging!), we could still be the leader in developing safer clean energy for the future and producing a better future for our children, rather than going after the last drop of oil in pristine environments, off-shore, in the tar sands. It is such a purblind foolish approach. We need someone with the courage to stand up to the special interests who have hamstrung U.S. policy, including the minority of anti-nukes who have controlled the energy policy of the Democratic party. We are still waiting for an Abraham Lincoln, a leader who will stand tall. It is a moral matter. Lincoln would not have released half of the slaves…. The other thing not mentioned above is that the most fundamental problem, which I keep repeating, is this: as long as fossil fuels are the cheapest energy, somebody will keep burning them — implication, we must put a rising price on carbon. (Not cap-and-trade! A simple, honest approach — collect a fee from fossil fuel companies at first sale, distribute that money, 100 percent, to the public.) Nevertheless, the easiest thing that he could do, and perhaps the best that we can hope for, is for him to give a strong boost to nuclear power. Unfortunately, he seems to fall prey to Democratic politics on this, rather than being a responsible leader.

#### 1AC Card – actually has to revive the industry

Hickey, Law Professor at Hofstra, 07

[REVIVING THE NUCLEAR POWER OPTION IN THE UNITED STATES: USING DOMESTIC ENERGY LAW TO CURE TWO PERCEPTIONS OF INTERNATIONAL LAW ILLEGALITY, lawarchive.hofstra.edu/pdf/Academics/Journals/LawReview/lrv\_issues\_v35n02\_i03.pdf]

Two perceptions, right or wrong, of international law illegality on the part of the United States have arisen in the last few years with regard to both the use of military force in Iraq and to global warming. The first perception is that the United States invaded Iraq illegally to secure a significant source of foreign oil. The second perception is that the United States ignores the letter and spirit of the evolving international climate change regime to reduce greenhouse gas (“GHG”) emissions. Both perceptions of international law illegality directly reflect the domestic growth energy policy of the United States that is anchored by a present and future reliance almost exclusively on fossil fuels (oil, coal and natural gas), which both emit GHG and contribute to the dependence of the United States on foreign oil. Those perceptions of illegality could be fully cured by an aggressive use of existing domestic law to revive the nuclear power industry in the United States to replace its fossil fuel based electric supply. This would put the United States in compliance with the climate change regime (whether or not it ever participates in it) and would help both to greatly reduce the dependence of the United States on foreign oil as a factual matter and to eliminate the perception that it uses force to secure foreign oil sources as a policy matter. In turn, the benefits of removing perceptions of international law illegality ought to play a significant and positive role in weighing the benefits and costs of future domestic nuclear energy production. II. PERCEPTIONS OF INTERNATIONAL LAW ILLEGALITY The first perception of illegality is that the invasion of Iraq was all about securing a foreign oil supply. Three considerations fuel that perception: the absence of an international law justification for the invasion, the presence of large oil reserves in Iraq, and the growing dependence of the United States on foreign oil for most of its oil needs. There was little justification in international law for the invasion by the United States and the coalition of willing states. International law forbids “the threat or use of force by states against the territorial integrity or political independence of any state,” except in an act of legitimate individual or collective self-defense or if authorized to maintain or restore international peace and security by the U.N. Security Council.2 The invasion of Iraq was not an act of self-defense under either the U.N. Charter,3 or under customary international law. Iraq had not actually attacked anyone for twelve years prior to March 2003.4 The invasion also was not justified as an act of anticipatory self-defense because Iraq neither had the capability nor demonstrated any intention of launching an imminent armed attack against the United States or other coalition states.5 The alternative notion that the invasion was legally justified in international law to preempt an armed attack at some remote point in time in the distant future is a dangerous and discredited international law justification for the use of force and there is no record to support that Iraq had such long term intentions. The invasion also could not be justified in international law as an act of humanitarian intervention.6 Finally, the invasion of Iraq was not legally justified by resolutions of the U.N. Security Council.7 The only two Security Council resolutions that could be invoked to justify the invasion were Resolution 678,8 and Resolution 1441.9 Neither resolution authorized the invasion of Iraq in March 2003. Resolution 678 was over a dozen years old and only authorized force to oust Iraq from Kuwait in the Desert Storm war.10 If the United States thought Resolution 678 provided a legal predicate to invade Iraq in 2003, it would not have sought Resolution 1441 from the Security Council. Resolution 1441 did not authorize the use of force because it did not contain the “magic words” of authorization—“use all necessary means.” Two permanent members of the Security Council (Russia and France) said in voting for 1441 that they did not intend to authorize the use of force, and that the resolution itself clearly required the Security Council to take an additional decision if Iraq violated 1441.11 The Security Council subsequently never issued any resolution authorizing the use of force against Iraq. In the absence of international law justifications for the invasion, the perception persists in some quarters, rightly or wrongly, that the United States invaded Iraq primarily to secure long term foreign sources of oil. After all, the United States depends mostly on foreign oil for much of the country’s energy needs.12 “In 2005, total U.S. demand for petroleum was 20.8 million barrels per day, of which 12.5 million barrels per day, or 60 percent, was from net imports.”13 Domestic oil production is mature, is increasingly under environmental constraints, and is not expected to rise significantly in the future.14 Under the present growth energy policy of the United States, grounded in fossil fuel use, secure foreign sources of oil must be found. In this regard, Iraq is estimated to have up to 216 billion barrels of untapped oil reserves in the ground, the third highest reserves in the world behind Saudi Arabia and Canada.15 The second perception of international law illegality is that the United States is acting contrary to the letter and spirit of the emerging international law regime to deal with climate change, in particular, efforts to reduce GHG emissions that contribute to global warming that are found in the 1992 United Nations Framework Convention on Climate Change (“Climate Change Convention”) and later in the 1997 Kyoto Protocol to the Climate Change Convention (“Kyoto Protocol”). The United States is a party to the Climate Change Convention along with 188 other nations. The Climate Change Convention establishes an administrative mechanism for governments to cooperate in stabilizing and ultimately reducing man-made GHG emissions to stop global warming. It establishes a largely aspirational framework to address the problem of climate change by urging cooperation among nations, by calling for the gathering of data on GHG emissions, by the launching of strategies to facilitate needed financing and technologies, and by articulating principles (like equity, sustainable development, and the precautionary principle) to guide more substantive rules. An overall goal of the Climate Change Convention is to have developed nations reduce GHG emissions to their 1990 levels and to have them assist developing countries in dealing with GHG.20 While still a party to the Climate Change Convention, the United States, in 2001, withdrew from the Kyoto Protocol. The Kyoto Protocol, which entered into force in February 2005 and has 169 parties to it, imposed binding international law obligations on industrialized nations to cap GHG emissions. If the United States had not withdrawn from the Kyoto Protocol, it would have been obligated to reduce its GHG emissions seven percent below 1990 levels.23 Just the opposite happened. From 1990 through 2000, for example, total GHG emissions by the United States rose from 1647 million metric tons annually to 1885 million metric tons.24 In 2005, GHG emissions from the United States were seventeen percent higher than in 1990.25 The United States alone produces roughly one quarter of all the world’s energy-related carbon emissions.26 Forty percent of that total comes from electric power plants burning coal, oil, and natural gas.27 In addition, the United States domestically has refused to regulate GHG emissions from automobiles under the Clean Air Act.28 By any measure, this is a domestic energy policy position out of step with the international law regimes emerging to deal with climate change. III. REVIVING THE NUCLEAR POWER OPTION Nuclear power is one of the most readily available domestic energy sources that can be used to achieve energy independence. It has a fiftyyear record of safe operational experience with over one hundred power plants.29 There are an estimated 498 million tons of uranium ore reserves in the United States30 to fuel a revived nuclear power industry. In addition, Australia and Canada, two close U.S. allies, have most of the world’s uranium reserves. Unlike fossil fuel electric power, nuclear electric power does not produce any GHGs. In 2005, over 200 million barrels of oil were used directly for electric generation.31 This consumption can be replaced by nuclear generation, which would help to reduce U.S. foreign oil dependence. In addition, the heavy reliance on the automobile in the United States is a major source of both oil consumption and of GHG emissions. The movement to introduce electric and electric hybrid cars to the U.S. automobile market is an attempt to reduce oil use and GHG emissions. However, if electric batteries used in these cars are recharged with fossil fuel generated electricity, little is achieved to reduce GHG emissions because the source of those emissions is simply moved from the tailpipe to the smokestack. In a revived nuclear power industry, additional GHG emission reductions could be achieved by recharging electric car batteries with electricity produced from nuclear power plants. Despite these advantages, the growth of the nuclear power industry has been moribund since the late 1970s because of domestic concerns about cost, accidents, and waste disposal.32 As a result, the nuclear energy contribution to meet the nation’s total electric demand hovers at about twenty percent.33 If nothing changes in the calculus of the benefits and costs of nuclear power production, the contribution of nuclear energy to meet the rising energy needs of the United States will decline in the future. Existing nuclear plants are operating at top efficiency and they are near the end of their useful lives, with no new plants on the horizon.34 In turn, U.S. electric demand is expected to increase by fortythree percent over the next twenty years requiring between 1300 and 1900 new power plants. Without nuclear power plants, the primary fuel source for those plants will be fossil fuels (coal, natural gas and oil), which are the major contributors of GHG to the atmosphere from electric generation. Renewable energy sources presently contribute little more than two percent of the nation’s total electric generation, excluding hydroelectricity (i.e. wind, solar, geothermal) Even if renewable capacity was tripled, it would still constitute only a very small portion of the total electric energy needs of the country. Hydroelectric power provides between six and seven percent of the country’s electricity.38 It is fully developed in the sense that nearly all rivers and streams capable of being used for production of hydroelectricity have been exploited. It is estimated that fossil fuels, without a change in energy laws and policies, will provide eighty-six percent of the energy supply of the United States in 2030.39 There is also in place a comprehensive legal and administrative regime for revival of the nuclear power industry. For example, the 1954 Atomic Energy Act allows private ownership of nuclear power plants under licenses issued by the federal Nuclear Regulatory Commission.40 The 1957 Price-Anderson Act limits investment risks and encourages investment in nuclear power plants by limiting the overall liability of commercial nuclear plant operators.41 The 1969 National Environmental Policy Act requires environmental impact statements to be prepared.42 The 1982 Nuclear Waste Policy Act addresses disposal of nuclear wastes associated with nuclear power production.43 The 1992 Energy Policy Act simplifies nuclear plant licensing procedures and encourages research and development of advanced nuclear power facilities.44 Finally, the 2005 Energy Policy Act renews the Price-Anderson Act, provides for loan guarantees for new nuclear power reactors, and establishes nuclear power production tax credits.45 What then prevents a shift in domestic growth energy policy towards aggressive nuclear power development and away from reliance on fossil fuels? There are four areas of concern about the nuclear power industry that inhibit its revival: costs, safety, proliferation, and waste. First, nuclear power remains at present relatively expensive under current financial comparisons. The cost of new nuclear plant construction per kilowatt hour is roughly $1500 compared to half that for a new coal plant.46 However, those cost comparisons do not fully internalize the associated global warming costs associated with GHG emissions from coal fired power production. In addition, the cost benefits of reducing GHG emissions by using nuclear power plants is also not reflected in current cost calculations. The cost comparisons also do not reflect any of the benefits achieved by curing the perceptions of illegality with regard to the use of force or to global warming. Cost calculations could also be reduced on a short term basis with government subsidies for the first few plants until economies of scale kick in with a revived nuclear industry, which would further reduce the cost per kilowatt hour. Second, since the Three Mile Island accident in 1979 and the 1987 Chernobyl plant meltdown in the Ukraine, there are concerns about plant safety and harm from accidents. Since those accidents, many industry and government measures have been undertaken to improve safety margins at nuclear plants in the United States. In addition, nuclear plant technology has changed greatly and is continuing to change to produce safer plants. In any event, the old Chernobyl type technology has never been used in the United States.47 There is also a new concern about the possibility of terrorist strikes against nuclear power plants and those safety concerns must be taken into consideration.48 In weighting safety concerns, it must be appreciated that global warming from GHG emissions can potentially produce far more catastrophic harms to the planet than local significant releases of radiation from a nuclear plant accident or terrorist strike for that matter.49 Third, there are concerns about nuclear weapons proliferation weapons. However, proliferation is not a problem inside the United States. It is a problem abroad in countries like Iran and North Korea. In any event, the July 18, 2005 agreement of the United States to share advanced nuclear plant technology with India, which is not a party to the Nuclear Non-Proliferation Treaty, should remove concerns about proliferation from a revived U.S. nuclear power industry from the calculus.50 If the United States is not concerned about nuclear proliferation from its nuclear power plant technology being used to make bombs in India, then it should hardly be much of a factor in considering the revival of the U.S. nuclear power industry. Fourth, there are legitimate concerns about disposal and storage of nuclear waste. Throughout the fuel cycle, low level and high level radioactive waste is created. Of particular concern, is spent nuclear fuel from fuel rods that can no longer produce enough heat to make electricity.51 Those highly radioactive spent fuel rods require storage permanently and safely to prevent exposure to humans, animals and flora and fauna. The waste disposal problem can be significantly ameliorated if the United States would lift its ban on nuclear fuel reprocessing, which would allow spent fuel rods to be used again rather than stored.52 What is not taken into account in considering the revival of the nuclear power industry are the substantial and real benefits in removing perceptions of international law illegality that have arisen in the context of climate change and the use of force. These benefits are admittedly hard to quantify. However, they belong firmly in the revival calculations. IV. CONCLUSION From the 1950s through the 1970s there was a pro-nuclear power consensus in the United States that resulted in the birth and vigorous growth of the nuclear power industry. Rising costs, construction delays, accidents, and waste disposal concerns shattered the pro-nuclear power consensus and stopped the growth of the industry in its tracks. It may now be time to rebuild that consensus and revive the growth of the nuclear power industry in the United States. Our dependence on foreign oil has grown to an unacceptable degree and evidence of the dangers of irreversible global catastrophe from global warming is mounting, while the energy policy of the United States remains a prisoner of fossil fuels. This has resulted in widely held perceptions, right or wrong, that the United States violated international law on the use of force by invading Iraq to secure foreign oil sources and that it now is violating the letter and spirit of the emerging international law regime to deal with climate change. Those perceptions can be removed by a domestic growth energy policy resting on existing domestic energy laws that moves away from fossil fuels and expands nuclear power production. If fossil fuels continue to be the centerpiece of long term domestic energy policy, those perceptions of international law illegality will persist to the detriment of U.S. foreign policy for decades.

#### we adapt

Goklany 10, policy analyst for the Department of the Interior – phd from MSU, “Population, Consumption, Carbon Emissions, and Human Well-Being in the Age of Industrialization (Indur, Part IV – There Are No PAT Answers, or Why Neo-Malthusians Get It Wrong”, April 26, http://www.masterresource.org/2010/04/population-consumption-carbon-emissions-and-human-well-being-in-the-age-of-industrialization-part-iv-there-are-no-pat-answers-or-why-neo-malthusians-get-it-wrong/)

Moreover, fears that the world’s population would continue to increase exponentially have failed to materialize. The world’s population growth rate peaked in the late 1960s. Population increased by 10.6% from 1965–70, but only 6.0% from 2000–05. Many countries are now concerned that fewer young people means that their social security systems are unsustainable. Projections now suggest that the world’s population may peak at around 9 billion around mid-century (see here). The slowdown in the population growth rate, unanticipated by Neo-Malthusians, can be attributed to the fact that population (P) is dependent on affluence (or the desire for affluence) and technology (A and T in the IPAT equation). Empirical data show that as people get wealthier or desire greater wealth for themselves or their offspring, they tend to have fewer children. Cross-country data shows that the total fertility rate (TFR), which measures the number of children per women of child-bearing age, drops as affluence (measured by GDP per capita) increases (see Figure 1). Moreover, for any given level of affluence, TFR has generally dropped over time because of changes in technology, and societal attitudes shaped by the desire for economic development (see here). Most importantly, it is not, contrary to Neo-Malthusian fears, doomed to rise inexorably, absent coercive policies. Neo-Malthusians also overlook the fact that, in general, affluence, technology and human well-being ***reinforce* each other in a** Cycle of Progress (Goklany 2007a, pp. 79-97). If existing technologies are unable to reduce impacts or otherwise improve the quality of life, wealth and human capital can be harnessed to improve existing technologies or create new ones that will. HIV/AIDS is a case in point. The world was unprepared to deal with HIV/AIDS when it first appeared. For practical purposes, it was a death sentence for anyone who got it. It took the wealth of the most developed countries to harness the human capital to develop an understanding of the disease and devise therapies. From 1995 to 2004, age-adjusted death rates due to HIV declined by over 70 percent in the US (USBC 2008). Rich countries now cope with it, and developing countries are benefiting from the technologies that the former developed through the application of economic and human resources, and institutions at their disposal. Moreover, both technology and affluence are necessary because while technology provides the methods to reduce problems afflicting humanity, including environmental problems, affluence provides the means to research, develop and afford the necessary technologies. Not surprisingly, access to HIV therapies is greater in developed countries than in developing countries. And in many developing countries access would be even lower but for wealthy charities and governments from rich countries (Goklany 2007a, pp. 79–97). Because technology is largely based on accretion of knowledge, it ought to advance with time, independent of affluence — provided society is open to scientific and technological inquiry and does not squelch technological change for whatever reason. Consequently, indicators of human well-being improve not only with affluence but also with time (a surrogate for technology). This is evident in Figure 1, which shows TFR dropping with time for any specific level of GDP per capita. It is also illustrated in Figure 2 for life expectancy, which shows that wealthier societies have higher average life expectancies, and that the entire life expectancy curve has been raised upward with the passage of time, a surrogate for technological change (broadly defined). Other indicators of human well-being — e.g., crop yield, food supplies per capita, access to safe water and sanitation, literacy, mortality — also improve with affluence and, separately, with time/technology (see here and here). This indicates that secular technological change and economic development, rather than making matters worse, have actually enhanced society’s ability to solve its problems and advanced its quality of life. Moreover, population is not just a factor in consumption. It is the basis for “human capital.” No humans, no human capital. Humans are not just mouths, but also hands and brains. As famously noted by Julian Simon, they are the Ultimate Resource. This is something Neo-Malthusians have difficulty in comprehending. Notably, a World Bank study, Where is the Wealth of Nations?, indicated that “human capital and the value of institutions … constitute the largest share of wealth in virtually all countries.” A population that is poor, with low human capital, low affluence, and lacking in technological knowhow is more likely to have higher mortality rates, and lower life expectancy than a population that is well educated, affluent and technologically sophisticated, no matter what its size. These factors — human capital, affluence and technology — acting in concert over the long haul, have enabled technology for the most part to improve matters ***faster* than** any **deterioration** due to population, affluence (GDP per person) or their product (GDP). **This has helped keep environmental damage in check**, (e.g., for cropland, a measure of habitat converted to human uses) **or** even **reverse it** (e.g., for water pollution, and indoor and traditional outdoor air pollution), particularly in the richer countries. Note that since the product of population (P) and affluence (A or GDP per capita) is equivalent to the GDP then according to the IPAT identity, which specifies that I = P x A x T, the technology term (T) is by definition the impact (I) per GDP (see Part II in this series of posts). I’ll call this the impact intensity. If the impact is specified in terms of emissions, then the technology term is equivalent to the emissions intensity, that is, emissions per GDP. Therefore the change in impact intensity (or emissions intensity) over a specified period is a measure of technological change over that period. Since matters improve if impact/emissions intensity drops, a negative sign in front of the change in impact intensity denotes that technological change has reduced the impact. Table 1 shows estimates of the changes in impacts intensity, or technological change, over the long term for a sample of environmental indicators for various time periods and geographical aggregations. Additional results regarding technological change over different time periods and countries are available from the original source (here). These results indicate that in the long run, technological change has, more often than not, reduced impacts. The reduction in many cases is by an order of magnitude or more! Thus, notwithstanding plausible Neo-Malthusian arguments that technological change would eventually increase environmental impacts, historical data suggest that, in fact, technological change ultimately reduces impacts, provided technology is not rejected through an inappropriate exercise of the precautionary principle or compromised via subsidies (which usually flow from the general public to politically favored elements of society). To summarize, although population, affluence and technology can create some problems for humanity and the planet, they are also the agents for solving these very problems. In the IPAT equation, the dependence of the I term on the P, A and T terms is not fixed. It evolves over time. And the Neo-Malthusian mistake has been to assume that the relationship is fixed, or if it is not, then it changes for the worse. A corollary to this is that projections of future impacts spanning a few decades but which do not account for technological change as a function of time and affluence, more likely than not, will **overestimate impacts**, perhaps by orders of magnitude. In fact, this is one reason why many estimates of the future impacts of climate change are suspect, because most do not account for changes in adaptive capacity either due to secular technological change or increases in economic development (see here and here). Famously, Yogi Berra is supposed to have said, “It’s tough to make predictions, especially about the future.” Most analysts recognize this. They know that just because one can explain and hindcast the past, it does not guarantee that one can forecast the future. Neo-Malthusians, by contrast, cannot hindcast the past but are confident they can forecast the future. Finally, had the solutions they espouse been put into effect a couple of centuries ago, most of us alive today would be dead and those who were not would be living poorer, shorter, and unhealthier lives, constantly subject to the vagaries of nature, surviving from harvest to harvest, spending more of our time in darkness because lighting would be a luxury, and our days in the drudgery of menial tasks because under their skewed application of the precautionary principle (see here, here and here) fossil fuel consumption would be severely curtailed, if not banned. Nor would the rest of nature necessarily be better off. First, lower reliance on fossil fuels would mean greater demand for fuelwood, and the forests would be denuded. Second, less fossil fuels also means less fertilizer and pesticides and, therefore, lower agricultural productivity. To compensate for lost productivity,, more habitat would need to be converted to agricultural uses. But habitat conversion (including deforestation) — not climate change — is already the greatest threat to biodiversity!

## Nat Gas

#### No impact to natural gas—market will adapt

Persily ‘12

(Larry Persily, “Experts say U.S. exports will push global LNG prices lower”, Alaska Natural Gas Transportation Projects: Office of the Federal Coordinator, 8-30-2012, <http://www.arcticgas.gov/2012/experts-say-us-exports-will-push-global-lng-prices-lower>)

Exporting U.S. LNG will raise domestic natural gas prices little - and maybe not at all - because the global market won't take enough to make a difference. But it could help push down LNG prices in Asia and Europe. That was the conclusion of three economists who separately studied global prospects and presented their work at an Energy Information Administration workshop Aug. 23 in Washington. Kenneth Medlock, from the James A. Baker Institute for Public Policy at Rice University in Houston, said his models determined the world will not need all that much U.S. LNG. All three experts also said the LNG business is highly competitive and other players won't stand still while the U.S. enters the market. Philip Hanser, of The Brattle Group, said LNG requires so much up-front capital that the market for U.S. exports is small and the window is already closing. Producer nations like Canada, Russia, Qatar and Nigeria will protect their market shares and "will react even before we do anything," he said. Most of the LNG delivered to Asia and Europe is priced on contract formulas connected to oil. With high prices for crude driving up LNG in those markets, natural gas buyers are already balking and insisting on contract renegotiations. Hanser said he expects U.S. exports would push the rest of the world away from oil indexing and toward market-based prices. Medlock said U.S. LNG could exert "significant downward pressure on prices," particularly in Asia, while Dale Nesbitt, senior manager at Deloitte MarketPoint, said prices will "converge" globally with lower-priced U.S. LNG in the market.

#### Too much global- defense is overwhelmed

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, mss)

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.

#### Econ resilient, US isn’t key, and impact empirically denied

**Lamy ’11**(Pascal Lamy is the Director-General of the World Trade Organization. Lamy is Honorary President of Paris-based think tank Notre Europe. Lamy graduated from the prestigious Sciences Po Paris, from HEC and ÉNA, graduating second in his year of those specializing in economics. “System Upgrade” BY PASCAL LAMY | APRIL 18, 2011)

**The** bigger **test came with** the 2008-2009 Great Recession, **the first** truly **global recession** since World War II. When the international economy went into free fall, trade went right along with it. Production and supply are today thoroughly global in nature, with most manufactured products made from parts and materials imported from many other countries. These global value chains have a multiplier effect on trade statistics, which explains why, as the global economy contracted by 2 percent in 2009, trade volume shrank by more than 12 percent. This multiplier effect works the other way around as well: **Growth returned** to 4.6 percent and trade volume grew by a record 14.5 percent over the course of 2010. **Projections for trade** in 2011 **are** also **strong**, with WTO economists predicting that trade volume will rise 6.5 percent during the current year. This sharp rebound in trade has proved two essential things: **Markets stayed open despite ever-stronger pressures** to close them, and trade is an indispensible tool for economic recovery, particularly for developing countries, which are more dependent on trade. Shortly after the crisis broke out, we in the WTO began to closely monitor the trade policy response of our member governments. Many were fearful that pressures to impose trade restrictions would prove too powerful for governments to resist. But this is not what happened. Instead, **the system of rules and disciplines**, agreed to over 60 years of negotiations, **held firm**. In **a series of reports** prepared for WTO members and the G-20, we found that **governments acted with great restraint**. At no time did the trade-restrictive measures imposed cover more than 2 percent of world imports. Moreover, the measures used -- anti-dumping duties, safeguards, and countervailing duties to offset export or production subsidies -- were those which, in the right circumstances, are permissible under WTO rules. I am not suggesting that every safeguard measure or countervailing duty imposed during those difficult days was in compliance with WTO rules, but responses to trade pressures were generally undertaken within an internationally agreed-upon framework. Countries by and large resisted overtly noncompliant measures, such as breaking legally binding tariff ceilings or imposing import bans or quotas. As **markets stayed open, trade flows began to shift**, **and countries** that shrugged off the impact of the crisis and **continued to grow** -- **notably China, India, and Brazil** -- **became ever-more attractive markets for countries that were struggling**, **including** those in Europe and **North America**. Trade has been a powerful engine for growth in the developing world, a fact reflected in the far greater trade-to-GDP ratios we see there. In 2010, developing countries' share of world trade expanded to a record 45 percent, and this trend looks set to continue. Decisions made in Brasilia, Beijing, and New Delhi to open their respective economies to trade have been instrumental in enabling these countries to lift hundreds of millions of people out of poverty.

#### Impact empirically denied

**Barnett ‘9** (Thomas P.M. Barnett, senior managing director of Enterra Solutions LLC, “The New Rules: Security Remains Stable Amid Financial Crisis,” 8/25/2009)

When the global financial crisis struck roughly a year ago, the blogosphere was ablaze with all sorts of scary predictions of, and commentary regarding, ensuing conflict and wars -- a rerun of the Great Depression leading to world war, as it were. Now, as global economic news brightens and recovery -- surprisingly led by China and emerging markets -- is the talk of the day, it's interesting to look back over the past year and realize how **globalization's first truly worldwide recession has had virtually no impact whatsoever on the international security landscape**. None of the more than three-dozen ongoing conflicts listed by GlobalSecurity.org can be clearly attributed to the global recession. Indeed, the last new entry (civil conflict between Hamas and Fatah in the Palestine) predates the economic crisis by a year, and three quarters of the chronic struggles began in the last century. Ditto for the 15 low-intensity conflicts listed by Wikipedia (where the latest entry is the Mexican "drug war" begun in 2006). Certainly, the Russia-Georgia conflict last August was specifically timed, but by most accounts the opening ceremony of the Beijing Olympics was the most important external trigger (followed by the U.S. presidential campaign) for that sudden spike in an almost two-decade long struggle between Georgia and its two breakaway regions. Looking over the various databases, then, we see a most familiar picture: the usual mix of civil conflicts, insurgencies, and liberation-themed terrorist movements. Besides the recent Russia-Georgia dust-up, the only two potential state-on-state wars (North v. South Korea, Israel v. Iran) are both tied to one side acquiring a nuclear weapon capacity -- a process wholly unrelated to global economic trends. And with the United States effectively tied down by its two ongoing major interventions (Iraq and Afghanistan-bleeding-into-Pakistan), our involvement elsewhere around the planet has been quite modest, both leading up to and following the onset of the economic crisis: e.g., the usual counter-drug efforts in Latin America, the usual military exercises with allies across Asia, mixing it up with pirates off Somalia's coast). Everywhere else we find serious instability we pretty much let it burn, occasionally pressing the Chinese -- unsuccessfully -- to do something. Our new Africa Command, for example, hasn't led us to anything beyond advising and training local forces. So, to sum up: \* No significant uptick in mass violence or unrest (remember the smattering of urban riots last year in places like Greece, Moldova and Latvia?); \* The usual frequency maintained in civil conflicts (in all the usual places); \* Not a single state-on-state war directly caused (and no great-power-on-great-power crises even triggered); \* No great improvement or disruption in great-power cooperation regarding the emergence of new nuclear powers (despite all that diplomacy); \* A modest scaling back of international policing efforts by the system's acknowledged Leviathan power (inevitable given the strain); and \* No serious efforts by any rising great power to challenge that Leviathan or supplant its role. (The worst things we can cite are Moscow's occasional deployments of strategic assets to the Western hemisphere and its weak efforts to outbid the United States on basing rights in Kyrgyzstan; but the best include China and India stepping up their aid and investments in Afghanistan and Iraq.) Sure, we've finally seen global defense spending surpass the previous world record set in the late 1980s, but even that is likely to wane given the stress on public budgets created by all this unprecedented "stimulus" spending. If anything, the friendly cooperation on such stimulus packaging was the most notable great-power dynamic caused by the crisis. Can we say that the world has suffered a distinct shift to political radicalism as a result of the economic crisis? Indeed, no. The world's major economies remain governed by center-left or center-right political factions that remain decidedly friendly to both markets and trade. In the short run, there were attempts across the board to insulate economies from immediate damage (in effect, as much protectionism as allowed under current trade rules), but there was no great slide into "trade wars." Instead, the **W**orld **T**rade **O**rganization is functioning as it was designed to function, and regional efforts toward **f**ree-**t**rade **a**greement**s** have not slowed. Can we say Islamic radicalism was inflamed by the economic crisis? If it was, that shift was clearly overwhelmed by the Islamic world's growing disenchantment with the brutality displayed by violent extremist groups such as al-Qaida. And looking forward, austere economic times are just as likely to breed connecting evangelicalism as disconnecting fundamentalism. At the end of the day, the economic crisis did not prove to be sufficiently frightening to provoke major economies into establishing global regulatory schemes, even as it has sparked a spirited -- and much needed, as I argued last week -- discussion of the continuing viability of the U.S. dollar as the world's primary reserve currency. Naturally, plenty of experts and pundits have attached great significance to this debate, seeing in it the beginning of "economic warfare" and the like between "fading" America and "rising" China. And yet, in a world of globally integrated production chains and interconnected financial markets, such "diverging interests" hardly constitute signposts for wars up ahead. Frankly, I don't welcome a world in which America's fiscal profligacy goes undisciplined, so bring it on -- please! Add it all up and it's fair to say that this global financial crisis has proven the great resilience of America's post-World War II international liberal trade order.

# 1NR

### Overview

#### Probability- History proves food shortages are the most likely cause of extinction

**Brown ’11** (from World on the Edge: How to Prevent Environmental and Economic Collapse, by Lester R. Brown © 2011 Earth Policy Institute

For the Mayans, it was deforestation and soil erosion. As more and more land was cleared for farming to support the expanding empire, soil erosion undermined the productivity of their tropical soils. A team of scientists from the National Aeronautics and Space Administration has noted that the extensive land clearing by the Mayans likely also altered the regional climate, reducing rainfall. In effect, the scientists suggest, it was the convergence of several environmental trends, some reinforcing others, that led to the food shortages that brought down the Mayan civilization. 26 Although we live in a highly urbanized, technologically advanced society, we are as dependent on the earth’s natural support systems as the Sumerians and Mayans were. If we continue with business as usual, civilizational collapse is no longer a matter of whether but when. We now have an economy that is destroying its natural support systems, one that has put us on a decline and collapse path. We are dangerously close to the edge. Peter Goldmark, former Rockefeller Foundation president, puts it well: “**The death of our civilization is no longer a theory** or an academic possibility; it is the road we’re on.” 2 **Judging by the archeological records of earlier civilizations, more often than not food shortages appear to have precipitated their decline and collapse**. Given the advances of modern agriculture, I had long rejected the idea that food could be the weak link in our twenty-first century civilization. **Today I think not only that it could be the weak link but that it is the weak link.**

**Magnitude- food shortages mean extinction**

**Takacs ‘96** (David, The Idea Of Diversity: Philosophies Of Paradise, 1996, p. 200-1.)

So biodiversity keeps the world running. It has value and of itself, as well as for us. Raven, Erwin, and Wilson oblige us to think about the value of biodiversity for our own lives. The Ehrlichs’ rivet-popper trope makes this same point; by eliminating rivets, we play Russian roulette with global ecology and human futures: “It is likely that destruction of the rich complex of species in the Amazon basin could trigger rapid changes in global climate patterns. Agriculture remains heavily dependent on stable climate, and human beings remain heavily dependent on food. By the end of the century the extinction of perhaps a million species in the Amazon basin could have entrained famines in which a billion human beings perished. And if our species is very unlucky, the famines could lead to a thermonuclear war, which could extinguish civilization.” Elsewhere Ehrlich uses different particulars with no less drama: What then will happen if the current decimation of organic diversity continues? Crop yields will be more difficult to maintain in the face of climatic change, soil erosion , loss of dependable water supplies, decline of pollinators, and ever more serious assaults by pests. Conversion of productive land to wasteland will accelerate; deserts will continue their seemingly inexorable expansion. Air pollution will increase, and local climates will become harsher. Humanity will have to forgo many of the direct economic benefits it might have withdrawn from Earth's well­stocked genetic library. It might, for example, miss out on a cure for cancer; but that will make little difference. As ecosystem services falter, mortality from respiratory and epidemic disease, natural disasters, and especially famine will lower life expectancies to the point where can­cer (largely a disease of the elderly) will be unimportant. Humanity will bring upon itself consequences depressingly similar to those expected from a nuclear winter. Barring a nuclear conflict, it appears that civilization will disappear some time before the end of the next century - not with a bang but a whimper.

#### Immigration reform expands skilled labor --- spurs relations and economic growth in India

Los Angeles **Times**, 11/9/**20**12 (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 **200**2 (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.

**CIR key to Latin American stability**

**Gittelson ‘9** (Citation: 23 Notre Dame J.L. Ethics & Pub. Pol'y 115 2009 THE CENTRISTS AGAINST THE IDEOLOGUES: WHAT ARE THE FALSEHOODS THAT DIVIDE AMERICANS ON THE ISSUE OF COMPREHENSIVE IMMIGRATION REFORM Robert Gittelson has been a garment manufacturer in the Los Angeles area for over twenty-five years. His wife, Patricia Gittelson, is an immigration attorney with offices in Van Nuys and Oxnard, California. Robert also works closely with Patricia on the administrative side of her immigration practice. Throughout his career, Mr. Gittelson has developed practical, first-hand experience in dealing with the immigration issues that are challenging our country today.

In the alternative, should we fail to pass CIR, and instead opt to deport or force attrition on these millions of economic refugees through an enforcement-only approach to our current undocumented immigrant difficulties, what would be the net result? Forgetting for now the devastating effect on our own economy, and the worldwide reproach and loss of moral authority that we would frankly deserve should we act so callously and thoughtlessly, there is another important political imperative to our passing CIR that affects our national security, and the security and political stability of our neighbors in our hemisphere. That is the very real threat of communism and/or socialism. First of all, the primary reason why millions of undocumented economic refugees migrated to the United States is because the economies of their home countries were unable to support them. They escaped extreme poverty and oppression, and risked literally everything they had, including their lives and their freedom, to come to this country to try to work hard and support themselves and their families. Deporting our illegal immigrant population back to primarily Latin America would boost the communist and socialist movements in that part of our hemisphere, and if the anti-immigrationists only understood that fact, they might rethink their "line in the sand" position on what they insist on calling 'amnesty. Communism thrives where hope is lost. The economies of Latin American nations are struggling to barely reach a level of meager subsistence for the population that has remained at home; Mexico, for example, has already lost 14% of their able-bodied workers to U.S. migration.3" Without the billions of dollars in remissions from these nations' expatriates working in the United States that go back to help support their remaining family members, the economies of many of these countries, most of whom are in fact our allies, would certainly collapse, or at least deteriorate to dangerously unstable levels. The addition of millions of unemployed and frustrated deported people who would go to the end of the theoretical unemployment lines of these already devastated economies would surely cause massive unrest and anti-American sentiment. The issue of Comprehensive Immigration Reform is not simply a domestic issue. In our modern global economy, everything that we do, as the leaders of that global economy, affects the entire world, and most especially our region of the world. If we were to naively initiate actions that would lead to the destabilization of the Mexican and many Central and South American governments, while at the same time causing serious harm to our own economy (but I digress ... ), it would most assuredly lead to disastrous economic and political consequences. By the way, I'm not simply theorizing here. In point of fact, over the past few years, eight countries in Latin America have elected leftist leaders. Just last year, Guatemala swore in their first leftist president in more than fifty years, Alvaro Colom.3" He joins a growing list. Additional countries besides Guatemala, Venezuela,32 and Nicaragua33 that have sworn in extreme left wing leaders in Latin America recently include Brazil,34 Argentina,3 5 Bolivia,36 Ecuador,37 and Uruguay.3s This phenomenon is not simply a coincidence; it is a trend. The political infrastructure of Mexico is under extreme pressure from the left.39 Do we really want a leftist movement on our southern border? If our political enemies such as the communists Chavez in Venezuela and Ortega in Nicaragua are calling the shots in Latin America, what kind of cooperation can we expect in our battle to secure our southern border?

**Extinction**

**Manwaring ‘5** (Max G., Retired U.S. Army colonel and an Adjunct Professor of International Politics at Dickinson College, venezuela’s hugo chávez, bolivarian socialism, and asymmetric warfare, October 2005, pg. PUB628.pdf)

President Chávez also understands that the process leading to state failure is the most dangerous long-term security challenge facing the global community today. The argument in general is that failing and failed state status is the breeding ground for instability, criminality, insurgency, regional conflict, and terrorism. These conditions breed massive humanitarian disasters and major refugee flows. They can host “evil” networks of all kinds, whether they involve criminal business enterprise, narco-trafficking, or some form of ideological crusade such as *Bolivarianismo.* More specifically, these conditions spawn all kinds of things people in general do not like such as murder, kidnapping, corruption, intimidation, and destruction of infrastructure. These means of coercion and persuasion can spawn further human rights violations, torture, poverty, starvation, disease, the recruitment and use of child soldiers, trafficking in women and body parts, trafficking and proliferation of conventional weapons systems and WMD, genocide, ethnic cleansing, warlordism, and criminal anarchy. At the same time, these actions are usually unconfined and spill over into regional syndromes of poverty, destabilization, and conflict.62 Peru’s *Sendero Luminoso* calls violent and destructive activities that facilitate the processes of state failure “armed propaganda.” Drug cartels operating throughout the Andean Ridge of South America and elsewhere call these activities “business incentives.” Chávez considers these actions to be steps that must be taken to bring about the political conditions necessary to establish Latin American socialism for the 21st century.63 Thus, in addition to helping to provide wider latitude to further their tactical and operational objectives, state and nonstate actors’ strategic efforts are aimed at progressively lessening a targeted regime’s credibility and capability in terms of its ability and willingness to govern and develop its national territory and society. Chávez’s intent is to focus his primary attack politically and psychologically on selected Latin American governments’ ability and right to govern. In that context, he understands that popular perceptions of corruption, disenfranchisement, poverty, and lack of upward mobility limit the right and the ability of a given regime to conduct the business of the state. Until a given populace generally perceives that its government is dealing with these and other basic issues of political, economic, and social injustice fairly and effectively, instability and the threat of subverting or destroying such a government are real.64 But failing and failed states simply do not go away. Virtually anyone can take advantage of such an unstable situation. The tendency is that the best motivated and best armed organization on the scene will control that instability. As a consequence, failing and failed states become dysfunctional states, rogue states, criminal states, narco-states, or new people’s democracies. In connection with the creation of new people’s democracies, one can rest assured that Chávez and his Bolivarian populist allies will be available to provide money, arms, and leadership at any given opportunity. And, of course, the longer dysfunctional, rogue, criminal, and narco-states and people’s democracies persist, the more they and their associated problems endanger global security, peace, and prosperity.65

### Turns Case

#### Turns economy

De Los Santos 2-9. [Michael, political writer, contributor @ Policy Mic, "3 Ways Immigration Reform Will Lead to a Stronger American Economy" Policy Mic -- www.policymic.com/articles/25301/3-ways-immigration-reform-will-lead-to-a-stronger-american-economy]

Immigration, immigration, immigration: it seems that reform has become the hot topic of the day now that the debt ceiling debate is temporarily over. PolicyMic has published at least 16 articles over the last week that dealt with the topic. We have had a bipartisan panel and President Obama release ideas for immigration reform, and you can expect it to play a significant role in his upcoming State of the Union address. With the economy still the biggest driver of dissatisfaction in this country, how will passing immigration reform impact the economic recovery? Passing a comprehensive package will positively impact the economy in three key areas: consumption, tax revenue and job creation.¶ 1. Consumption:¶ Consumption is driven by wages, and so to understand how consumption will improve, we have to look at wage increases. Immigration reform does not just impact the immigrant community, but U.S.-born workers as well. Our first glimpses are the effects of President Reagan's Immigration Reform and Control Act of 1986. While immigrants still made less than their U.S. born-comrades, they still saw their incomes increase by 15% years following their legalization. While anti-immigration reform groups will dispute the effectiveness of the reforms of 1986, they can’t refute the increase in wages.¶ These wage increases also extended to U.S.-born workers. The Economic Policy Institute looked at the impact immigration had on wages of the non-immigrant community. What they found was that between 1994 and 2007, wages increased by 0.4% over foreign-born workers. This also extended to those with less than a high school education, who still saw a 0.3% increase during that same time as a result of immigration. These aren't huge gains, but the size of the gains wasn't as important as what they indicated: more workers mean a bigger economy. The influx of immigrant workers meant more people were earning wages, and therefore spending more and growing the economy, which in turn meant higher wages and more opportunities for everyone.¶ 2. Tax Revenue:¶ The increase in wage earners, wages, and spending leads to higher tax revenues. A 2010 study by the University of Southern California estimated that undocumented Latino workers missed out on $2.2 billion in income. As a result, the state of California missed out on $310 million in income taxes. They also determined that the federal government lost out on $1.4 billion in taxes.¶ Furthermore, the Congressional Budget Office and the Joint Committee on Taxation estimated that the Comprehensive Immigration Reform Act of 2006 would have generated $66 billion in new revenue between 2007 and 2016. This increase in revenue would have more than offset the estimated increase in entitlement spending of $54 billion.¶ 3. Job Creation:¶ The final area for consideration is job creation. Ezra Klein of The Washington Post examined this in a recent post. Small businesses are drivers of the economy, and as Klein points out, immigrants start business and file patents at a much higher rate than the non-immigrant community.¶ Our economy is struggling to create jobs and encourage consumer spending, and all levels of government are struggling to generate the necessary revenues and right spending cuts to tackle growing debt.¶ These factors make immigration reform a nobrainer. A comprehensive immigration plan addresses all three of these key areas to fixing our economy. In fact, immigration reform should be looked at as more than just immigration policy – it's economic policy. The economy and our country will be better because of it.

#### Key to science leadership

Arizona Daily Sun 2-10-13. azdailysun.com/news/opinion/editorial/cooperation-on-immigration-reform-only-way-forward/article\_c5b261e3-e267-566f-a235-3de051bdce57.html

And what does reform look like? Both the bipartisan Senate package and President Obama's plan start with even more border security and better enforcement of the federal employment verification system and temporary visas that are overstayed. These are just as important to border security as any 20-foot-high fence -- would-be migrants who have heard they cannot find work and who know they will be tracked down once their visas expire will think twice before leaving Mexico for Arizona.¶ LET SCIENCE GRADUATES STAY¶ For those illegals already here, a system of registration, payment of fines, the requirement to learn English, and a waiting period for green cards and citizenship that likely will be at least 10 years doesn't sound like amnesty to us. The devil, of course, is in the details, but the principles of reform should be clear: Bring millions of undocumented aliens out of the shadows, allow them to work legally and pay taxes, and bring them into the mainstream of American culture.¶ Flagstaff, as a university city, has a stake in the part of the reform package that calls for an immediate increase in the number H-1B visas for foreign workers skilled in STEM (science, technology, engineering and math). NAU is attracting hundreds of foreign students in those fields, some of whom would gladly stay past graduation if they could obtain visas. Based on the number of foreign-born U.S citizens who start businesses, obtain patents and even win Nobel Prizes, this is just the kind of immigration reform that Flagstaff, a self-declared STEM city, needs.

#### Turns environmental leadership

Federoff ‘8

(Nina, Assistant Secretary of State, <http://www.gpo.gov/fdsys/pkg/CHRG-110hhrg41470/html/CHRG-110hhrg41470.htm>)

The welfare and stability of countries and regions in many parts of ¶ the globe require a concerted effort by the developed world to address ¶ the causal factors that render countries fragile and cause states to ¶ fail. Countries that are unable to defend their people against ¶ starvation, or fail to provide economic opportunity, are susceptible to ¶ extremist ideologies, autocratic rule, and abuses of human rights. As ¶ well, the world faces common threats, among them climate change, energy ¶ and water shortages, public health emergencies, environmental ¶ degradation, poverty, food insecurity, and religious extremism. These ¶ threats can undermine the national security of the United States, both ¶ directly and indirectly. Many are blind to political boundaries, ¶ becoming regional or global threats.¶ The United States has no monopoly on knowledge in a globalizing ¶ world and the scientific challenges facing humankind are enormous. ¶ Addressing these common challenges demands common solutions and ¶ necessitates scientific cooperation, common standards, and common ¶ goals. We must increasingly harness the power of American ingenuity in ¶ science and technology through strong partnerships with the science ¶ community in both academia and the private sector, in the U.S. and ¶ abroad among our allies, to advance U.S. interests in foreign policy.

### Gun Control Thumper

#### Obama has priced in the rest of his agenda and will get immigration done – a new contentious topic ruins his strategy

Zeleny 1-24. [Jeff, NYT political correspondent, “For Obama, am ambitious agenda faces ticking clock” IHT -- lexis]

The State of the Union address that Mr. Obama will deliver to Congress on Feb. 12 will offer the most definitive road map yet for how the White House will set priorities in his second term as well as how it intends to **avoid becoming mired in a heated debate over one contentious topic** to the detriment of the full agenda. ''There's no doubt you want to get off to a strong start, and we've got a pretty big dance card,'' said David Plouffe, a senior adviser to Mr. Obama who is leaving the White House this week. He ticked through a list of agenda items that included guns, immigration and fiscal issues, but he disputed the suggestion that one item would overtake the others. **''We clearly have this moment where we can get immigration done**,'' Mr. **Plouffe added**. ''If we don't get it done, then shame on us. We've got to seize this opportunity.''

#### Obama pushing immigration – gun control not top.

Pace and Werner 1-25. [Julie, Erica, AP writers, "White House, senators to start immigration push" Twin Cities Pioneer Press -- www.twincities.com/national/ci\_22454002/white-house-senators-start-immigration-push]

The president met privately Friday with the Congressional Hispanic Caucus to discuss his next steps on immigration. Among those in the meeting was Rep. Linda Sanchez, D-Calif., who said Obama told lawmakers "immigration reform is his number one legislative priority."¶ That could bump back the president's efforts to seek legislation enacting stricter gun laws, another issue he has vowed to make a top second-term priority.

#### Not spending pc on it.

Cain 2-5. [Michael, staff writer, "Gun Control Legislation is Another Victim of Our Short Attention Span" Policy Mic -- www.policymic.com/articles/24939/why-we-won-t-ever-see-a-real-gun-ban-in-america]

The president knows these things, and he isn’t about to spend valuable political capital trying to rise against the tide. Within 60 days, nobody in Washington will be talking about gun control. They will have moved on to more pressing matters, confident they have presented a brave attempt which will placate their constituents until the next time.

#### Public push for gun control irrelevant – Obama still pushing immigration reform.

Parsons 2-3. [Christi, White House correspondent for the Chicago Tribune, "Obama to keep up the pressure for immigration reform" LA Times -- articles.latimes.com/2013/feb/03/nation/la-na-pn-obama-immigration-napolitano-20130203]

President Obama’s public focus will be on gun violence this week, but behind the scenes he and key administration officials plan to keep pushing for immigration reform.

#### Engaging the public on guns – NOT capital with congress

AP 1 – 15 – 13 [Obama Proposing Gun Limits, Faces Tough Obstacles, http://www.npr.org/templates/story/story.php?storyId=169390749]

White House officials signaled that Obama would seek to rally public support for the measures he puts forward, perhaps holding events around the country or relying on Organizing for America, his still-operational presidential campaign.

"The president's success in using this strategy, I think, is pretty notable," Carney said of Obama's efforts to engage the public in previous legislative fights. "He'll absolutely continue to engage with the American people on the policy proposals he's putting forward."

Still, it's unclear how much political capital Obama will exert in pressing for congressional action.

### AT: Cap Not Key

#### Political capital is real and finite – Obama has to avoid overreach

The Associated Press 12/13/12 (“The Reset: Obama Spending ‘Political Capital’ Las Vegas Sun)

President Barack Obama is trying to spend what former President George W. Bush called "political capital." That's the good will and clout you get from a re-election victory. Obama's predecessor boasted after his 2004 win that he'd amassed political capital and planned to "spend it" in his second term. Obama is now trying to do the same ting, standing firm with Republicans in negotiations on averting the year-end fiscal cliff and refusing to budge on his insistence that top tax rates \_ not just overall tax revenues\_ go up in any bipartisan fiscal deal. Clearly, his re-election win has given him more leverage. He campaigned on letting Bush-era tax cuts expire for households earning over $250,000 a year. And polls show that if Congress can't agree in the next three weeks and the economy goes over the "fiscal cliff" triggering large automatic spending cuts and tax increases, more voters will blame Republicans than Democrats. Obama met House Speaker John Boehner Sunday for a rare one-on-one talk about the crisis. Otherwise, he's been busy presenting his case elsewhere \_ including Monday's campaign-like visit to Michigan auto workers. Republicans gripe the president should be in Washington negotiating \_ not still out campaigning. Obama says he's mindful of "presidential overreach in second terms" and will proceed cautiously. Still, "I didn't get reelected just to bask in reelection." Of course Bush found he had far less political capital than he'd imagined. He campaigned across the country in early 2005 for a plan to partially privatize Social Security. After months on the road, he realized he couldn't even sell his plan to many members of his own party on Capitol Hill. Right now, Democrats are giving Obama running room. "He gets his way \_ up to a point," said Sen. Sherrod Brown, D-Ohio.

#### Political capital is crucial- political science research and history proves

Beckmann and McGann ‘8 (http://jtp.sagepub.com Journal of Theoretical Politics DOI: 10.1177/0951629807085818 2008; 20; 201 Journal of Theoretical Politics Matthew N. Beckmann and Anthony J. McGann Navigating the Legislative Divide: Polarization, Presidents, and Policymaking in the United States, MATTHEW N. BECKMANN is Assistant Professor of Political Science at the University of California, Irvine. He is currently working on a book-length project that explains and tests a new theory of presidents’ inﬂuence on Capitol Hill, 1953–2004. ANTHONY J. MCGANN is Associate Professor of Political Science at theUni- versity of California, Irvine and Reader in Government at the University of Essex.)

A second question focuses on presidents’ role in polarized politics. Even as empiricists have cited presidents as key legislative players – in agenda setting as well as coalition building (Rossiter, 1956; Neustadt, 1960; Covington, 1987, 1988; Sullivan, 1988, 1990; Edwards, 1989; Bond and Fleisher, 1990; Peterson, 1990; Covington et al., 1995; Cameron, 2000; Edwards and Barrett, 2000) – to date the theoretical models have largely conﬁned presidents to a reactive role, that of a veto player.7 **Below we incorporate presidents as strategic players into the theoretical models of lawmaking** when proactively promoting preferred poli- cies. In doing so, we not only specify elements of this strategy but also examine the conditions under which they will be effective. Finally, what does this mean for the policies that the president ultimately signs into law? The foremost implication of the preference-based models is that all congressional paths funnel toward the center of congressional members’ pre- ferences. But listening to the Capitol’s so called ‘centrists’ suggests federal laws **frequently deviate from their preferences**. Seemingly pivotal **lawmakers regularly pronounce a bittersweet** **assessment** of their chamber’s products – better than nothing but far from ideal. Our ﬁnal question, therefore, examines whether all lawmaking involves moves toward the center of the ideological spectrum or whether some conditions enable presidents to pull outcomes away from the phil- osophical middle and toward the ideological extreme. Overcoming the Ideological Divide To this point it has been argued that polarization tends to promote gridlock. Par- tisan polarization does so inasmuch as it encourages lawmakers to put posturing ahead of negotiating, and ideological polarization does so inasmuch as it reduces the range of issues where pivotal voters can agree to pass any new law over the status quo. Here we build from this theoretical baseline to examine the effect of incorporating two important stylistic features: presidents and polarization. The Wellsprings of Presidential Power In his seminal work on the presidency, Richard Neustadt (1960) cited the ofﬁce’s informal levers of power – not its constitutional levers of power – as central to understanding presidents’ role in American politics generally, and federal lawmaking in particular. For Neustadt, these informal powers were rooted in the presidency’s unrivaled perspective and prestige; for Sam Kernell (1993), they stem from presidents’ **unique capacity to rally public pressure against otherwise recalcitrant lawmakers** (see also Canes-Wrone, 2005). And beyond personal persuasion and ‘going public’, presidents and their aides **also enjoy a distinct ability to engage in what political scientists call vote-buying** and Washington insiders call ‘horse-trading’.8 Whatever the president’s tactical choice – private persuasion, public pressure, or vote buying – they all ﬁt under the same strategic umbrella; each reﬂects the president’s allocation of president-controlled resources to alter lawmakers’ posi- tions. As such, we employ the omnibus concept of ‘presidential political capital’ to capture this class of presidential lobbying. More precisely, we deﬁne presidents’ political capital as the resources White House ofﬁcials can allocate to induce changes in lawmakers’ position on roll-call votes.9 This deﬁnition of presidential political capital comports well with previous scholarship (e.g. Groseclose and Snyder, 1996) as well as contemporaneous accounts of White House lobbying. For example, after watching the administration’s recent **effort before a vote on an important trade** bill, the next-day’s Washington Post article described the situation: So many top Bush administration ofﬁcials were working the Capitol last night that Democrats joked that the **hallways looked like a Cabinet meeting** . . . The last-minute negotiations for votes resembled the wheeling and dealing on a car lot . . . Members took advantage of the opportunity by requesting such things as fundraising appear- ances by Cheney and the restoration of money the White House has tried to cut from agriculture programs. (Blustein and Allen, 2005: s. A) Nearly 20 years earlier, Ronald Reagan’s OMB 251), described a similar scene: ‘The last 10 percent or 20 percent of the votes needed for a majority of both houses on the 1981 tax cut had to be bought, period’. Applying the well-known vote-buying models (see Snyder, 1991; Groseclose, 1996; Groseclose and Snyder, 1996) to this setup, we show how **presidents can strategically target their political capital to legislators** to the end of **inﬂuencing** lawmakers and the **policies they pass.** From there we incorporate polarization into the model to show how it conditions the president’s inﬂuence. The Basic Model To start, let us consider a simple vote-buying game. There are two types of players: a president who seeks to buy votes such that the Senate passes legisla- tion more to his liking than it otherwise would, and senators, who must balance the utility they derive from voting in line with their default ideal with the beneﬁts that the president offers. Hence we assume that the legislative outcome can be described as a point on the Real number line. The president’s utility function is: Up = Aðo, pÞ − B where o is the outcome, p is the president’s ideal point and B is the sum of poli- tical capital the president spends. Let us assume that p ≥ o ≥ status quo (i.e., that the president wishes to move the outcome to ‘the right’.) Furthermore, assume that A (o, p) is a function of the distance between the outcome and presi- dent’s ideal – increasing as the outcome (o) approaches his ideal (p). The utility function of a senator is a function of whether they vote yea or nay, and whether they support the proposal sufﬁciently to vote for it absent any presi- dential pressure or bribe: If si ≤ o: Yea: Ui = Ci ðo, si Þ + bi Nay: Ui = 0 If si ≥ o Yea: 0 Nay: −Ci ðo, si Þ + bi where bi is the political capital offered to each individual senator, si is the sena- tor’s ideal point and C (o, si Þ is a function of the distance between o and s i – with senators’ utility increasing as the distance between the outcome and their ideal decreases. One interpretation of senators’ ideal points is the most extreme outcome a senator will support without a bribe. Senators for whom si ≥ o will support proposal o without being lobbied, and indeed would have to be lobbied not to support it, whereas senators for whom si < o will not vote for proposal o unless the president expends some political capital on them. Like Groseclose and Snyder (1996), we assume senators derive utility from their revealed prefer- ence over policies, not just the outcome. As a ﬁrst point, it is worth stating the obvious: **the greater the president’s political capital, the greater his ability to inﬂuence legislators’ votes**. If bi = 0 – either because the president chose not to get involved or because he lacks politi- cal capital to spend – then the White House is limited to the familiar role of veto bargaining (see Cameron, 2000). Indeed, when unwilling or unable to spend the political capital that presidential lobbying demands, the president and his team **cannot push a proactive legislative agenda**. By contrast, as bi increases, the administration’s ability to ply any particular member increases, thereby granting presidents a positive role in the policymaking process.

#### Capital is real – other ev misinterprets findings

Dickinson 9. (Matthew, professor of political science at Middlebury College. He taught previously at Harvard University, where he also received his Ph.D., working under the supervision of presidential scholar Richard Neustadt, We All Want a Revolution: Neustadt, New Institutionalism, and the Future of Presidency Research, Presidential Studies Quarterly 39 no4 736-70 D 2009)

Small wonder, then, that initial efforts to find evidence of presidential power centered on explaining legislative outcomes in Congress. Because scholars found it difficult to directly and systematically measure presidential influence or "skill," however, they often tried to estimate it indirectly, after first establishing a baseline model that explained these outcomes on other factors, including party strength in Congress, members of Congress's ideology, the president's electoral support and/or popular approval, and various control variables related to time in office and political and economic context. With the baseline established, one could then presumably see how much of the unexplained variance might be attributed to presidents, and whether individual presidents did better or worse than the model predicted. Despite differences in modeling assumptions and measurements, however, these studies came to remarkably similar conclusions: individual presidents did not seem to matter very much in explaining legislators' voting behavior or lawmaking outcomes (but see Lockerbie and Borrelli 1989, 97-106). As Richard Fleisher, Jon Bond, and B. Dan Wood summarized, "[S]tudies that compare presidential success to some baseline fail to find evidence that perceptions of skill have systematic effects" (2008, 197; see also Bond, Fleisher, and Krutz 1996, 127; Edwards 1989, 212). To some scholars, these results indicate that Neustadt's "president-centered" perspective is incorrect (Bond and Fleisher 1990, 221-23). In fact, the aggregate results reinforce Neustadt's recurring refrain that presidents are weak and that, when dealing with Congress, a president's power is "comparably limited" (Neustadt 1990, 184). The misinterpretation of the findings as they relate to PP stems in part from scholars' difficulty in defining and operationalizing presidential influence (Cameron 2000b; Dietz 2002, 105-6; Edwards 2000, 12; Shull and Shaw 1999). But it is also that case that scholars often misconstrue Neustadt's analytic perspective; his description of what presidents must do to influence policy making does not mean that he believes presidents are the dominant influence on that process. Neustadt writes from the president's perspective, but without adopting a president-centered explanation of power. Nonetheless, if Neustadt clearly recognizes that a president's influence in Congress is exercised mostly, as George Edwards (1989) puts it, "at the margins," his case studies in PP also suggest that, within this limited bound, presidents do strive to influence legislative outcomes. But how? Scholars often argue that a president's most direct means of influence is to directly lobby certain members of Congress, often through quid pro quo exchanges, at critical junctures during the lawmaking sequence. Spatial models of legislative voting suggest that these lobbying efforts are most effective when presidents target the median, veto, and filibuster "pivots" within Congress. This logic finds empirical support in vote-switching studies that indicate that presidents do direct lobbying efforts at these pivotal voters, and with positive legislative results. Keith Krehbiel analyzes successive votes by legislators in the context of a presidential veto and finds "modest support for the sometimes doubted stylized fact of presidential power as persuasion" (1998,153-54). Similarly, David Brady and Craig Volden look at vote switching by members of Congress in successive Congresses on nearly identical legislation and also conclude that presidents do influence the votes of at least some legislators (1998, 125-36). In his study of presidential lobbying on key votes on important domestic legislation during the 83rd (1953-54) through 108th (2003-04) Congresses, Matthew Beckman shows that in addition to these pivotal voters, presidents also lobby leaders in both congressional parties in order to control what legislative alternatives make it onto the congressional agenda (more on this later). These lobbying efforts are correlated with a greater likelihood that a president's legislative preferences will come to a vote (Beck 2008, n.d.).

#### Des Moines says Bully Pulpit is key

#### Obama is key to the immigration

Fabian 1-25. [Jordan, Political Editor, ABC News, White House, Senators to Begin Push on Immigration Reform , 2013 -- http://abcnews.go.com/ABC\_Univision/News/white-house-senators-begin-push-immigration-reform/story?id=18315277]

"The president is the quarterback and he will direct the team, call¶ the play, and be pivotal if we succeed. I am very optimistic based on¶ conversations with Republicans in the House and Senate that we will do¶ more than just talk about the immigration issue this year," Gutierrez¶ said in a statement following the CHC meeting with Obama. "The¶ president putting his full weight and attention behind getting a bill¶ signed into law is tremendously helpful. We need the president and the¶ American people all putting pressure on the Congress to act because¶ nothing happens in the Capitol without people pushing from the¶ outside."

#### Immigration reform will pass now but capital key to ensure comprehensive bill.

Chazan 1-24. [Jackie, former news producer and editor, "Citizenship for undocumented immigrants gains favor" Examiner -- www.examiner.com/article/citizenship-for-undocumented-immigrants-gains-favor]

A new poll released Wednesday, shows an increase in support for a path to citizenship for undocumented immigrants which, interestingly, has been fueled by Republicans.¶ The Associated Press-GfK poll released on Wednesday shows 62 percent Americans favor allowing undocumented immigrants to eventually gain citizenship, up from 50 percent in 2010. More than half of Republicans – 53 percent - now favor a path to citizenship, up 22 percentage points from 2010.¶ Congress is expected to take up an immigration reform package this year. A path to citizenship remains one of the most contentious issues of reform. Democrats support it and Republicans do not, although, Sen. Marco Rubio (R-Fla.) proposal allows undocumented immigrants to apply for legal status but provides no special pathway to citizenship.¶ President Barack Obama made immigration reform a centerpiece of his re-election campaign, garnishing a plurality of votes in the November election from Latino voters.¶ Democrats have opened up a 41 percent to 34 percent lead over Republicans as the party most trusted to deal with immigration. That's a significant shift from October 2010, when Republicans led Democrats on that question by a margin of 46 percent to 41 percent.¶ Republican leaders have increasingly recognized the need for a shift in party stance on the issue, as Latino power grows in the United States. Whether Latino voters will convert electoral clout into meaningful, comprehensive immigration legislation has yet to be seen.¶ “I think the republicans are ready to do something on immigration,” former Republican presidential candidate, Rick Santurum said on ABC’s This Week. “You saw Marco Rubio’s plan which is pretty far down the road. It looks a lot like what President Bush put forward four years ago.”¶ But just because Republicans were prepared to talk about immigration policies doesn’t mean they are in complete agreement with Democrats on what policies to enact, Santorum cautioned. “They’re willing to do it but they’re not willing to give the President everything he wants.” Santorum said, “because I think they believe the rule of law still matters in this country and that we have to respect those who did it the right way who waited in line and did — and made sacrifices and that they shouldn’t be treated the same as people who broke the law and came here.”

#### Spending PC now.

Benen 2-6. [Steve, political writer, "Defining the 'extremes' in the immigration debate" MSNBC -- maddowblog.msnbc.com/\_news/2013/02/06/16868677-defining-the-extremes-in-the-immigration-debate]

At the surface, there's ample reason for optimism on comprehensive immigration reform. President Obama is investing considerable political capital into the issue; the public strongly supports the reform efforts; a bipartisan bill is already progressing in the Senate; and every Republican strategist and consultant is warning the party not to further alienate the fastest-growing voting constituency in the country.

#### Capital is critical to get a deal through

ABC News 1/2/13 (“Analysis: 6 Things Obama Needs to Do For Immigratoin Reform”) http://abcnews.go.com/ABC\_Univision/News/things-president-obama-immigration-reform/story?id=18103115&page=2#.UOTWeOR9Iw8

During Obama's first term, bipartisan legislation never got off the ground. The president needs to do a better job leading the charge this time around, according to Chishti. "He has to make it clear that it's a high priority of his," he said. "He has to make it clear that he'll use his bully pulpit and his political muscle to make it happen, and he has to be open to using his veto power." His announcement this weekend is a step in that direction, but he needs to follow through.

#### Will pass but it’ll be a fight.

Lillis 1-29. [Mike, congressional reporter, "Despite momentum, tough fight looms for immigration-reform advocates" The Hill -- thehill.com/homenews/news/279761-despite-momentum-tough-fight-looms-over-immigration-reform]

Fueling the reform push, a bipartisan group of powerful senators unveiled a sweeping immigration-reform blueprint Monday that takes elements from both parties' legislative wish-lists. ¶ The package features efforts to strengthen border security and better track temporary visitors to ensure they leave the country when their visas expire — provisions favored by Republicans. The proposal would also create a path to citizenship for the roughly 12 million illegal immigrants estimated to be living in the United States — a change favored by Democrats.¶ The package has been endorsed by four Democrats — Sens. Charles Schumer (N.Y.), Dick Durbin (Ill.), Robert Menendez (N.J.) and Michael Bennet (Colo.) — and four Republicans, Sens. John McCain (Ariz.), Lindsey Graham (S.C.), Marco Rubio (Fla.) and Jeff Flake (Ariz.).¶ Obama is expected to outline a similarly broad approach on Tuesday in Las Vegas.¶ Rep. Luis Gutierrez (D-Ill.), Congress's most vocal immigrant-rights advocate, said Monday that Congress is "on track to pass a bipartisan bill" this year.¶ Still, few observers are predicting an easy fight, and major battles are sure to swirl around hot-button questions like how to register millions of immigrants while simultaneously protecting their civil liberties, and whether gay, bisexual, lesbian and transgender immigrants will benefit from the reforms.¶ Immigrant-rights advocates will also be watching closely to see what hoops illegal immigrants will have to jump through to remain in the country legally. Rubio, for instance, is urging that any immigrants granted legal status must "go to the back of the line" behind others who have officially applied — a process that can take many years, some warned this week.¶ "It takes 21 years, sometimes, to get to the front of the line," Longazel said.¶ The citizenship provision, however, will likely prove the thorniest; some conservatives on Capitol Hill are already hammering the Senate's bipartisan blueprint over it.¶ "When you legalize those who are in the country illegally, it costs taxpayers millions of dollars, costs American workers thousands of jobs and encourages more illegal immigration," Rep. Lamar Smith (R-Texas) said Monday in a brief statement. "By granting amnesty, the Senate proposal actually compounds the problem by encouraging more illegal immigration.”¶ NumbersUSA, a group that advocates for tougher immigration laws, also blasted the Senate proposal, vowing to mobilize its supporters against it. ¶ Rosemary Jenks, the group's director of government affairs, characterized the blueprint as " 'Amnesty 2.0' — meaningless enforcement measures, mass amnesty and increases in legal immigration, with taxpayers left to foot the bill.”¶ ¶ Such opposition will leave Boehner and other GOP leaders trying to perform the delicate dance of attracting Hispanic voters without alienating their conservative base.¶ Gutierrez, for one, was undeterred by the political complexities surrounding the issue this week, focusing instead on the rare case of Congress agreeing, at the very least, that immigration reform in some measure is a good idea. ¶ "The most important thing right now is to keep the various efforts moving forward," he said, "and not to draw lines in the sand."

### AT: Biden Solves (Soto)

#### Obama would take credit for the plan

Wald 11 (“Administration to Push for Small ‘Modular’ Reactors”, Matthew, 2/12, New York Times, <http://www.nytimes.com/2011/02/13/science/earth/13nuke.html?pagewanted=all&_r=0>

The Obama administration’s 2012 budget proposal will include a request for money to help develop small “modular” reactors that would be owned by a utility and would supply electricity to a government lab, people involved in the effort say. [Enlarge This Image](javascript:pop_me_up2('http://www.nytimes.com/imagepages/2011/02/13/NUKE.html','NUKE_html','width=720,height=590,scrollbars=yes,toolbars=no,resizable=yes')) Alex Brandon/Associated Press Christofer Mowry, left, head of Babcock & Wilcox, which could apply to build small reactors. Related [Times Topic: Nuclear Energy](http://www.nytimes.com/info/nuclear-energy/?scp=1-spot&sq=nuclear%20energy&st=cse) A blog about energy and the environment. [Go to Blog »](http://green.blogs.nytimes.com/) [Follow Green on Twitter »](https://twitter.com/nytimesgreen) The department is hoping for $500 million over five years, half of the estimated cost to complete two designs and secure the [Nuclear Regulatory Commission](http://topics.nytimes.com/top/reference/timestopics/organizations/n/nuclear_regulatory_commission/index.html?inline=nyt-org)’s approval. The reactors would be built almost entirely in a factory and trucked to a site like modular homes. In promoting the reactor, the administration’s immediate goal is to help the Energy Department meet a federal target for reducing its carbon dioxide emissions by relying more on clean energy and less on gas and [coal](http://topics.nytimes.com/top/reference/timestopics/subjects/c/coal/index.html?inline=nyt-classifier). Like other federal agencies, the department is required by an executive order to [reduce its carbon footprint](http://www.nytimes.com/2010/01/30/science/earth/30efficient.html) by 28 percent by 2020. Yet the longer-term goal is to foster assembly-line production of the small reactors at a far lower cost than construction of conventional reactors. The reactors could even replace old coal-fired power plants that are threatened by new federal emissions rules and sit on sites that already have grid connections and cooling water. The costs of construction would range from a few hundred million dollars to $2 billion, as opposed to the current price tag of up to $10 billion for a twin-unit nuclear complex, which has an output 20 times larger than that expected for a modular reactor. A leading candidate to receive electricity from such a project is the [Oak Ridge National Laboratory](http://www.ornl.gov/) in Tennessee, run by the Energy Department and served by the Tennessee Valley Authority. Last year, the Energy Department asked for enough money to halve the cost of licensing a new design with a company that would be chosen later. But Congress never passed a 2011 budget for the Energy Department, instead approving a so-called continuing resolution, which finances old programs based on the previous year’s appropriations. The modular reactor program had no prior appropriation. This year, the administration is again asking for that money in addition to financing to begin actually developing the reactor. The details of the proposal will not be formally released until Monday, when the Obama administration issues its budget request for the fiscal year that begins on Oct. 1. But several people involved in the proposal agreed to describe it on the condition of anonymity. Whether Congress will agree to the idea remains uncertain, particularly in a tough budget year. Last year, the House and Senate appropriations committees were sympathetic, even approving more than requested.

#### At worst, this is just a reason capital is key

Associated Press 2-6-13. thegardenisland.com/news/national/obama-meet-with-senate-democrats-talks-strategy/article\_737111f2-a70f-56fe-9ed3-f485a6af3a6b.html

High on the agenda was immigration, where Carney said Obama would note the "significant progress" made toward a bipartisan deal. Obama is letting the Senate take the lead on crafting comprehensive immigration legislation, including a path to citizenship for 11 million illegal immigrants. But he is using all the power that the presidency affords to implore lawmakers to act without delay.

### AT: Link Turn

#### Public fears means it costs capital

**Schmid 11** 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. Sonja Schmid (sschmid@vt.edu) is an assistant professor in Science and Technology Studies at Virginia Tech. “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.

#### Prolif risks means it costs capital

**Fairley 10**IEEE Spectrum

(Peter, May, “Downsizing Nuclear Power Plants”, [spectrum.ieee.org/energy/nuclear/downsizing-nuclear-power-plants/0](http://spectrum.ieee.org/energy/nuclear/downsizing-nuclear-power-plants/0))

However, there are political objections to SMRs. Precisely because they are more affordable, they may well increase the risk of proliferation by bringing the cost and power output of nuclear reactors within the reach of poorer countries.¶ Russia’s first SMR, which the nuclear engineering group Rosatom expects to complete next year, is of particular concern. The Akademik Lomonosov is a floating nuclear power plant sporting two 35-MW reactors, which Rosatom expects to have tethered to an Arctic oil and gas operation by 2012. The reactor’s portability prompted Greenpeace Russia to call this floating plant the world’s most dangerous nuclear project in a decade. SMRs may be smaller than today’s reactors**.** But, politically at least, they’re just as nuclear.

#### Feinstein hates the plan

Hopf 11 (Jim, Senior Nuclear Engineer, member of the ANS Public Information Committee, “Roadblock in Congress for SMR Development” October 25th 2011, )

As discussed in my [June 20 post](http://ansnuclearcafe.org/2011/06/20/small-modular-reactors-and-current-policy-initiatives/), small modular reactors (SMRs) have many potential advantages, and could very well represent nuclear’s best prospect for the future. The industry has run into trouble, however, in getting government support for getting SMRs off the ground. The Obama administration has made a multi-year, $450 million [request](http://www.eenews.net/public/Greenwire/2011/07/14/8) for SMR development, including $67 million this year to support SMR licensing. The U.S. House of Representatives has included the $67 million in its 2012[budget](http://www.politico.com/morningenergy/1011/morningenergy354.html) bill. That funding got removed from the U.S. Senate budget bill, however, by the Senate Energy and Water Development Appropriations Subcommittee, due primarily to opposition from Chairwoman Dianne Feinstein (D., Cal.). Feinstein cited the fact that SMRs would create additional nuclear [waste](http://www.eenews.net/public/Greenwire/2011/07/14/8), for which there is still no permanent disposal site, as a reason for her opposition. She also said that federal nuclear R&D money should be spent on [safety](http://www.bloomberg.com/news/2011-09-06/senate-panel-led-by-democrats-cuts-obama-s-clean-energy-programs.html), as opposed to new reactor development, in light of the Fukushima disaster.

#### She’s key to immigration reform

Chebium ’13

(Raju Chebium, “California senators express support for Senate immigration reform plan”, News 10 California, 1-28-2013, http://www.news10.net/news/article/227364/2/Boxer-Feinstein-express-support-for-Senate-immigration-plan)

WASHINGTON - California Sens. Barbara Boxer and Dianne Feinstein - who represent a state with the nation's largest number of undocumented immigrants - support a Senate plan that would overhaul the immigration system and offer those living in the U.S. illegally a path to citizenship.¶ A bipartisan group of senators unveiled their plan on Capitol Hill on Monday, one day before President Barack Obama releases his own recommendations during a visit to Las Vegas.¶ "It's great to see movement on comprehensive immigration reform," Boxer said. "While the devil is in the details, I look to working with my colleagues on this legislation."¶ Feinstein said any plan must provide a way for undocumented people to become citizens eventually but also require them to pay taxes and fines and learn English. Tightening border security and providing an effective way for the U.S. agriculture industry to hire foreign laborers are other critical elements, she said.¶ "The comprehensive framework outlined today by the bipartisan Senate working group is a major step forward in the effort to reform our broken immigration system," Feinstein said. "As a senior member of the Judiciary Committee, I am encouraged by today's progress and look forward to working closely with my colleagues on this issue."¶ The Senate Judiciary Committee will take the lead in holding hearings to examine the reform proposal.

#### Nuclear power requires presidential leadership in order to overcome opposition

Sachs 9 (Jeff, Writer at the Economists View“Obama Has Lost His Way on Jobs”) <http://economistsview.typepad.com/economistsview/2009/11/obama-has-lost-his-way-on-jobs.html>

During the Obama campaign we were told about a green recovery... We were told about ... complex multi-state projects that would employ huge numbers of workers while building a cutting-edge economy. Little bits of these efforts are strewn through the stimulus legislation... But the administration has not done the hard work to bring these complex initiatives to reality. Intercity rail does not just appear by itself. Direct-voltage transmission lines require a new federal and regional power grid strategy. Nuclear power requires presidential leadership to get moving again. Carbon-capture and storage requires a partnership of science and industry, backed in early stages by public technology funds. The president has lost the economic initiative, weighed down by a tedious fight between two outmoded ideologies: Keynesianism and supply-side tax cuts, as well as by the president’s excessive deference to Congress. ... Move now, Mr President, or we will spend our time digging out of the next consumer bust and buying our technology from China.

New nuclear production causes massive political backlash and saps capital – any evidence pre 2011 is irrelevant

Alex Trembath, Policy Fellow in AEL’s New Energy Leaders Project, 11 [“Nuclear Power and the Future of Post-Partisan Energy Policy,” Lead Energy, Feb 4, http://leadenergy.org/2011/02/the-nuclear-option-in-a-post-partisan-approach-on-energy/]

Nuclear power is unique among clean energy technologies in that Democrats tend to be more hesitant towards its production than Republicans. Indeed, it has a reputation for its appeal to conservatives -Senators Kerry, Graham and Lieberman included provisions for nuclear technology in their ultimately unsuccessful American Power Act (APA) with the ostensible goal of courting Republican support. The urgency with which Democrats feel we must spark an energy revolution may find a perfect partner with Republicans who support nuclear power. But is there anything more than speculative political evidence towards its bipartisan viability?¶ If there is one field of the energy sector for which **certainty of political will** **and government policy is essential**, it is nuclear power. High up front costs for the private industry, extreme regulatory oversight and public wariness necessitate a committed government partner for private firms investing in nuclear technology. In a new report on the potential for a “nuclear renaissance,” Third Way references the failed cap-and-trade bill, delaying tactics in the House vis-a-vis EPA regulations on CO₂, and the recent election results to emphasize the difficult current political environment for advancing new nuclear policy. The report, “The Future of Nuclear Energy,” makes the case for political certainty:¶ “It is difficult for energy producers and users to estimate the relative price for nuclear-generated energy compared to fossil fuel alternatives (e.g. natural gas)–an essential consideration in making the major capital investment decision necessary for new energy production that will be in place for decades.”¶ Are our politicians willing to match the level of certainty that the nuclear industry demands? Lacking a suitable price on carbon that may have been achieved by a cap-and-trade bill removes one primary policy instrument for making nuclear power more cost-competitive with fossil fuels. The impetus on Congress, therefore, will be to shift from demand-side “pull” energy policies (that increase demand for clean tech by raising the price of dirty energy) to supply-side “push” policies, or industrial and innovation policies. Fortunately, there are signals from political and thought leaders that a package of policies may emerge to incentivize alternative energy sources that include nuclear power.¶ One place to start is the recently deceased American Power Act, addressed above, authored originally by Senators Kerry, Graham and Lieberman. Before its final and disappointing incarnation, the bill included provisions to increase loan guarantees for nuclear power plant construction in addition to other tax incentives. Loan guarantees are probably the most important method of government involvement in new plant construction, given the high capital costs of development. One wonders what the fate of the bill, or a less ambitious set of its provisions, would have been had Republican Senator Graham not abdicated and removed any hope of Republican co-sponsorship.¶ But **that was last year. The** **changing of the guard in Congress makes this a whole different game**, and the once feasible support for nuclear technology on either side of the aisle must be reevaluated. A New York Times piece in the aftermath of the elections forecast **a difficult road ahead for nuclear energy policy**, but did note Republican support for programs like a waste disposal site and loan guarantees.¶ Republican support for nuclear energy has roots in the most significant recent energy legislation, the Energy Policy Act of 2005, which passed provisions for nuclear power with wide bipartisan support. Reaching out to Republicans on policies they have supported in the past should be a goal of Democrats who wish to form a foundational debate on moving the policy forward. There are also signals that key Republicans, notably Lindsey Graham and Richard Lugar, would throw their support behind a clean energy standard that includes nuclear and CCS.¶ Republicans in Congress will find intellectual support from a group that AEL’s Teryn Norris coined “innovation hawks,” among them Steven Hayward, David Brooks and George Will. Will has been particularly outspoken in support of nuclear energy, writing in 2010 that “it is a travesty that the nation that first harnessed nuclear energy has neglected it so long because fads about supposed ‘green energy’ and superstitions about nuclear power’s dangers.”¶ The extreme reluctance of Republicans to cooperate with Democrats over the last two years is only the first step, as any legislation will have to overcome Democrats’ traditional opposition to nuclear energy. However, here again there is reason for optimism. Barbara Boxer and John Kerry bucked their party’s long-time aversion to nuclear in a precursor bill to APA, and Kerry continued working on the issue during 2010. Jeff Bingaman, in a speech earlier this week, reversed his position on the issue by calling for the inclusion of nuclear energy provisions in a clean energy standard. The Huffington Post reports that “the White House reached out to his committee [Senate Energy] to help develop the clean energy plan through legislation.” This development in itself potentially mitigates two of the largest obstacle standing in the way of progress on comprehensive energy legislation: lack of a bill, and lack of high profile sponsors. Democrats can also direct Section 48C of the American Recovery and Reinvestment Act of 2009 towards nuclear technology, which provides a tax credit for companies that engage in clean tech manufacturing.¶ Democrats should not give up on their policy goals simply because they no longer enjoy broad majorities in both Houses, and Republicans should not spend all their time holding symbolic repeal votes on the Obama Administration’s accomplishments. The lame-duck votes in December on “Don’t Ask, Don’t Tell,” the tax cut deal and START indicate that at least a few Republicans are willing to work together with Democrats in a divided Congress, and that is precisely what **nuclear energy** needs moving forward. It **will require an aggressive push from the White House**, and a concerted effort from both parties’ leadership, but the road for forging bipartisan legislation is not an impassable one.

#### Nuclear power costs political capital – risks, startup cost, and public safety

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If there is one field of the energy sector for which certainty of political will and government policy is essential, it is nuclear power. High up front costs for the private industry, extreme regulatory oversight and public wariness necessitate a committed government partner for private firms investing in nuclear technology. In a new [report](http://www.thirdway.org/publications/370) on the potential for a “nuclear renaissance,” Third Way references the failed cap-and-trade bill, delaying tactics in the House vis-a-vis EPA regulations on CO₂, and the recent election results to emphasize the difficult current political environment for advancing new nuclear policy. The report, “The Future of Nuclear Energy,” makes the case for political certainty:

### Nuclear Lobby

#### No link turns – nuclear has no political clout – there’s not enough of a constituency

**Tucker, 12** – veteran journalist whose work has appeared in Harper’s, the Atlantic Monthly, the American Spectator, the Weekly Standard, National Review, Reason, the New Republic, Reader’s Digest, the Wall Street Journal, and many other publications; author of Terrestrial Energy: How a Nuclear-Solar Alliance Can Rescue the Planet (William, 8/16. “Nuclear’s Problem — Too Much Energy, Not Enough Jobs.” Nuclear Townhall. http://www.nucleartownhall.com/blog/william-tucker-nuclear%E2%80%99s-problem-%E2%80%94-too-much-energy-not-enough-jobs/)

So there you have it. America’s energy future is a contest between coal and wind. Which can create more jobs? If you think there’s a better option, you don’t have a place at the table. And that’s where nuclear stands today. Sure, there may be questions about potential accidents and the effects of radiation, but the real problem is this: Nuclear is so energy intensive that it doesn’t produce enough jobs to create a political constituency. Why does coal still have such enormous political clout? The answer is simple. It requires so much mining and transportation of raw material that hundreds of thousands of workers – whole states, in fact – become involved in the task. There are now 1300 coal mines in 27 states employing 88,000 workers. More than half a dozen of these states identify themselves as “coal states” – West Virginia, Kentucky, Pennsylvania, Ohio, Indiana, Illinois, Colorado and Wyoming just fir a start. The state with the biggest coal reserves – Montana – hasn’t really started developing them yet. Next to farming, coal mining is most widely entrenched resource-based industry in the country. There is good reason for all this job creation. A1000-MW coal plant must be resupplied by a 110-car unit train arriving every 30 hours. Almost half the railroad freight in the U.S. is coal. Economists say there’s a real question of whether the railroads actually own the coal companies or the coal companies own the railroads. In any case, all this produces huge work forces with powerful labor union backing. Wind energy works the same way. Because each giant 45-story windmills produces only about 2 MW, thousands upon thousands will be required to produce electricity in commercial quantities. This creates a huge work force. The American Wind Energy Association claims 90,000 employees in the wind industry with more than 4,000 in California, Texas, Iowa, Illinois, Indiana, Ohio, Michigan, Pennsylvania and North Dakota. Building out the transmission lines to carry this electricity to population centers will eventually employ thousands more. Wind is nothing if not labor intensive.So how does nuclear do by comparison? According to the Uranium Producers of America, there are 13 uranium mines in the U.S. employing 1635 people. Their annual output was 16, 000 tons of uranium oxide – the equivalent of two coal trains leaving the Powder River Basin (where one now departs every eight minutes). Our domestic production of uranium has actually been suppressed over the last two decades because we have been using former Soviet weapons material for half our fuel in the Megatons to Megawatts program, although the pace may pick up when the treaty expires next year. Worldwide there are only 46 uranium mines – as opposed to 450 coal mines in Kentucky alone. Recently the Russians have proposed supplying the entire world out of one uranium mine in Siberia. Nuclear’s great energy density has one glaring weakness – there is no possibility of building a huge mining and transport constituencies that can support the technology. Uranium does require reprocessing and there are major facilities in Kentucky and Ohio. But even those hardly constitute more than a ripple in the two states’ economies. Traditionally, the only places where nuclear has gained a political foothold is those states that have national laboratories. New Mexico’s Democratic Senator Pete Domenici was long a leading supporter because of the Los Alamos and Sandia National Laboratories. Senator Lamar Alexander of Tennessee, which hosts Oak Ridge and the Tennessee Valley Authority, has now picked up the mantle. But Tennessee is much more involved in the auto industry and there is no “nuclear state” to match the half-dozen coal states. Well then, what about the 104 reactors that operate around the country? Don’t they generate some political support? The average reactor employs about 650 people and is extremely popular in its home territory. Bisconti Research has found that support for nuclear increases to around 85 percent in communities that host reactors. But this support tends to be highly localized and reactors create little ancillary employment. Replacing the fuel rods, for instance, requires only six tractor trailers arriving once every 18 months. Illinois gets almost half its electricity from nuclear and even Barack Obama was known to say a few nice things about it while he was Senator from Illinois. But most states with large nuclear complexes are equally committed to coal. Even in a state that is highly dependent on nuclear, the work force is so small as to be inconsequential. Vermont gets 60 percent of its electricity form Vermont Yankee, yet its efforts to close down the reactor have generated very little pushback. Vernon, the tiny town of 2,000 that supplies all this energy, is 100 percent in favor of keeping the reactor. But its interests are completed swamped by 623,000 other Vermonters who only get clean, cheap energy from nuclear and think they can do the same by covering the green mountains with 45-story windmills. The only place where nuclear has built a true constituency is in the South. This is partly because of the many military veterans in the region, since a large portion of the nuclear workforce has come up through the Nuclear Navy. South Carolina is probably the most pro-nuclear state in the country with Georgia and Tennessee also strongly in favor. It is no accident that the four new reactors licensed for construction will be built in Georgia and South Carolina. Areva is also completing its plutonium recycling plant at the Savannah River Site. But all these states are pretty much locked up for Republicans and have very little impact at the national level. So nuclear’s weakness is plain to see. It does very poorly at creating the kind of widespread employment that builds political constituencies. It is only good at producing energy.