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#### Natural Gas industry is strong

Smith 2012 [Rebecca Smith Wall Street Journal 3-15-2012 “Cheap Natural Gas Unplugs U.S. Nuclear-Power Revival” http://online.wsj.com/article/SB10001424052702304459804577281490129153610.html]

Across the country, utilities are turning to natural gas to generate electricity, with 258 plants expected to be built from 2011 through 2015, federal statistics indicate. Not only are gas-fired plants faster to build than reactors, they are much less expensive. The U.S. Energy Information Administration says it costs about $978 per kilowatt of capacity to build and fuel a big gas-fired power plant, compared with $5,339 per kilowatt for a nuclear plant.¶ Already, the inexpensive natural gas is putting downward pressure on electricity costs for consumers and businesses.¶ The EIA has forecast that the nation will add 222 gigawatts of generating capacity between 2010 and 2035—equivalent to one-fifth of the current U.S. capacity. The biggest chunk of that addition—58%—will be fired by natural gas, it said, followed by renewable sources, including hydropower, at 31%, then coal at 8% and nuclear power at 4%.

#### Every renewable dollar takes money out of natural gas investment- even if it doesn’t actually make the market

Downey 2012 [Richard Downey Unatego Area Landowners Association 2012 JULY 29 “Natural Gas vs. Subsidized Renewables Is No Contest” http://eidmarcellus.org/marcellus-shale/renewables-versus-natural-gas-no-contest/11392/]

A “fractivist” ended the recent Otsego County Natural Gas Advisory Committee’s meeting by intoning the following statement: A dollar spent on natural gas is one less dollar spent on renewables.¶ Very deep, but what does this mean? It’s probably about subsidies, so let’s scroll back to Economics 101.¶ Demand determines where money is spent in free markets. However, in command-and-control societies, the money goes where the kings and commissars (the elites) deem it best. Our society is a little of both, but thankfully, still more of the former. So, in spite of loan guarantees, tax credits, state supported rebates, state mandates and quotas, direct subsidies and grants, and manipulated tariffs, renewables still fail to make the market.¶ Take solar heated homes. After decades of popularization and righteous approval, and with tons of subsidies, solar heated homes are still marginal in the United States. According to the 2010 Census (American Community Survey), there are only 38,000 in the entire country. In contrast, there are 57,000,000 homes heated with natural gas. Why? Natural gas is cheaper, more reliable, more adaptable to a mass market (i.e., scaleable), and more builder friendly. In other words, people like it.¶ This holds true for wind, biomass, hydro, wave, geothermal and other forms of renewable energy. Renewables gobble up massive subsidies and, yet, are nowhere near fossil fuel pricing. Competitive? Not even with the pork barrel.¶ But, hey, that doesn’t mean people can’t make a buck on them. Massive subsidies attract the wheeler/dealers and the crony capitalists. Never mind the business wont fly. When Uncle Sam picks up the tab, roll ‘em, and let it ride! More money where that came from, baby!

#### Natural gas cements climate leadership

**Casten 2009** (Sean Casten, president of Recycled Energy Development, December 16, 2009, “Natural gas as a near-term CO2 mitigation strategy,” Grist, http://goo.gl/b8z08)

Discussions of CO2 reduction tend to start from a presumption of near-term economic disruption coupled to long-term investment in green technology. The presumption isn’t right. The U.S. could reduce its total CO2 footprint by 14-20 percent tomorrow with no disruption in our access to energy services, without investing in any new infrastructure. The Waxman-Markey proposal to reduce CO2 emissions by 17 percent over 10 years is constrained only by its ambition. This near-term opportunity would be realized by ramping up our nation’s generation of electricity from gas and ramping down our generation from coal, taking advantage only of existing assets. Its scale and potential for immediate impact deserves consideration; even partial action towards this goal would have dramatic political and environmental consequences, establishing U.S. leadership and credibility in global climate negotiations.

#### Climate leadership five extinction threats- Biodiversity, soil erosion, ocean acidification, de-fo, pollution

**Khosla 2009** (Ashok Khosla, president of the International Union for Conservation of Nature, January 27, 2009, “A new President for the United States: We have a dream,” http://goo.gl/RQsL8)

A rejuvenated America, with a renewed purpose, commitment and energy to make its contribution once again towards a better world could well be the turning point that can reverse the current decline in the state of the global economy, the health of its life support systems and the morale of people everywhere. This extraordinary change in regime brings with it the promise of a deep change in attitudes and aspirations of Americans, a change that will lead, hopefully, to new directions in their nation’s policies and action. In particular, we can hope that from being a very reluctant partner in global discussions, especially on issues relating to environment and sustainable development, the United States will become an active leader in international efforts to address the Millennial threats now confronting civilization and even the survival of the human species. For the conservation of biodiversity, so essential to maintaining life on Earth, this promise of change has come not a moment too soon. It would be a mistake to put all of our hopes on the shoulder of one young man, however capable he might be. The environmental challenges the world is facing cannot be addressed by one country, let alone by one man. At the same time, an inspired US President guided by competent people, who does not shy away from exercising the true responsibilities and leadership his country is capable of, could do a lot to spur the international community into action. To paraphrase one of his illustrious predecessors, “the world asks for action and action now.” What was true in President Roosevelt’s America 77 years ago is even more appropriate today. From IUCN’s perspective, the first signals are encouraging. The US has seriously begun to discuss constructive engagement in climate change debates. With Copenhagen a mere 11 months away, this commitment is long overdue and certainly very welcome. Many governments still worry that if they set tough standards to control carbon emissions, their industry and agriculture will become uncompetitive, a fear that leads to a foot-dragging “you go first” attitude that is blocking progress. A positive intervention by the United States could provide the vital catalyst that moves the basis of the present negotiations beyond the narrowly defined national interests that lie at the heart of the current impasse. The logjam in international negotiations on climate change should not be difficult to break if the US were to lead the industrialized countries to agree that much of their wealth has been acquired at the expense of the environment (in this case greenhouse gases emitted over the past two hundred years) and that with the some of the benefits that this wealth has brought, comes the obligation to deal with the problems that have resulted as side-effects. With equitable entitlement to the common resources of the planet, an agreement that is fair and acceptable to all nations should be easy enough to achieve. Caps on emissions and sharing of energy efficient technologies are simply in the interest of everyone, rich or poor. And both rich and poor must now be ready to adopt less destructive technologies – based on renewables, efficiency and sustainability – both as a goal with intrinsic merit and also as an example to others. But climate is not the only critical global environmental issue that this new administration will have to deal with. Conservation of biodiversity, a crucial prerequisite for the wellbeing of all humanity, no less America, needs as much attention, and just as urgently. The United States’ self-interest in conserving living natural resources strongly converges with the global common good in every sphere: in the oceans, by arresting the precipitate decline of fish stocks and the alarming rise of acidification; on land, by regenerating the health of our soils, forests and rivers; and in the atmosphere by reducing the massive emission of pollutants from our wasteful industries, construction, agriculture and transport systems.

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#### Text: The United States Supreme Court should rule that federal environmental review requirements for wind power production under the Indian Tribal Energy Development and Self-Determination Act of 2005 and limits on eligibility for wind power Tribal Energy Resource Agreements to tribal energy resource development organizations composed of Native American tribes are unconstitutional.

#### Supreme court can rule against restrictions on energy production

Craig 2010 (Robin Kundis Craig, Attorneys' Title Professor and Associate Dean for Environmental Programs at Florida State University College of Law, Summer 2010, “MULTISTATE DECISION MAKING FOR RENEWABLE ENERGY AND TRANSMISSION: SPOTLIGHT ON COLORADO, NEW MEXICO, UTAH, AND WYOMING: Constitutional Contours for the Design and Implementation of Multistate Renewable Energy Programs and Projects,” University of Colorado Law Review, Lexis)

A number of dormant Commerce Clause cases have involved energy production, and they systematically conclude that states cannot create legal requirements or preferences based on the source of the fuel or energy. In Wyoming v. Oklahoma, for example, the U.S. Supreme Court struck down an Oklahoma statute that required Oklahoma coal-fired electric power plants producing power for sale in Oklahoma to burn a mixture of coal containing at least ten percent Oklahoma-mined coal. 121 Moreover, the "savings clause" of the Federal Power Act did not prevent the conclusion that the Oklahoma statute was unconstitutional. 122 Similarly, the U.S. District Court for the Northern District of Illinois concluded that a Clean Air Act compliance plan that favored Illinois coalviolated the dormant Commerce Clause. 123¶ Nor can states "hoard" state-created energy within their borders. Thus, in 1982, the U.S. Supreme Court concluded that New Hampshire could not constitutionally restrict interstate transportation of hydroelectric power generated in New Hampshire. 124

#### The counterplan is not a *reduction*—it requires executive/congressional acquiescence.

Spiro, 2001 (Peter J. Spiro, Professor, Hofstra University School of Law; Visiting Professor, University of Texas School of Law, Texas Law Review, April, lexis)

The increments approach answers these objections, at the same time that it affirms the value of constitutionalism. It presents, first of all, a determinate method of constitutional location. Unlike translation exercises, the increments model substantially confines the possible discretion of individual constitutional actors, including the judiciary. Working from a premise of historical situatedness, the theory denies the possibility of independent constitutional determination. That is not to deny the inevitability of constitutional change. But all constitutional actors work from a baseline, departures from which can be challenged and rejected by other constitutional actors. Constitutional norms are resolved only by the interplay of those actors. The content of constitutional norms will usually be reflected in institutional action, but one cannot necessarily find the law by reference to the action of any single institution alone. Even if the Supreme Court attempted to exploit the discretion afforded it by a translation model, its pronouncements amount to mere artifacts in the absence of acceptance by other actors. The increments model thus answers the primary volley of the originalists against countermajoritarian judicial adaptation of the constitutional text. Such adaptation will not prevail where it is rejected by other actors.

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#### Obama wins easily absent future events – conventions, combined data prove – counterspin is self interested

Bruce Bartlett. 9-7-12. Why Barack Obama Will Win the Election Easily

http://www.thefiscaltimes.com/Columns/2012/09/07/Why-Barack-Obama-Will-Win-the-Election-Easily.aspx#page2

Having failed rather spectacularly to correctly predict Mitt Romney’s running mate—I said it definitely would not be Paul Ryan less than 24 hours before he was picked -- I should probably avoid political predictions for a while. But as all those who make their livings in the prediction business know, the secret to success is to make so many of them that a few are bound to be right. That said, I’m going to go out on a limb and predict that Barack Obama will win the election easily, at least in the all-important Electoral College. I have thought so for some time, but wanted to wait and see if the party conventions changed the political dynamics. They have; they have made me more certain of Obama’s victory. Pollster Nate Silver has done an excellent job of assembling all of the known political data on where the presidential race stood as of Wednesday. His analysis leads him to project that Obama will beat Romney 51.2 percent to 47.6 percent in the popular vote, and 311 to 227 in the Electoral College where only 270 votes are needed to win. Overall, Silver gives Obama a 76 percent chance of winning the election. Those who don’t follow the data intensively can be forgiven for not knowing what good shape Obama is in, because it is rarely reported in the mainstream media. There is a simple reason for this: it has a huge vested interest in maintaining the idea that the election is so close it cannot be called and will come down to the last vote cast on Election Day. That is because the media have huge political operations with many highly-paid commentators who need people reading and tuning in daily to see if their preferred candidate has made any headway. There is also an enormous amount of data being produced daily that requires reporting and analysis—polls, campaign contributions, charges and counter charges, endorsements, gaffes and so on. It is not hard to spin this vast cacophony of material in such a way as to maintain the fiction that the election will be close. The media, collectively, are in the position of sports announcers calling a game where one team is heavily favored and well ahead. They need to keep people watching so that advertisers will get value for their money. So they use every cliché in the book to tell viewers that “it ain’t over till it’s over” and about all the times the losing team has come from behind to win and so on and so on. Of course, it goes without saying that once in a while, the losing team does make a comeback and wins unexpectedly. But by the time that happens, all except the winning team’s hardcore fans have changed the channel or left the stadium. However, we all know about those magical come-from-behind victories because the media have an incentive to hype them as a warning to fickle fans that they better stay tuned next time. The same is going on today with the presidential race. Reporters and commentators are building up Romney’s chances and downplaying Obama’s to keep people interested. This was most evident last week when Republican speakers at their convention were played up and their talking points repeated, as if they were changing the course of the election as they spoke. This week, they are doing the same for the Democrats. I thought the Republican convention went very poorly. And apparently, I was not the only one. According to Nielsen, television ratings for the Republican convention were down sharply from 2008. And according to Gallup, Romney’s convention “bounce” was the worst for any candidate of either party except for John Kerry in 2004—and we know what happened to him. We don’t yet know what kind of bounce Obama will get, but anecdotal evidence suggests that it will at least be significantly better than Romney’s. Whereas few Republicans raved about any convention speech other than actor Clint Eastwood’s rambling conversation with an empty chair, Democrats are raving about those by Michele Obama, Bill Clinton and a number of other speakers at their convention. To be sure, there are still opportunities for Republicans to level the playing field. There will be three debates between Romney and Obama, as well as one between the respective vice presidential nominees. They could make a difference, but history does not show that debates have much impact.

#### Wind is a hot button political issue – PTC extension is controversial.

Clean Technica, August 4 2012 Senate Committee Revives Wind Energy Tax Credit; Nuclear-Fueled Exelon Seeks to Squash It <http://cleantechnica.com/2012/08/04/senate-committee-revives-wind-energy-tax-credit-nuclear-fueled-exelon-seeks-to-squash-it/>

The outlook for extension of the federal wind energy PTC is highly uncertain, as wind and renewable energy tax credits and other government incentives sought by the Obama Administration and supporters in Congress have been consistently stymied by opponents. Federal government support for renewable energy has become a “hot button” political issue and dividing line for President Obama and leading Republican candidate Mitt Romney.

#### Approval ratings are key to the election

Cook, The National Journal Political Analyst, 11

(Charlie, October 27, “Underwater,” http://www.nationaljournal.com/columns/cook-report/the-cook-report-obama-underwater-20111027, d/a 7-20-12, ads)

The best barometer of how a president is going to fare is his approval rating, which starts taking on predictive value about a year out. As each month goes by, the rating becomes a better indicator of the eventual results. Presidents with approval numbers above 48 to 50 percent in the Gallup Poll win reelection. Those with approval ratings below that level usually lose. If voters don’t approve of the job you are doing after four years in office, they usually don’t vote for you. Of course, a candidate can win the popular vote and still lose the Electoral College. It happened to Samuel Tilden in 1876, Grover Cleveland in 1888, and Al Gore in 2000. But the popular votes and the Electoral College numbers usually come down on the same side.

#### Obama win key to US-Russia relations – Romney’s agenda is belligerent and controversial.

Reichardt 7/9. (Adam is the Managing Editor of New Eastern Europe, “Considering Russia in the Voting Booth,” New Eastern Europe, 2012, http://www.neweasterneurope.eu/node/382)

Obama’s policy towards Russia is easier to gauge, since there has already been four years of his administration to judge. As Ross Wilson noted, “President Obama has a four-year record with Russia to defend – i.e., the reset policy and the benefits that the administration will argue have accrued from its more pragmatic and less confrontational approach to relations with Moscow.” President Obama’s policy of reset was indeed a glimmer of hope for US-Russian relations at the start of 2009, but that glimmer has all but faded. The case of Syria and Iran are clear examples of the real challenges America still faces when engaging with Russia on global issues and the Obama campaign will most likely avoid referring to the “reset” by name. “Though the Administration will not use the expression ‘reset’ too much, it can be expected to continue to emphasize pragmatism and to implement that line if the president is re-elected,” Wilson believes. Obama’s opponent, Mitt Romney, has been less clear about his position on relations with Russia, but what is revealed in recent statements and on his website shows a more controversial approach. Most telling were the comments Romney made in June 2012. On Russia, Romney has stated: "The nation which consistently opposes our actions at the United Nations has been Russia. We're of course not enemies. We're not fighting each other. There's no Cold War, but Russia is a geopolitical foe in that regard." The Romney campaign’s web site reveals several areas of focus for Russia, none of them discuss active engagement, but rather focus on taking tougher stances with Russia, including renegotiating the New Start Treaty, decreasing Europe’s energy reliance on Russia, building stronger relations with Central Asia, as well as supporting Russia’s civil society. Surprisingly, the last one, engaging Russia’s civil society, could be the most controversial. The Romney campaign web site provides a strongly worded statement that “A Romney administration will be forthright in confronting the Russian government over its authoritarian practices.” Indeed, America needs a strong leader to stand up for its position in the world, however confronting Russia on internal issues may not only offend most Russians, even in the opposition – it could hurt the entire goal of this platform. Having the American government play an active role in the changes happening inside Russia could be detrimental to US-Russian relations. Many Russians believe that changes within their own country should be driven from the Russian society. Any outside interference would hurt the legitimacy of the Russian opposition and cause the Russian elite to become even more suspicious, and perhaps even hostile, to the intentions of American foreign policy.

#### U.S.-Russian war causes extinction – most probable

Bostrom ‘2 [Nick Bostrom, professor of philosophy - Oxford University, March, 2002, Existential Risks: Analyzing Human Extinction Scenarios and Related Hazards, Journal of Evolution and Technology, p. http://www.nickbostrom.com/existential/risks.html]

A much greater existential risk emerged with the build-up of nuclear arsenals in the US and the USSR. An all-out nuclear war was a possibility with both a substantial probability and with consequences that might have been persistent enough to qualify as global and terminal. There was a real worry among those best acquainted with the information available at the time that a nuclear Armageddon would occur and that it might annihilate our species or permanently destroy human civilization.[4] Russia and the US retain large nuclear arsenals that could be used in a future confrontation, either accidentally or deliberately. There is also a risk that other states may one day build up large nuclear arsenals. Note however that a smaller nuclear exchange, between India and Pakistan for instance, is not an existential risk, since it would not destroy or thwart humankind’s potential permanently. Such a war might however be a local terminal risk for the cities most likely to be targeted. Unfortunately, we shall see that nuclear Armageddon and comet or asteroid strikes are mere preludes to the existential risks that we will encounter in the 21st century.

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#### The affs use of the political as the background for their ethical action is the ultimate unethical act

Adam Thurschwell (Asst. Prof. of Law, Cleveland State University) 2003 24 Cardozo L. Rev. 1193

Thus, as Derrida puts it, "ethics enjoins a politics and a law ... . but the political or juridical content that is thus assigned remains undetermined, still to be determined beyond knowledge, beyond all presentation, all concepts ... ." n26 No determinate content issues from the ethical demand because ethics, in Derrida's (and Levinas's) sense, is non-normative. To derive a legal or political rule of decision from one's ethical responsibility would be, paradoxically, to displace that responsibility onto a "calculation," and thus would itself be unethical precisely to the extent that it relieves one of further responsibility for the decision in any given case. Ethics therefore demands a legal/political decision that can only rest on something like a "mystical foundation," n27 since such a decision cannot be founded on any determinable rules, reasons or values without abandoning its claim to ethical status. Accordingly, the legal/political decision can only be "determined beyond knowledge, beyond all presentation, all concepts" n28 - which is to say, determined on the basis of something that resembles pure faith.

#### Alternative –Reject the affirmatives displacement of their ethical commitment on outside institutions but embrace the individual ethical responsibility embodied within the 1AC

#### Their focus on the atrocities that the government creates because of things like subsidies ignores and trades off with recognizing our own personal complicity with violence. Only by refusing to make statements like “the United States Federal Government should” allows us to transform our own personal will to violence that is the root of their impacts

Susanne Kappeler (Associate Professor at Al-Akhawayn University) 1995 The Will to Violence: The Politics of Personal Behaviour, pg. 75-76

War does not suddenly break out in a peaceful society; sexual violence is not the disturbance of otherwise equal gender relations. Racist attacks do not shoot like lightning out of a non-racist sky, and the sexual exploitation of children is no solitary problem in a world otherwise just to children. The violence of our most commonsense everyday thinking, and especially our personal will to violence, constitute the conceptual preparation, the ideological armament and the intellectual mobilization which make the 'outbreak' of war, of sexual violence, of racist attacks, of murder and destruction possible at all. 'We are the war', writes Slavenka Drakulic at the end of her existential analysis of the question, 'what is war?': I do not know what war is, I want to tell [my friend], but I see it everywhere. It is in the blood-soaked street in Sarajevo, after 20 people have been killed while they queued for bread. But it is also in your non-comprehension, in my unconscious cruelty towards you, in the fact that you have a yellow form [for refugees] and I don't, in the way in which it grows inside ourselves and changes our feelings, relationships, values - in short: us. We are the war . . . And I am afraid that we cannot hold anyone else responsible. We make this war possible, we permit it to happen.5 'We are the war' - and we also 'are' the sexual violence, the racist violence, the exploitation and the will to violence in all its manifestations in a society in so-called 'peacetime', for we make them possible and we permit them to happen. 'We are the war' does not mean that the responsibility for a war is shared collectively and diffusely by an entire society - which would be equivalent to exonerating warlords and politicians and profiteers or, as Ulrich Beck says, upholding the notion of'collective irresponsibility', where people are no longer held responsible for their actions, and where the conception of universal responsibility becomes the equivalent of a universal acquittal.6 On the contrary, the object is precisely to analyse the specific and differential responsibility of everyone in their diverse situations. Decisions to unleash a war are indeed taken at particular levels of power by those in a position to make them and to command such collective action. We need to hold them clearly responsible for their decisions and actions without lessening theirs by any collective 'assumption' of responsibility. Yet our habit of focusing on the stage where the major dramas of power take place tends to obscure our sight in relation to our own sphere of competence, our own power and our own responsibility — leading to the -well-known illusion of our apparent 'powerlessness' and its accompanying phenomenon, our so-called political disillusionment. Single citizens — even more so those of other nations - have come to feel secure in their obvious non-responsibility for such large-scale political events as, say, the wars in Croatia and Bosnia-Hercegovina or Somalia - since the decisions for such events are always made elsewhere. Yet our insight that indeed we are not responsible for the decisions of a Serbian general or a Croatian president tends to mislead us into thinking that therefore we have no responsibility at all, not even for forming our own judgement, and thus into underrating the responsibility we do have within our own sphere of action. In particular, it seems to absolve us from having to try to see any relation between our own actions and those events, or to recognize the connections between those political decisions and our own personal decisions. It not only shows that we participate in what Beck calls 'organized irresponsibility', upholding the apparent lack of connection between bureaucratically, institutionally, nationally and also individually organized separate competences. It also proves the phenomenal and unquestioned alliance of our personal thinking with the thinking of the major powermongers. For we tend to think that we cannot 'do' anything, say, about a war, because we deem ourselves to be in the wrong situation; because we are not where the major decisions are made. Which is why many of those not yet entirely disillusioned with politics tend to engage in a form of mental deputy politics, in the style of 'What would I do if I were the general, the prime minister, the president, the foreign minister or the minister of defence?' Since we seem to regard their mega spheres of action as the only worthwhile and truly effective ones, and since our political analyses tend to dwell there first of all, any question of what I would do if I were indeed myself tends to peter out in the comparative insignificance of having what is perceived as 'virtually no possibilities': what I could do seems petty and futile. For my own action I obviously desire the range of action of a general, a prime minister, or a General Secretary of the UN — finding expression in ever more prevalent formulations like 'I want to stop this war', 'I want military intervention', 'I want to stop this backlash', or 'I want a moral revolution.'7 'We are this war', however, even if we do not command the troops or participate in so-called peace talks, namely as Drakulic says, in our 'non-comprehension': our willed refusal to feel responsible for our own thinking and for working out our own understanding, preferring innocently to drift along the ideological current of prefabricated arguments or less than innocently taking advantage of the advantages these offer. And we 'are' the war in our 'unconscious cruelty towards you', our tolerance of the 'fact that you have a yellow form for refugees and I don't' - our readiness, in other words, to build identities, one for ourselves and one for refugees, one of our own and one for the 'others'. We share in the responsibility for this war and its violence in the way we let them grow inside us, that is, in the way we shape 'our feelings, our relationships, our values' according to the structures and the values of war and violence.

### Black Lung

#### Coal is getting cleaner- no more emissions

Miller 2010 [Steve Miller, president and CEO of the American Coalition for Clean Coal Electricity 8-16-2010, The National Journal, “’Clean Coal’ is Essential to U.S.” http://energy.nationaljournal.com/2010/08/how-viable-is-clean-coal.php#1616515]

Second, has CCT worked? Absolutely—to the benefit of the environment, electricity consumers, and taxpayers. Over the past thirty years, America’s coal-based electricity providers have invested over $90 billion in technologies to reduce emissions of major air pollutants, while providing affordable, reliable electricity. EPA’s latest analysis shows that sulfur dioxide emissions are 56% lower than in 1980, while nitrogen dioxide emissions are 46% lower during this period—even as the use of coal to generate electricity has almost tripled. Clean coal technologies have played a critical role in these reductions, and investments in CCT to meet new regulations will cut emissions significantly more in the years ahead.¶ Third, can clean coal technologies help address climate concerns? Yes—carbon capture and storage technologies (CCS) will do that. Last week, the President’s Interagency Task Force on Carbon Capture and Storage found “there are no insurmountable technological, legal, institutional, regulatory or other barriers that prevent CCS from playing a role in reducing greenhouse gas emissions.” The task force noted that CO2 has been removed from industrial gas streams for more than sixty years and that we have transported CO2 in pipelines for almost forty years. Further, it is well documented that American businesses have safely stored CO2 underground to extract otherwise unrecoverable oil deposits for more than twenty years.

#### Rise of natural gas is killing coal

Jon Sharpe, August 31 2012, “New EPA regs not driving coal demand” <http://seekingalpha.com/article/839701-new-epa-regulations-not-driving-coal-demand>

So if not environmental regulations, what is driving coal equity values? The reduced overall costs of combined cycle natural gas cogeneration and extremely low natural gas prices, and lower cost renewables are major factors. The rise in coal inventories over the last year and EIA reports on electricity generation suggest that significant coal capacity was idled in favor of natural gas generators as natural gas prices plummeted.

#### Coal is down 20% in usage from last year.

HFN’12Monday, 28 May 2012 Source - Hydrogen Fuel News <http://www.s> teel gur u.c om/ ra w\_ m a t e r I al \_ n e ws / U S \_ c o a l \_ g e n e rated\_energy\_falls\_by\_20pct\_in\_the\_past\_year/265898.htmlThe US Energy Information Administration has released new figures concerning the state of coal generation in the country. According to the agency, electricity produced by burning coal has dropped by nearly 20% over the past year. Coal generated energy now accounts for 36% of the electricity produced in the US down from what it had been in 2011. The agency notes that this steep drop in coal energy production is due to several factors, including the attractiveness of alternative energy. Price of natural gas cited as major contributor to drop in coal energy production The EIA notes that natural gas has played a significant role in the decline of coal energy production. Natural gas prices have dropped significantly in the past few years, which have made it an attractive alternative to coal and oil. Though natural gas burns cleaner than these fossil-fuels, it still produces greenhouse gases when burned for energy. Despite this, the inexpensive nature of natural gas will lead to an increased use of the fuel in 2012. EIA expects growth of natural gas marker to continue through the year The EIA notes that in the first quarter of 2012, natural gas accounted for approximately 28% of energy generation in the U.S. This is up from 20.7%, the level it had been during the same period in 2011. The EIA believes that this trend will continue throughout 2012 and into the future. Other forms of alternative energy, such as solar and wind power, is also expected to begin playing a larger role in the country’s energy scheme, but may take a back seat to the position of natural gas due to financial issues. Coal production expected to drop this year due to financial issues Production at coal mines is expected to drop approximately 10% this year, according to EIA estimates. This is, again, due to the financial aspects of the industry. Financial issues are beginning to have a profound impact on the alternative energy industry and natural gas market in the U.S. As fossil-fuels become more expensive, renewable sources of fuel are becoming more popular, such is the case with natural gas.

### Nuclear Colonialism

#### NRC won’t license or renew any nuke reactors until there’s a solution to waste

Reuters, “Nuclear Power Plant License Renewals Decision Suspended By NRC,” Huffington Post, August 7, 2012, http://www.huffingtonpost.com/2012/08/08/nuclear-power-plant-license\_n\_1753931.html?utm\_hp\_ref=green, accessed 8-123-2012.

U.S. regulators on Tuesday suspended issuing final decisions on new licenses and on license renewals for nuclear power plants until the agency decides how to deal with the thorny issue of spent nuclear fuel. The order from the Nuclear Regulatory Commission - headed by Allison Macfarlane, a nuclear waste expert - will not stop hearings or other work on licensing activity and no license decisions are imminent, an NRC spokesman said. The U.S. Court of Appeals for the District of Columbia Circuit in June struck down the NRC's so-called "waste confidence" provisions, saying the NRC violated the National Environmental Policy Act (NEPA) in issuing its 2010 update to the Waste Confidence Decision and accompanying Temporary Storage Rule. The court remanded the case for further consideration. "Waste confidence undergirds certain agency licensing decisions, in particular new reactor licensing and reactor license renewal," the NRC commissioners said in the order. "In recognition of our duties under the law, we will not issue licenses dependent upon the Waste Confidence Decision or the Temporary Storage Rule until the court's remand is appropriately addressed," the order said. Licensing reviews and proceedings will continue to move forward, the NRC said. The NRC staff is expected to provide the commission with options on the waste confidence issue within weeks, but there is no timetable for commission action, the spokesman said. Nuclear critics hailed the action, which they said would affect eight plant license renewals, nine applications to build new reactors, one operating license and one early site permit.

#### Nuclear power is distinct from energies that perpetuate environmental racism

Margaret Ryan and Dr. Patrick Moore 2012 May, 2 (Moore is a founding member of Greenpeace, Ph.D. in Ecology, and founder of CASEnergy) in “Nuclear Power Jobs Positioned As An Economic Justice Issue” <http://energy.aol.com/2012/05/02/nuclear-power-jobs-positioned-as-an-economic-justice-issue/>

Who has the power in the power industry? Minority communities for years have seen large industrial facilities as environmental justice issues, says CASEnergy's Patrick Moore, with high-impact plants built in their midst because they're powerless to stop it, but he insists nuclear is different. Moore told AOL Energy that he is reaching out to African-American and Hispanic business and labor groups, telling them that nuclear plants, in contrast to projects like coal plants, are long-term community assets. Patrick Moore, an early Greenpeace activist and co-founder of CASEnergy who now supports nuclear as the largest non-polluting electricity source available, says nuclear not only needs thousands of skilled workers when plants are built new but generations of skilled workers to keep the units running for 60 or more years. The US Nuclear Regulatory Commission is just beginning to consider what safety standards are needed to extend US plants licenses from 60 to 80 years. African-American and Hispanic advocacy groups have historically been focused on civil rights, but they're "morphing into economic development," Moore said, and looking at energy policy for the first time. Unlike many other big industrial facilities, he noted, polls show nuclear power plants have increasing popular support the closer people live to them. Nuclear plants are "wealth creating machines," Moore said, with no pollution, better roads and schools financed by the plants' property taxes, and large payrolls. Moore said he has had positive reception from minority business leaders, and said he is urging minority business groups to "stream their members into training" for nuclear industry jobs. "Even if no new plants are built, the nuclear work force is aging," he said, echoing an issue discussed by both the NRC and the industry in recent years. "Over half the workforce is retiring in the next few years." Moore said that, despite the Fukushima disaster, he sees less controversy worldwide about nuclear power now than there was five years ago, in part as other countries see the increasing pollution and fossil fuel costs borne by Japan and Germany in the wake of politically forced nuclear shutdowns. AOL Energy covered the anniversary of the Fukushima disaster in detail with analysis of impacts for regulators, investors, the industry and suppliers. See that coverage here. Japan in April reported a $55 billion trade deficit for the fiscal year since Fukushima, due to lower exports from quake-affected industries and higher fuel imports. It was Japan's first deficit in three decades. On safety, Moore said, a key factor leading to the Fukushima events was the lack of an independent regulator in Japan, and that's not an issue for the US. "The regulatory authority was controlled by industry," he said. "In the US, the NRC is at arms' length, there is true independent oversight every day." CASEnergy is a coalition of business and advocacy groups, and Moore acknowledged that, with natural gas prices so low and supply so ample, it's hard to justify the expense of nuclear building unless a business can take a long view. Gas prices are historically volatile, he noted, but with so many utilities and merchant generators turning to cheap gas, "it will flip to a seller's market" in a few years, he argued, and "nuclear will start looking good again." Moore doesn't see why small modular reactors – the latest focus of industry and NRC attention – shouldn't be deployed to islands like Hawaii and Puerto Rico and isolated towns in Alaska to provide heat and power now supplied only by petroleum. "We already have 100 of them working in the Nuclear Navy," he said, noting Naval reactors predate the land-based ones. "For years we've had sailors living right next door to them."

#### The US is abandoning nuclear power

Economist 11 ( Nuclear power When the steam clears, Mar 24th, http://www.economist.com/node/18441163)

America, which leads the world in installed nuclear power, may lead the world in turning away from the technology, too. In 2007 Congress agreed to provide loan guarantees for nuclear power; some 28 applications for new stations have since been filed. Barack Obama pledged in his state-of-the-union address in January 2010 to build a “new generation of safe, clean nuclear power plants”. Even before Fukushima, though, this was looking increasingly unlikely. The recession hit demand. Ever-more-available shale gas brought a cheap and reliable alternative route to domestically fuelled electricity. And the lack of climate legislation meant there was no price on carbon, which would have favoured nuclear power. There are just two new American reactors under construction, neither with full regulatory approval (a third, approved under an earlier system and then put on ice, is also under way). Few in the industry expect many more. Applications for around 20 plants to extend their licences are before the government and requests for 15 more are expected shortly. The Nuclear Regulatory Commission has already granted them to 64 plants, most recently on March 21st to Vermont Yankee, which is of the same design and vintage as the Fukushima reactors. This similarity has not been lost on the Vermonters trying with renewed vigour to shut it down. Expect more local opposition in years to come.

#### Util is good and doesn’t devalue life

Revesz 2008 Richard L. Revesz (Dean and Lawrence King Professor of Law at New York University School of Law, JD Yale Law School) and Michael A Livermore. (JD NYU School of Law, Executive Director of the Institute for Policy Integrity, and Managing director of the NYU Law Review). Retaking Rationality How Cots-Benefit Analysis Can Better protect the Environment and Our Health. 2008. P. 1-4.

Governmental decisions are also fundamentally different from personal decisions in that they often affect people in the aggregate. In our individual lives, we come into contact with at least some of the consequences of our decisions. If we fail to consult a map, we pay the price: losing valuable time driving around in circles and listening to the complaints of our passengers. We are constantly confronted with the consequences of the choices that we have made. Not so for governments, however, which exercise authority by making decisions at a distance. Perhaps one of the most challenging aspects of governmental decisions is that they require a special kind of compassion—one that can seem, at first glance, cold and calculating, the antithesis of empathy. The aggregate and complex nature of governmental decisions does not address people as human beings, with concerns and interests, families and emotional relationships, secrets and sorrows. Rather, people are numbers stacked in a column or points on a graph, described not through their individual stories of triumph and despair, but by equations, functions, and dose-response curves. The language of governmental decisionmaking can seem to—and to a certain extent does—ignore what makes individuals unique and morally important. But, although the language of bureaucratic decisionmaking can be dehumanizing, it is also a prerequisite for the kind of compassion that is needed in contemporary society. Elaine Scarry has developed a comparison between individual compassion and statistical compassion.' Individual compassion is familiar—when we see a person suffering, or hear the story of some terrible tragedy, we are moved to take action. Statistical compassion seems foreign—we hear only a string of numbers but must comprehend "the concrete realities embedded there."' Individual compassion derives from our social nature, and may be hardwired directly into the human brain.' Statistical compassion calls on us to use our higher reasoning power to extend our natural compassion to the task of solving more abstract—but no less real—problems. Because compassion is not just about making us feel better—which we could do as easily by forgetting about a problem as by addressing it—we have a responsibility to make the best decisions that we can. This book argues that cost-benefit analysis, properly conducted, can improve environmental and public health policy. Cost-benefit analysis—the translation of human lives and acres of forest into the language of dollars and cents—can seem harsh and impersonal. But such an approach is also necessary to improve the quality of decisions that regulators make. Saving the most lives, and best protecting the quality of our environment and our health—in short, exercising our compassion most effectively—requires us to step back and use our best analytic tools. Sometimes, in order to save a life, we need to treat a person like a number. This is the challenge of statistical compassion. This book is about making good decisions. It focuses on the area of environmental, health and safety regulation. These regulations have been the source of numerous and hard-fought controversies over the past several decades, particularly at the federal level. Reaching the right decisions in the areas of environmental protection, increasing safety, and improving public health is clearly of high importance. Although it is admirable (and fashionable) for people to buy green or avoid products made in sweatshops, efforts taken at the individual level are not enough to address the pressing problems we face—there is a vital role for government in tackling these issues, and sound collective decisions concerning regulation are needed. There is a temptation to rely on gut-level decisionmaking in order to avoid economic analysis, which, to many, is a foreign language on top of seeming cold and unsympathetic. For government to make good decisions, however, it cannot abandon reasoned analysis. Because of the complex nature of governmental decisions, we have no choice but to deploy complex analytic tools in order to make the best choices possible. Failing to use these tools, which amounts to abandoning our duties to one another, is not a legitimate response. Rather, we must exercise statistical compassion by recognizing what numbers of lives saved represent: living and breathing human beings, unique, with rich inner lives and an interlocking web of emotional relationships. The acres of a forest can be tallied up in a chart, but that should not blind us to the beauty of a single stand of trees. We need to use complex tools to make good decisions while simultaneously remembering that we are not engaging in abstract exercises, but that we are having real effects on people and the environment. In our personal lives, it would be unwise not to shop around for the best price when making a major purchase, or to fail to think through our options when making a major life decision. It is equally foolish for government to fail to fully examine alternative policies when making regulatory decisions with life-or-death consequences. This reality has been recognized by four successive presidential administrations. Since 1981, the cost-benefit analysis of major regulations has been required by presidential order. Over the past twenty-five years, however, environmental and other progressive groups have declined to participate in the key governmental proceedings concerning the cost-benefit analysis of federal regulations, instead preferring to criticize the technique from the outside. The resulting asymmetry in political participation has had profound negative consequences, both for the state of federal regulation and for the technique of cost-benefit analysis itself. Ironically, this state of affairs has left progressives open to the charge of rejecting reason, when in fact strong environmental and public health pro-grams are often justified by cost-benefit analysis. It is time for progressive groups, as well as ordinary citizens, to retake the high ground by embracing and reforming cost-benefit analysis. The difference between being unthinking—failing to use the best tools to analyze policy—and unfeeling—making decisions without compassion—is unimportant: Both lead to bad policy. Calamities can result from the failure to use either emotion or reason. Our emotions provide us with the grounding for our principles, our innate interconnectedness, and our sense of obligation to others. We use our powers of reason to build on that emotional foundation, and act effectively to bring about a better world.

#### Life without value is better than death.

Kenneth **Waltz** (Institute of War and Peace Studied; Father of realism) **1959** Man, The State, and War

St. Augustine had observed the importance of self-preservation in the hierarchy of human motivations. When we see that even the most wretched “fear to die, and will rather live in such misfortune than end it by death, is it not obvious enough,” he asks, “how nature shrinks from annihilation?”10 The desire for self-preservation is, with Augustine, an observed fact. It is not a principle sufficient to explain the whole of man’s behavior. For Spinoza, however, the end of every act is the self-preservation of the actor. The laws of nature are simply statements of what this single end requires: natural right, a statement of what it logically permits.11 The man who lives according to reason will demonstrate both courage and high-mindedness. That is, he will strive to preserve himself in accordance with the dictates of reason, and he will strive to aid other men and unite them to him in friendship. This is not a description of actual behavior; it is a description of behavior that is ideally rational. It is not because they are duties that the man who follows the dictates of reason behaves with courage and high-mindedness. Instead these characteristics are the necessary result of following reason.

#### You should evaluate policies based on their consequences - prioritizing ethical considerations does not work for policymaking.

William H. **Shaw**. PhD. Contemporary Ethics: Taking Account of Utilitarianism. P. 171-2. **1999**

Utilitarianism ties right and wrong to the promotion of well-being, but it is not only a personal ethic or a guide to individual conduct. It is also a "public philosophy"' - that is, a normative basis for public policy and the structuring of our social, legal, and political institutions. Indeed, it was just this aspect of utilitarianism that primarily engaged Bentham, John Stuart Mill, his father James, and their friends and votaries. For them utilitarianism was, first and foremost, a social and political philosophy and only secondarily a private or personal moral code. In particular, they saw utilitarianism as providing the yardstick by which to measure, assess, and, where necessary, reform government social and economic policy and the judicial institutions of their day. In the public realm, utilitarianism is especially compelling. Because of its consequentialist character, a utilitarian approach to public policy requires officials to base their actions, procedures, and programs on the most accurate and detailed understanding they can obtain of the circumstances in which they are operating and the likely results of the alternatives open to them. Realism and empiricism are the hallmarks of a utilitarian orientation, not customary practice, unverified abstractions, or wishful thinking. Promotion of the well-being of all seems to be the appropriate, indeed the only sensible, touchstone for assessing public policies and institutions, and the standard objections to utilitarianism as a personal morality carry little or no weight against it when viewed as a public philosophy.

#### The risk of extinction outweighs all other values – magnitude outweighs probability

Jonathan **Schell** (writer for the New Yorker and nuclear weapons expert) **1982** The Fate of the Earth

But the mere risk of extinction has a significance that is categorically different from, and immeasurably greater than, that of any other risk, and as we make our decisions we have to take that significance into account. Up to now, every risk has been contained within the frame of life; extinction will shatter the frame. It represents not the defeat of some purpose but an abyss in which all human purposes would be drowned for all time. We have no right to place the possibility of limitless, eternal defeat on the same footing as risks that we run in the ordinary conduct of our affairs in our particular transient moment of human history. To employ a mathematical analogy, we can say that although the risk of extinction may be fractional, the stake is, humanly speaking, infinite, and a fraction of infinity is still infinity. In other words, once we learn that a holocaust might lead to extinction, we have no right to gamble, because if we lose, the game will be over, and neither we nor anyone else will ever get another chance. Therefore, although, scientifically speaking, there is all the difference in the world between the mere possibility that a holocaust will bring about extinction and the certainty of it, morally they are the same, and we have no choice but to address the issue of nuclear weapons as though we knew for a certainty that their use would put an end to our species.

#### Case comes first – nuclear war makes ff solvency impossible

Brian **Martin** (science, techonology, and society at the Unviersity of Wollongong, Australia) September 3, **2002** “Activism after nuclear war?” http://www.transnational.org/SAJT/forum/meet/2002/Martin\_ActivismNuclearWar.html

In the event of nuclear war, as well as death and destruction there will be serious political consequences. Social activists should be prepared. The confrontation between Indian and Pakistani governments earlier this year showed that military use of nuclear weapons is quite possible. There are other plausible scenarios. A US military attack against Iraq could lead Saddam Hussein to release chemical or biological weapons, providing a trigger for a US nuclear strike. Israeli nuclear weapons might also be unleashed. Another possibility is accidental nuclear war. Paul Rogers in his book Losing Control says that the risk of nuclear war has increased due to proliferation, increased emphasis on nuclear war-fighting, reduced commitment to arms control (especially by the US government) and Russian reliance on nuclear arms as its conventional forces disintegrate. A major nuclear war could kill hundreds of millions of people. But less catastrophic outcomes are possible. A limited exchange might kill "only" tens or hundreds of thousands of people. Use of nuclear "bunker-busters" might lead to an immediate death toll in the thousands or less. Nuclear war would also lead to increased political repression. Martial law might be declared. Activists would be targeted for surveillance or arrest. Dissent would become even riskier. War always brings restraints on civil liberties. The political aftermath of September 11 - increased powers for police forces and spy agencies, increased intolerance of and controls over political dissent - is just a taste of what would be in store in the aftermath of nuclear war.

#### Forecasting to prevent big impacts is inevitable and possible

Friedman 2008 George Friedman (founder of Stratfor) May 2008 “The Love of One’s Own and the Importance of Place” Stratfor

Forecasting is built into the human condition. Each action a human being takes is intended to have a certain outcome. The right to assume that outcome derives from a certain knowledge of how things work. Sometimes, the action has unexpected and unintended consequences. The knowledge of how things work is imperfect. But there is a huge gulf between the uncertainty of a prediction and the impossibility of a prediction. When I get up and turn on the hot water, it is with the expectation that the hot water will be there. It isn’t always there and I may not have a full understanding of why it will be there, but in general, it is there and I can predict that. A life is made up of a fabric of such expectations and predictions. There is no action taken that is not done with the expectation, reasonable or not, erroneous or not, of some predictable consequence. The search for predictability suffuses all of the human condition. Students choose careers by trying to predict what would please them when they are 30 years older, what would be useful and therefore make them money and so on. Businesses forecast what can be sold and to whom. We forecast the weather, the winners of elections, the consequences of war and so on. There is no level on which human beings live that they don’t make forecasts and, therefore, on which they don’t act as if the world were to some degree predictable.

#### The ethical practice of prediction and prevention builds communal ties and energizes a citizen base capable of pressuring for real solutions to extinction\*\*\*

Fuyuki **Kurasawa** Constellations Volume 11, No 4, **2004** Cautionary Tales: The Global Culture of Prevention and the Work of Foresight

Rather than bemoaning the contemporary preeminence of a dystopian imaginary, I am claiming that it can enable a novel form of transnational socio-political action, a manifestation of globalization from below that can be termed preventive foresight. We should not reduce the latter to a formal principle regulating international relations or an ensemble of policy prescriptions for official players on the world stage, since it is, just as significantly, a mode of ethico-political practice enacted by participants in the emerging realm of global civil society. In other words, what I want to underscore is the work of farsightedness, the social processes through which civic associations are simultaneously constituting and putting into practice a sense of responsibility for the future by attempting to prevent global catastrophes. Although the labor of preventive foresight takes place in varying political and socio-cultural settings – and with different degrees of institutional support and access to symbolic and material resources – it is underpinned by three distinctive features: dialogism, publicity, and transnationalism. In the first instance, preventive foresight is an intersubjective or dialogical process of address, recognition, and response between two parties in global civil society: the ‘warners,’ who anticipate and send out word of possible perils, and the audiences being warned, those who heed their interlocutors’ messages by demanding that governments and/or international organizations take measures to steer away from disaster. Secondly, the work of farsightedness derives its effectiveness and legitimacy from public debate and deliberation. This is not to say that a fully fledged global public sphere is already in existence, since transnational “strong publics” with decisional power in the formal-institutional realm are currently embryonic at best. Rather, in this context, publicity signifies that “weak publics” with distinct yet occasionally overlapping constituencies are coalescing around struggles to avoid specific global catastrophes.4 Hence, despite having little direct decision-making capacity, the environmental and peace movements, humanitarian NGOs, and other similar globally-oriented civic associations are becoming significant actors involved in public opinion formation. Groups like these are active in disseminating information and alerting citizens about looming catastrophes, lobbying states and multilateral organizations from the ‘inside’ and pressuring them from the ‘outside,’ as well as fostering public participation in debates about the future. This brings us to the transnational character of preventive foresight, which is most explicit in the now commonplace observation that we live in an interdependent world because of the globalization of the perils that humankind faces (nuclear annihilation, global warming, terrorism, genocide, AIDS and SARS epidemics, and so on); individuals and groups from far-flung parts of the planet are being brought together into “risk communities” that transcend geographical borders.5 Moreover, due to dense media and information flows, knowledge of impeding catastrophes can instantaneously reach the four corners of the earth – sometimes well before individuals in one place experience the actual consequences of a crisis originating in another. My contention is that civic associations are engaging in dialogical, public, and transnational forms of ethico-political action that contribute to the creation of a fledgling global civil society existing ‘below’ the official and institutionalized architecture of international relations.6 The work of preventive foresight consists of forging ties between citizens; participating in the circulation of flows of claims, images, and information across borders; promoting an ethos of farsighted cosmopolitanism; and forming and mobilizing weak publics that debate and struggle against possible catastrophes. Over the past few decades, states and international organizations have frequently been content to follow the lead of globally-minded civil society actors, who have been instrumental in placing on the public agenda a host of pivotal issues (such as nuclear war, ecological pollution, species extinction, genetic engineering, and mass human rights violations). To my mind, this strongly indicates that if prevention of global crises is to eventually rival the assertion of short-term and narrowly defined rationales (national interest, profit, bureaucratic self-preservation, etc.), weak publics must begin by convincing or compelling official representatives and multilateral organizations to act differently; only then will farsightedness be in a position to ‘move up’ and become institutionalized via strong publics.7 Since the global culture of prevention remains a work in progress, the argument presented in this paper is poised between empirical and normative dimensions of analysis. It proposes a theory of the practice of preventive foresight based upon already existing struggles and discourses, at the same time as it advocates the adoption of certain principles that would substantively thicken and assist in the realization of a sense of responsibility for the future of humankind. I will thereby proceed in four steps, beginning with a consideration of the shifting socio-political and cultural climate that is giving rise to farsightedness today (I). I will then contend that the development of a public aptitude for early warning about global cataclysms can overcome flawed conceptions of the future’s essential inscrutability (II). From this will follow the claim that an ethos of farsighted cosmopolitanism – of solidarity that extends to future generations – can supplant the preeminence of ‘short-termism’ with the help of appeals to the public’s moral imagination and use of reason (III). In the final section of the paper, I will argue that the commitment of global civil society actors to norms of precaution and transnational justice can hone citizens’ faculty of critical judgment against abuses of the dystopian imaginary, thereby opening the way to public deliberation about the construction of an alternative world order (IV).

#### Predictions are good – they are key to prevent catastrophic violence even if they are inaccurate

Fuyuki **Kurasawa** Constellations Volume 11, No 4, **2004** Cautionary Tales: The Global Culture of Prevention and the Work of Foresight

When engaging in the labor of preventive foresight, the first obstacle that one is likely to encounter from some intellectual circles is a deep-seated skepticism about the very value of the exercise. A radically postmodern line of thinking, for instance, would lead us to believe that it is pointless, perhaps even harmful, to strive for farsightedness in light of the aforementioned crisis of conventional paradigms of historical analysis. If, contra teleological models, history has no intrinsic meaning, direction, or endpoint to be discovered through human reason, and if, contra scientistic futurism, prospective trends cannot be predicted without error, then the abyss of chronological inscrutability supposedly opens up at our feet. The future appears to be unknowable, an outcome of chance. Therefore, rather than embarking upon grandiose speculation about what may occur, we should adopt a pragmatism that abandons itself to the twists and turns of history; let us be content to formulate ad hoc responses to emergencies as they arise. While this argument has the merit of underscoring the fallibilistic nature of all predictive schemes, it conflates the necessary recognition of the contingency of history with unwarranted assertions about the latter’s total opacity and indeterminacy. Acknowledging the fact that the future cannot be known with absolute certainty does not imply abandoning the task of trying to understand what is brewing on the horizon and to prepare for crises already coming into their own. In fact, the incorporation of the principle of fallibility into the work of prevention means that we must be ever more vigilant for warning signs of disaster and for responses that provoke unintended or unexpected consequences (a point to which I will return in the final section of this paper). In addition, from a normative point of view, the acceptance of historical contingency and of the self-limiting character of farsightedness places the duty of preventing catastrophe squarely on the shoulders of present generations. The future no longer appears to be a metaphysical creature of destiny or of the cunning of reason, nor can it be sloughed off to pure randomness. It becomes, instead, a result of human action shaped by decisions in the present – including, of course, trying to anticipate and prepare for possible and avoidable sources of harm to our successors.

## 2NC

### Coal

#### Coal is down from 2011

Bass’12 US coal production falls 6.4% year-on-year in week ended Saturday: EIA Houston (Platts)--14Jun2012/506 pm EDT/2106 GMT Carla Bass, carla\_bass@platts.com --Edited by Katharine Fraser , katharine \_fraser @platts.com

US coal production in the week ended Saturday totaled 18.9 million st, up 2.4% from the prior week, but 6.4% below output in the comparable week of 2011, the Energy Information Administration said Thursday. EIA, which bases its estimates on rail car loading data, said production east of the Mississippi River in the week ended Saturday totaled 8.2 million st, while production west of the Mississippi totaled 10.7 million st. US year-to-date coal production totaled 438.6 million st, 8.1% below that of the comparable period last year, the agency said.

#### Coal is on the fall- companies are cutting back massively

Hooks ’12 Cliffs cuts 2012 US thermal coal production forecast by 27% Galax, Virginia (Platts)--15Jun2012/646 pm EDT/2246 GMT Steve Hooks, steve\_hooks@platts.com --Edited by Carla Bass, carla\_bass@platts.com http://www.platts.com/RSSFeedDetailedNews/RSSFeed/Coal/6392028

Cliffs Natural Resources is cutting its 2012 thermal coal sales and production volume expectations by about 300,000 short tons, driven "by a softer US pricing environment" for thermal coal, the Cleveland, Ohio-based producer said late Friday. The reduced guidance means Cliffs -- primarily an iron ore and metallurgical coal producer -- will cut full-year production from its Toney Fork No. 2 surface mine in Logan County, West Virginia, to about 800,000 st from a previously expected 1.1 million st. Toney Fork, a surface mine operated by subsidiary Cliffs Logan County Coal, produced 1.2 million st last year and 300,529 st in the first quarter of this year, according to US Mine Safety and Health Administration data. The cut, Cliffs said, "is driven by a softer US pricing environment for thermal coal products. The decreased volumes will result in the reduction of 46 hourly positions at the mining operation, along with 13 salaried positions within the company's administrative offices, effective June 15, 2012." "Thermal coal usage for power generation has declined sharply, driven by the extremely mild winter and historically low natural gas prices," said David Webb, Cliffs' senior vice president of Global Coal Operations. He added that Toney Fork's production "will be reduced to a level that will satisfy our existing supply agreements and customer requirements." Cliffs acquired Toney Fork in 2010 as part of its acquisition of the coal operations of INR Energy. Cliffs said it is maintaining its full-year 2012 expected North American met coal sales at 6 million st and production volumes at 5.5 million st.

### Nuclear

#### Framing objections to the nuclear cycle around indigenous issues is a counter-productive strategy – our attempts to end it by rejecting nuclear weapon attacks is a more productive politics

Truman ‘98

(http://www.ratical.org/ratville/nukes/JTruman/053098\_1.html # Thinking about the Unthinkable: Nuclear War in South Asia was (but no longer) http://customnews.cnn.com/cnews/pna.show\_story?p\_art\_id=2615468&p\_sec...text local copy Date: Sat, 30 May 1998 Subject: SOME PERSONAL THOUGHT AT THE END OF A LONG, LONG DAY!)

Here in this country, the "Environmentalists" insist on playing the same "indigenous peoples card", instead of dealing with the awful reality that fallout from nuclear testing is color and ethnic -blind -- it is an equal opportunity victimizer and kills whoever and wherever it goes! Why is this the real problem? Simply because fallout worldwide from testing killed likely on the order of tens of millions to date, and millions more injured who are not yet dead from it. Wholesale mass murder is what it is, and the public "needs" to know that right now! Especially when they "ALL" no matter who they are, where they live, how they live, or what color they are, Are already its victims.Only by realizing that and all that goes with it, is there "any" hope the public here, or worldwide will stand up to their governments and say no before those governments blow them up at the worst, or use this as a "wonderful" excuse to get back to nuclear weapons development business as usual! Likewise the activist community has got to stop playing organizational politics, and stop playing the race card. The movement can no longer play the indigenous peoples game simply because it is more "PC" and most specifically because it is "more fundable". To say nuclear testing's victims have always been indigenous peoples is not only incorrect, but is a sign of total stupidity on the issue, as the only indigenous people victimized by the testing was -- and are -- the human race! And the human race better get that point real soon and come to terms with the fact that on that one level at least we all share one thing in common on this planet. We all carry a little bit of the Nevada Test Site, the Semipalatinsk Test Site, The Lop Nor Test Site, the British and French Test Sites and soon perhaps the Indian and Pakistan Test Sites inside all our bodies. This does not mean that what happened to people forced from their homes -- first for the factories, then for the testing sites, or the reasons why testing sites were put where they were-- are not important, or are insignificant, or to excuse examples of environmental and atomic racism. They are all too clear examples of the utter sickness present in the minds of those responsible. Pick on those least able to defend themselves first and then slowly and steadily expand the circle to those you don't really give a damn about! Just like Joe Stalin, Adolf Hitler, Jim Crow, or George Armstrong Custer! Those stories and those histories and those facts must be exposed and justice demanded right along with ALL the rest of the terrible legacy of nuclear testing. All it means is that to stop the nuclear arms race the truth has to come out, the full truth, the complete truth, and not a truth focused to look better organizationally or politically. Because if it is, it only plays into the hands of those responsible for the testing in the first place, and is a "god-send" to them in helping to minimize the open public exposure of the full extent of the horrors they unleased.No group of victims is better, more worthy, less worthy, or better to focus and raise funds on. We are all one race -- the human race -- and we are all testing's victims. That is the one truth that when our race knows it, we will truly be free and no more, never ever again, will those damned tall mushrooms and their deadly spores carried on the winds to sicken, kill and mame, be allowed to grow anywhere on this planet we all share as home!

### Perm

#### Only rejection of the plan can open up space from decolonization—only a total break with state institutions makes decolonization possible

Alfred ‘5

Taiaiake Alfred, Indigenous scholar, 3/1/2005, www.ctheory.net/articles.aspx?id=444, WASÁSE:indigenous pathways of action and freedom,

The first question that arises when this idea is applied in a practical way to the situations facing Onkwehonwe in real life is this: How can we regenerate ourselves culturally and achieve freedom and political independence when the legacies of disconnection, dependency, and dispossession have such a strong hold on us? Undeniably, we face a difficult situation. The political and social institutions that govern us have been shaped and organized to serve white power and they conform to the interests of the states founded on that objective. These state and Settler-serving institutions are useless to the cause of our survival, and if we are to free ourselves from the grip of colonialism, we must reconfigure our politics and replace all of the strategies, institutions, and leaders in place today. The transformation will begin inside each one of us as personal change, but decolonization will become a reality only when we collectively both commit to a movement based on an ethical and political vision and consciously reject the colonial postures of weak submission, victimry, and raging violence. It is a political vision and solution that will be capable of altering power relations and rearranging the forces that shape our lives. Politics is the force that channels social, cultural, and economic powers and makes them imminent in our lives. Abstaining from politics is like turning your back on a beast when it is angry and intent on ripping your guts out.

It is the kind of politics we practice that makes the crucial distinction between the possibility of a regenerative struggle and what we are doing now. Conventional and acceptable approaches to making change are leading us nowhere. Submission and cooperation, which define politics as practiced by the current generation of Onkwehonwe politicians, are, I contend, morally, culturally, and politically indefensible and should be dismissed scornfully by any right-thinking person and certainly by any Onkwehonwe who still has dignity. There is little attention paid in this book to the conventional aspects of the politics of pity, such as self-government processes, land claims agreements, and aboriginal rights court cases, because building on what we have achieved up until now in our efforts to decolonize society is insufficient and truly unacceptable as the end-state of a challenge to colonialism. The job is far from finished. It is impossible to predict what constraints and opportunities will emerge, but it is clear that we have not pushed hard enough yet to be satisfied with the state's enticements. Fundamentally different relationships between Onkwehonwe and Settlers will emerge not from negotiations in state-sponsored and government-regulated processes, but only after successful Onkwehonwe resurgences against white society's entrenched privileges and the unreformed structure of the colonial state.

#### Demands on the state reinforce state power – only the alternative of individual action solves

Brian Martin 1990 “uprooting war” http://www.uow.edu.au/arts/sts/bmartin/pubs/90uw/uw07.html

The obvious point is that most social activists look constantly to the state for solutions to social problems. This point bears labouring, because the orientation of most social action groups tends to reinforce state power. This applies to most antiwar action too. Many of the goals and methods of peace movements have been oriented around action by the state, such as appealing to state elites and advocating neutralism and unilateralism. Indeed, peace movements spend a lot of effort debating which demand to make on the state: nuclear freeze, unilateral or multilateral disarmament, nuclear-free zones, or removal of military bases. By appealing to the state, activists indirectly strengthen the roots of many social problems, the problem of war in particular. To help transform the state system, action groups need to develop strategies which, at a minimum, do not reinforce state power. This means ending the incessant appeals for state intervention, and promoting solutions to social problems which strengthen local self-reliance and initiative. What can be done about poverty? Promote worker and community control over economic resources, and local self-reliance in skills and resources. What about racial discrimination? Promote discussion, interaction and nonviolent action at a grassroots level. What about environmental degradation? Encourage local communities to re-examine their own activities and to confront damaging practices. What about sexual discrimination? Build grassroots campaigns against rape and the gender division of labour, and mount challenges to hierarchical structures which help sustain patriarchy. What about corporate irresponsibility or excess profits? Promote worker and community control over production. What about unemployment? Promote community control of community resources for equitable distribution of work and the economic product, and develop worker cooperatives as an alternative to jobs as gifts of employers. What about crime? Work against unequal power and privilege, and for meaningful ways of living, to undercut the motivation for crime, and promote local community solidarity as a defence against crime. What about enemy attack? Social defence. What about too much military spending? Build local alternatives to the state, use these alternatives to withdraw support from the state and undermine the economic foundation of military spending. These grassroots, self-managing solutions to social problems are in many cases no more than suggestive directions. Detailed grassroots strategies in most cases have not been developed, partly because so little attention has been devoted to them compared to strategies relying on state intervention. But the direction should be clear: in developing strategies to address social problems, aim at building local self-reliance and withdrawing support from the state rather than appealing for state intervention and thereby reinforcing state power. Many people's thinking is permeated by state perspectives. One manifestation of this is the unstated identification of states or governments with the people in a country which is embodied in the words 'we' or 'us.' "We must negotiate sound disarmament treaties." "We must renounce first use of nuclear weapons." Those who make such statements implicitly identify with the state or government in question. It is important to avoid this identification, and to carefully distinguish states from people. The Italian state is different from the people living in Italy. Instead of saying "China invaded Vietnam," it is more accurate and revealing to say something like "Chinese military forces invaded Vietnamese territory" or perhaps "Chinese military forces, mostly conscripts, were ordered by the rulers of the Chinese state to invade territory which was claimed by rulers of the Vietnamese state as exclusively theirs to control." Also to be avoided is the attribution of gender to states, as in 'motherland' or 'fatherland.'Many social action campaigns have a national focus, a national organisational basis and depend on national activist leaders. This is especially true when the campaign is based on influencing state elites to implement or change policies. This national orientation both reflects and reinforces a state perspective and state power. The alternative is to think and act both locally and transnationally, and to develop skills and leadership at local levels. This approach has been adopted by some social movements, but seldom on a sustained and systematic basis.

### Alt

#### Alt solves the case- reconfiguring this relationship in terms of individuals trancends all oppressive structures and emancipates humanity,

Jayan Nayar 1999 (professor of law at the university of warwick) “orders of inhumanity” fall, p. lexis

we are today bombarded by images of our "one world." we speak of the world as "shrinking" into a "global village." we are not all fooled by the implicit benign-ness of this image of "time-space" contracted--so we also speak of "global pillage." this astuteness of our perceptions, however, does not prevent us from our delusion of the "global;" the image of the "global" world persists even for many activists amongst us who struggle to "change" the world. this is recent delusion. it is a delusion which anesthetizes us from the only world which we can ever locate ourselves in and know--the worlds of "I"-in relationships. the "I" is seldom present in "emancipatory" projects to change the world. this is because the "relational i"-world and the "global"-world are negations of one another; the former negates the concept of the latter whilst the latter negates the life of the former. and concepts are more amenable to scrutiny than life. the advance in technologies of image-ing enables a distanciation of scrutiny, from the "i"-world of relationships to the "global"-world of abstractions. as we become fixated with the distant, as we consume the images of "world" as other than here and now, as we project ourselves through technological time-space into worlds apart from our here and now, as we become "global," we are relieved of the gravity of our present. we, thus, cease the activism of self (being) and take on the mantle of the "activist" (doing). this is a significant displacement. that there is suffering all over the world has indeed been made more visible by the technologies of image-ing. yet for all its consequent fostering of "networks," images of "global" suffering have also served to disempower. by this, we mean not merely that we are filled with the sense that the forces against which the struggle for emancipations from injustice and exploitation are waged are pervasive and, therefore, often impenetrable, but, more importantly, that it diverts our gaze away from the only true power that is in our disposal--the power of self-change in relationships of solidarities. the "world," as we perceive it today, did not exist in times past. it does not exist today. there is no such thing as the global "one world." the world can only exist in the locations and experiences revealed through and in human relationships. it is often that we think that to change the world it is necessary to change the way power is exercised in the world; so we go about the business of exposing and denouncing the many power configurations that dominate. power indeed does lie at the core of human misery, yet we blind ourselves if we regard this power as the power out there. power, when all the complex networks of its reach are untangled, is personal; power does not exist out there, [\*630] it only exists in relationship. to say the word, power, is to describe relationship, to acknowledge power, is to acknowledge our subservience in that relationship. there can exist no power if the subservient relationship is refused--then power can only achieve its ambitions through its naked form, as violence. changing the world therefore is a misnomer for in truth it is relationships that are to be changed. and the only relationships that we can change for sure are our own. and the constant in our relationships is ourselves--the "i" of all of us. and so, to change our relationships, we must change the "i" that is each of us. transformations of "structures" will soon follow. this is, perhaps, the beginning of all emancipations. this is, perhaps, the essential message of mahatmas.

## 1NR

### DA

#### Our depictions of nuclear war prevent numbing and solve the root cause of nuclear harms in Indian Country

Stephanie **Hiller 2004** “Building Bases for Peace” http://www.awakenedwoman.com/sh\_bari.htm

The probability that nuclear testing will be resumed means radioactive residues will be distributed at home as well. Of course we **already** have plenty of radiation flowing through our water supply, especially on **the** lands where Native Americans **have been forced to** live. Now Bush has proposed that radioactive and other toxic waste be stored in "unregulated" disposal sites. So we can all expect to become slightly more radioactive in the years to come than we already are. Radiation, even from x-rays, is bad for the brain. Maybe that's why the American public is so easy to mislead. Nuclear weapons and nuclear war are **a very frightening subject --** so frightening that we don't like to talk about them. In that way, nukes are a little like feminism. In a world where most old fashioned taboos have been broken, **a new taboo seems to hover over the subject of nuclear weapons.** Yet at the same time, "nukes" has become an every day word. We talk of nuking food in the microwave. In children's video games, nukes are used as if they were bullets in a cowboy gun. So nukes are becoming normal**, even if nuclear war is a topic we avoid** But if we don't start talking about nuclear war -- and if we get numb to the consequences of nuclear war **-- if it is no longer shockingly scary --** if it starts to seem **somehow** normal, we are going to have it.

#### Non-unique – we don’t even test nuclear weapons anymore

**Center for Security Policy 2002** Security Forum No. 02-F 35 2002-09-26 Enough already: Ten years without nuclear tests is too long to assure the deterrents' safety, reliability http://www.centerforsecuritypolicy.org/index.jsp?section=papers&code=02-F\_35

(Washington, D.C.): Ten years ago last Monday, the United States stopped knowing for sure whether its nuclear arsenal would work as it was supposed to. In the intervening years, many billions have been spent trying to compensate for the fact that the Nation was no longer conducting actual underground nuclear testsand, on the basis of various analyses, modeling, computer simulations and sub-critical experiments, those responsible for maintaining the stockpile's safety, reliability and effectiveness have persuaded themselves that all was well -- or, at least, good enough for government work. Yesterday, a former, long-time Department of Energy scientist -- Kenneth Adney -- had the courage to say publicly what many of his colleagues have known, but declined to admit: The stockpile has been on "life-support" for years. We are at risk of denuclearization, with dangerous repercussions for this nation's interests and international security more generally. As Dr. Adney put it: "Only a fool would believe unreliable or militarily obsolete U.S. nuclear weapons will make this a safer world. But fools seem to abound in this business. Even **some in** military leadership accept this degradation and oppose nuclear testing**."** It is high time that the Bush Administration went beyond rejecting the Clinton Comprehensive Test Ban Treaty and ended the moratorium on underground testing instituted in 1992 over the first President Bush's objections. If we are to have a credible and safe nuclear deterrent, it must be tested the only tried and true way we know -- via periodic, underground thermonuclear detonations.

### 1NR

#### Warming causes extinction

Sify ’10 [Sydney newspaper citing Ove Hoegh-Guldberg, professor at University of Queensland and Director of the Global Change Institute, and John Bruno, associate professor of Marine Science at UNC (Sify News, “Could unbridled climate changes lead to human extinction?” ]

Sydney: Scientists have sounded alarm bells about how growing concentrations of greenhouse gases are driving irreversible and dramatic changes in the way the oceans function, providing evidence that humankind could well be on the way to the next great extinction. The findings of the comprehensive report: 'The impact of climate change on the world's marine ecosystems' emerged from a synthesis of recent research on the world's oceans, carried out by two of the world's leading marine scientists. One of the authors of the report is Ove Hoegh-Guldberg, professor at The University of Queensland and the director of its Global Change Institute (GCI). 'We may see sudden, unexpected changes that have serious ramifications for the overall well-being of humans, including the capacity of the planet to support people. This is further evidence that we are well on the way to the next great extinction event,' says Hoegh-Guldberg. 'The findings have enormous implications for mankind, particularly if the trend continues. The earth's ocean, which produces half of the oxygen we breathe and absorbs 30 per cent of human-generated carbon dioxide, is equivalent to its heart and lungs. This study shows worrying signs of ill-health. It's as if the earth has been smoking two packs of cigarettes a day!,' he added. 'We are entering a period in which the ocean services upon which humanity depends are undergoing massive change and in some cases beginning to fail', he added. The 'fundamental and comprehensive' changes to marine life identified in the report include rapidly warming and acidifying oceans, changes in water circulation and expansion of dead zones within the ocean depths. These are driving major changes in marine ecosystems: less abundant coral reefs, sea grasses and mangroves (important fish nurseries); fewer, smaller fish; a breakdown in food chains; changes in the distribution of marine life; and more frequent diseases and pests among marine organisms. Study co-author John F Bruno, associate professor in marine science at The University of North Carolina, says greenhouse gas emissions are modifying many physical and geochemical aspects of the planet's oceans, in ways 'unprecedented in nearly a million years'. 'This is causing fundamental and comprehensive changes to the way marine ecosystems function,' Bruno warned, according to a GCI release. The DA outweighs, err neg-

#### Action inaction distinction

Hanson, Goddard institute for space studies, et al, 2007

(J. Hansen1,2, M. Sato2, R. Ruedy3, P. Kharecha2, A. Lacis1,4, R. Miller1,5, L. Nazarenko2, K. Lo3, G. A. Schmidt1,4, G. Russell1, I. Aleinov2, S. Bauer2, E. Baum6, B. Cairns5, V. Canuto1, M. Chandler2, Y. Cheng3, A. Cohen6, A. Del Genio1,4, G. Faluvegi2, E. Fleming7, A. Friend8, T. Hall1,5, C. Jackman7, J. Jonas2, M. Kelley8, N. Y. Kiang1, D. Koch2,9, G. Labow7, J. Lerner2, S. Menon10, T. Novakov10, V. Oinas3, Ja. Perlwitz5, Ju. Perlwitz2, D. Rind1,4, A. Romanou1,4, R. Schmunk3, D. Shindell1,4, P. Stone11, S. Sun1,11, D. Streets12, N. Tausnev3, D. Thresher4, N. Unger2, M. Yao3, and S. Zhang2 1NASA Goddard Institute for Space Studies, New York, NY, USA 2Columbia University Earth Institute, New York, NY, USA 3Sigma Space Partners LLC, New York, NY, USA 4Department of Earth and Environmental Sciences, Columbia University, New York, NY, USA 5Department of Applied Physics and Applied Mathematics, Columbia University, New York, NY, USA 6Clean Air Task Force, Boston, MA, USA 7NASA Goddard Space Flight Center, Greenbelt, MD, USA 8Laboratoire des Sciences du Climat et de l’Environnement, Orme des Merisiers, Gif-sur-Yvette Cedex, France 9Department of Geology, Yale University, New Haven, CT, USA 10Lawrence Berkeley National Laboratory, Berkeley, CA, USA 11Massachusetts Institute of Technology, Cambridge, “Dangerous human-made interference with climate: a GISS modelE study,” http://www.atmos-chem-phys.net/7/2287/2007/acp-7-2287-2007.html)

These stark conclusions about the threat posed by global climate change and implications for fossil fuel use are not yet appreciated by essential governing bodies, as evidenced by ongoing plans to build coal-fired power plants without CO2 capture and sequestration. In our view, there is an acute need for science to inform society about the costs of failure to address global warming, because of a fundamental difference between the threat posed by climate change and most prior global threats. In the nuclear standoff between the Soviet Union and United States, a crisis could be precipitated only by action of one of the parties. In contrast, the present threat to the planet and civilization, with the United States and China now the principal players (though, as Fig. 10 shows, Europe also has a large responsibility), requires only inaction in the face of clear scientific evidence of the danger.

#### Reversibility- Precautionary principle

Cass R. Sunstein () 2007 “WORST-CASE SCENARIOS” p. 176-7, Harry Kalven Visitng Professor, Professor of Law at Harvard Law School but is currently on leave to serve as the Administrator of the White House Office of Information and Regulatory Affairs in the Obama administration, and

In ordinary life, our judgments about worst-case scenarios have everything to do with irreversibility. Of course an action may be hard but not impossible to undo, and so there may be a continuum of cases, with different degrees of difficulty in reversing. A marriage can be reversed, but divorce is rarely easy; having a child is very close to irreversible; moving from New York to Paris is reversible, but moving back may be difficult. People often take steps to avoid courses of action that are burdensome rather than literally impossible to reverse. In this light,we might identify an Irreversible Harm Precautionary Principle, applicable to a subset of risks.3 As a rough first approximation, the principle says this: Special steps should be taken to avoid irreversible harms, through precautions that go well beyond those that would be taken if irreversibility were not a problem. The general attitude here is “act, then learn,” as opposed to the tempting alternative of “wait and learn.” In the case of climate change, some people believe that research should be our first line of defense. In their view, we should refuse to commit substantial resources to the problem until evidence of serious harm is unmistakably clear.4 But even assuming that the evidence is not so clear, research without action allows greenhouse gas emissions to continue, which might produce risks that are irreversible, or at best difficult and expensive to reverse. For this reason, the best course of action might well be to take precautions now as a way of preserving flexibility for future generations. In the environmental context in general, this principle suggests that regulators should proceed with far more aggressive measures than would otherwise seem justified.5

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### A2 Wind Solves Warming

#### Not without natural gas

**Huber 2011** (Jacob Huber, energy analyst at the Energy Delta Institute, June 2011, “A Role for Natural Gas in the Pragmatic Transition to a Sustainable Energy System,” Energy Delta Institute, EDI Quarterly, Volume 3, Number 2, online)

At any point in history, the constraints of most thinking are defined by a ruling paradigm, according to Thomas Kuhn. When its effectiveness begins to diminish, its foundation come into question and thus begins the breakdown process; a paradigm shift yields the establishment of a new paradigm. Such shifts are, however, sufficiently open-ended “to leave all sorts of problems for the redefined group of practitioners to resolve.” This very sort of shift is taking place, changing the way energy issues are viewed and our very assumptions regarding energy generation and consumption and their associated impacts on the environment and society. A focus on the supply side without attention to the end use of energy is being replaced with a greater concentration on the demand side, emphasizing the end uses of energy and services that this use provides. Thus, energy efficiency is seen as playing a large role in the transition to a sustainable energy system based on renewables. Such transitions do not however happen overnight and conventional energy resources and technologies will continue to play a large role in the short- and medium-term. The newest project of EDI, EDIaal, aims to contribute to the dialogue surrounding the transition to a sustainable, low carbon energy system. Integral to this objective is the development of competencies in all transition issues including legal and regulatory aspects, renewables, energy efficiency, CCS, smart grids, and the appropriate context of fossil fuel technologies. This knowledge will then be provided through the development of training programs, seminars, and other events as well as tools for sharing knowledge of the role of natural gas in this transition. Natural gas is the contemporary source of energy most suited to playing a facilitating role in an efficient transition. It is well known that the contemporary energy system is dominated by fossil fuels, the negative aspects of which are motivating the push for a more efficient and sustainable system. These drivers include concerns ranging from climate change and pollution to resource depletion and security of supply. It is clear that the current system, which has been such a force for the development and advancement of humanity, cannot be suddenly abandoned and that a gradual transition toward the ultimate goal of a clean and sustainable energy system must be pursued. A future sustainable energy system is seen as being based on three pillars: energy efficiency, renewables, and clean fossil fuel technology (via carbon capture and storage, or CCS). It is expected that energy efficiency in various forms will account for 58% of carbon reductions in the IEA’s BLUE Map Scenario (Fig. 1). Renewables and CCS will account for 17% and 19% respectively, with the remaining 6% being due to nuclear. Natural gas in its various forms will play an essential role in this transition due to its cleanliness, flexibility, and other favorable characteristics. Current renewable or “sustainable” energy generation technologies, such wind and solar, are inherently intermittent and their product energy carrier (electricity) is essentially impossible to store on a large scale for significant lengths of time with current technology. While the resource represented by renewable technologies is large, these shortcomings present a technical barrier to their significant penetration in the short and medium term. Natural gas will play an important role in that its storability allows it to be dispatched upon command to account for a sudden shortfall of wind-based generation, for example. Development of gas-fired combined cycle power plants that are able to enter the grid in as little as 30 minutes (compared with a number of hours for coal and days for nuclear plants) provide a perfect fit with the variable nature of wind and allow integration of a much larger percentage of intermittent renewable sources. In addition, a large existing infrastructure of pipelines, storage, and power plants (as well as associated knowledge) minimize the capital expenditure required for capacity expansion. Energy efficiency is seen as playing a role in dampening growth in worldwide energy demand in the face of strongly increasing demand in developing economies, and here natural gas has a part to play. Natural gas has a role in the efficiency component of a sustainable energy system, both on the supply-side and in end-use efficiency. Carrier switching, distributed generation, and combined heat and power (CHP) together represent an enormous opportunity to increase system-level efficiency and thus minimize the extent to which capital- intensive renewable generation technologies must be implemented. The flexibility of natural gas allows it to fit into these niches and optimize system-wide performance. Carrier switching involves the choice of the most appropriate energy carrier to supply a given end use, with the objective of minimizing primary energy consumption and greenhouse gas emissions. In most contexts, it is more efficient to provide space heating, domestic hot water, and heat for cooking from natural gas than via electrical resistance from a grid-mix of electricity. For every 10 units of primary energy (PE) used to supply domestic hot water (DHW) via electrical resistance 3.8 units of final energy (FE) would ultimately be available to provide hot water after accounting for losses in power plants and transmission and distribution. 1 If provided by a natural gas boiler with an efficiency of 90% ten units of PE would yield nine of FE for water heating. This simple example illustrates the powerful role of carrier switching in energy efficiency. Although the penetration of natural gas in DHW, space heating, and cooking for the Netherlands is already extremely high, considerable potential for this sort of carrier switching exists in Southern Europe, the United States and other parts of the world. In the USA 10 units of PE yield 3.4 of FE delivered through the electricity grid on average, while in the IEA-EU 3.6 units are produced.2 In the IEA BLUE scenario, this sort of “end-use fuel switching” alone is expected to account for 15% of CO2 reductions. Distributed generation represents another domain of natural gas in the scheme of energy efficiency. The flexibility of gas allows it to be used on any scale from large centralized power plants to medium and small plants that can be strategically placed to reinforce the electricity grid. This can have the effect of lowering losses due to shorter transmission distances and less congestion, but also minimizes the requirement of electricity grid expansion and associated capital expenditures. Perhaps more significantly such a system allows for the greater usage of waste heat for industrial processes or district heating/cooling via systems of combined heat and power (CHP). These factors combined further demonstrate the ability of natural gas to contribute to efficiency efforts. The largest opportunity for natural gas in the scheme of energy efficiency is likely represented by CHP. Such systems make use of the waste heat from electrical power generation for industrial process heat or district heating and cooling. Through the advent of adsorption chillers, waste heat can also be used to generate cold water for district or process cooling. According to the IEA around 2/3 of fuel used to produce power on a global scale is wasted and CHP, through better utilization of waste heat and the lowering of transmission losses, has the potential to more than double this efficiency. In general, CHP plants convert 75-80% of the fuel source into useful energy, and those with the most modern technology have achieved efficiencies in excess of 90%. This figure stands in contrast to the ~60% efficiencies achieved by only the most advanced combined-cycle gas turbine (CCGT) power plants, representing the cutting edge in thermal power plant efficiency. CHP plants also deliver on an additional selection of policy objectives including reduced emissions of CO2 and other pollutants, cost savings for energy consumers, and a reduced need for transmission and distribution networks. It must be noted that appropriate system design maximizing utilization of waste heat is necessary both in order to maximize the economic viability of CHP systems and achieve the efficiencies stated. If the system is driven by heat demand with electricity as a “byproduct” to be utilized on-site or injected into the grid system efficiencies can easily reach the previously mentioned levels. If the system is driven by electricity demand complete utilization of waste heat is not assured and thus system efficiencies are lower. An illustrative example can be found in the case of a steam turbine CHP system with a power efficiency of 38%, and “heat” efficiency of up to 42%. 3 Assuming maximal utilization of heat, an overall efficiency of 80% can be achieved. In a system driven by the price of electricity at times of high demand it is conceivable that only a portion (or even none) of the waste heat can be utilized, driving overall efficiencies as low as the 38% electrical efficiency. Thus, such a system could be economically viable but inefficient when compared with contemporary CCGT power plants. This example underscores the importance of proper system design in order to achieve theoretical efficiencies in the real world. Natural gas has its final role to play in a sustainable energy system as a large-scale source of clean and climate-neutral energy in combination with CCS. CCS is currently being developed and scaled and will likely be ready in the medium term to make a significant contribution. In fact, the IEA expects CCS technology to deliver around a fifth of the 50% reduction of CO2 by 2050 in their Energy Technology Perspectives “BLUE Map Scenario.” Fossil fuels have their role to play in the energy system of the future and it likely that natural gas, being the cleanest among them, will only expand its role in power generation for the foreseeable future. Favorable characteristics are also displayed by natural gas in the context of the traditional energy paradigm include its large existing reserves, especially with their recent expansion due to the contribution of unconventional resources. Its scalability is also an advantage in that it can fit into the energy system on any scale from a small boiler for domestic hot water to a 1000MW power station. It is also traded on a large scale in liquid markets facilitated by its readily available delivery by pipeline or, increasingly, liquefied natural gas (LNG) carrier and the associated network of terminals. Production of renewable or “green” gas from such sources as biomass (via gasification), or agricultural waste (via biogas digesters) is also being pursued. Such gases can be injected into the natural gas network (after being upgraded to an equivalent composition) and take advantage of its existing infrastructure. One significant hurdle to the faster growth of renewable generation capacity is represented by their large, up-front costs. Although technologies such as wind and solar do not have fuel costs their capital requirements present an obstacle, particularly with the current economic climate characterized by limits in the availability of credit and liquidity. Investments in conventional generation technologies with a lower capital intensity thus often appear more attractive. Continuing with such investments in the cleanest forms of contemporary generation technologies thus make sense in allowing alternative technologies to become more commercially viable, counter intuitively allowing investments to leverage larger capacities of alternative generation in the long term. The shorter lead-time for construction of natural gas power plants (in comparison to coal and nuclear) represents another favorable characteristic in this context. It is clear that therefore be asked: Which of the current energy sources are most feasible from an environmental, economic, and technical perspective? From a technical perspective, all of the current major technologies (natural gas, oil, nuclear, and hydropower) are well developed. Large reserves of coal and natural gas exist but those of oil are rapidly being depleted and the majority of suitable hydropower locations have been exploited. The EIA’s 2010 International Energy Outlook estimates a current reserves-to-production ratio (R/P) of 60 years for natural gas (excluding unconventional sources excepting those in the USA) and 129 years for coal. Uranium ore is widely available (R/P of ~60 years) but the future of nuclear power is uncertain, particularly considering that the recent Fukushima disaster in Japan is likely to have a long-lasting adverse impact on the acceptance of nuclear generation. Coal and natural gas are the most widely available and scalable in addition to being relatively cheap and requiring of low capital investment. Coal, in comparison to natural gas, exhibits significantly higher CO2 emissions and negative externalities including pollution (particulate matter, NOx, SOx,, mercury, etc). The EU project “ExternE” estimates externalities resulting from coal electricity generation in the EU (including global warming, public and occupational health as well as material damage, Table 1) at 2 - 15 Euro-cent/kWh, while those for natural gas are 1 - 4 cents/kWh. The IEA estimates that deaths per 10 billion kWh of electricity produced by coal range from 2.8 - 32.7, with those from natural gas falling between the range of 0.3 - 1.6. These include deaths resulting from mining accidents, explosions, pollution, and similar causes. Finally, a simple switch from coal to natural gas represents a reduction in CO2 emissions on the order of 50%. Renewables, despite recent rapid growth and development, still require time to scale from their current levels to a leading role in the provision of energy for humanity. They currently lack the flexibility necessary to optimize energy system efficiency in the near-term and scale to account for significant portion of primary energy in the medium-term. Natural gas is already well developed and integrated into the contemporary energy system but will additionally support the transition to a more efficient system in its new role. This role comes in the form of a flexible, clean, and reliable energy carrier in the supporting a sustainable energy transition based on renewables, energy efficiency, and clean fossil generation technology. Thus, although its function will evolve, natural gas has an increasing role to play in the provision of a sustainable energy supply for the continued advancement of humanity.

#### It’s try or die- Only the plan solves fast enough to avoid tipping points and negative feedback loops

**Ward 2011** (Richard Ward, director of energy initiatives at the Aspen Science Center and senior energy advisor to the UN Foundation’s Energy Future Coalition, Spring 2011, “Ally Renewables with Natural Gas,” Earth Island Journal, EBSCO)

The scientific consensus is stark: Earth systems are dangerously close to tipping points which, once crossed, could ignite negative feedback loops and catastrophic climate change beyond human capacity to remedy. Because burning hydrocarbons is the cause, many environmentalists advocate a complete ban on carbon fuel sources in favor of renewables. This is compelling until we consider the numbers. The US uses about 100 quadrillion BTUs of energy a year and emits 6 billion tons of the world’s 30 billion tons of CO2. We use nearly 40 quads of oil for transportation and about 40 quads of energy for electric power. By contrast, our production from wind and solar is only 0.5 quads. To replace the 67 quads of oil, coal, and natural gas with wind and solar would take decades. In this time, the emissions from coal and oil would drive the planet over the brink. Even if we were to able ramp up solar and wind power by 20 times our current capacity over the next 20 years, the total contribution would only be 10 percent of the energy we need. We do not have time to be purists. The renewables revolution must occur. But we must make significant cuts in the carbon emissions today — and natural gas offers the fastest way to do that. Each year, coal emits 2 billion tons of CO2 for electric power generation in the United States. Because natural gas is 50 to 70 percent more carbon efficient than coal for the same energy output, switching our coal generation to natural gas will radically reduce the nation’s emissions by up to 500 million tons of CO2 per year in the near-term (1-2 years) and by more than a billion tons per year in the medium-term (10 years). There are no other options that provide these volumes of reductions this fast. Rapidly transitioning our energy infrastructure away from coal and oil toward renewables backed up by clean burning natural gas makes good sense. Renewables emit no greenhouse gases, and when the sun is not shining and the wind is not blowing, burning natural gas creates far less health and environmental damage than coal and oil. As we expand our renewables portfolio, the natural gas electricity generation could be ratcheted back. The reason that natural gas generation can be ramped up so quickly in the US is that the infrastructure for electrical generation is sitting idle most of the time. For most of the year, the natural gas-fed electric power plants are used less than 40 percent of the time. The Congressional Research Office estimates that by simply dispatching gas ahead of coal, the US could reduce 400 million tons of CO2 per year with existing infrastructure. Just because transitioning from coal to renewables and natural gas is smart doesn’t mean it will be easy. The coal lobby will not go away quietly. They sponsor climate skep- tics, support efforts to shut down natural gas development, and flood the air space with disingenuous information. Fear is their best tool. The latest example is that leaking pipes will make a shift to natural gas more dangerous and emit more methane than staying with coal. Environmentalists must not be fooled. It is good that the EPA has raised leaking flanges and compressors as a concern, not to discredit natural gas, but to improve regulations to ensure that the gas stays in the pipes until it is burned. Coal-fired power plants remain among the top emmitters of fine particle pollution, mercury, SO2 and NOx in the country. According to the Clean Air Task Force, this pollution caused over 13,000 premature deaths in 2010, almost 10,000 hospitalizations, and more than 20,000 heart attacks. Shifting to renewables and natural gas is the patriotic thing to do because significantly more Americans die every year from coal emissions than have died in the World Trade Center at- tack and the eight years of Iraq and Afghan wars combined (nearly 11,000 fatalities).

### Indians Links

CX established a strong and direct tradeoff between wind and natural gas- No “no link” arg in the 2AC means the link is conceded and guaranteed

#### Brink- Natural gas in electricity now- compensating for oversupply of plants

Smith 2012 [Rebecca Smith Wall Street Journal 3-15-2012 “Cheap Natural Gas Unplugs U.S. Nuclear-Power Revival” http://online.wsj.com/article/SB10001424052702304459804577281490129153610.html]

One reason utilities are finding it hard to resist cheap gas is that there is a surplus of gas-fired generating capacity in many parts of the nation, the result of a building boom that lasted from 1998 to 2005. Due in part to deregulation and inexpensive capital, in 2001 alone utilities added 60,000 gas-fired megawatts, equivalent to more than 120 big plants.¶ But the 2002 collapse of Enron Corp., the big energy marketer, led to a credit squeeze that eventually pushed some of the biggest and most indebted power-plant builders into bankruptcy court, including NRG Energy; Calpine CPN +1.30% Corp.; PG&E Corp.'s PCG -0.16% National Energy Group; and Mirant Corp.¶ "The beauty of inexpensive gas now is utilities are able to take advantage of overbuilding 10 years ago," says Curt Launer, managing director of equities research at Deutsche Bank Securities Inc. in New York. "Any utility that can use gas is trying to use more of it."

#### Tribes shifting to natural gas development now

Buffalo Post, August 6 2012 http://www.buffalopost.net/?cat=17

The Crow Tribe in southeastern Montana took a huge step toward developing its rich natural resources yesterday when it dedicated its first natural gas facility.¶ “The Creator has blessed us and put is in the right place in terms of all the natural resources that we have,” said Tribal Chairman Cedric Black Eagle at the ceremony. “We also thank Ursa Major for taking the risk with us to achieve this milestone.”¶ Ursa Major is the Oklahoma firm partnering with the tribe to develop seven natural gas wells. Production on those wells officially began yesterday, according to this Billings Gazettte story.¶ Yesterday’s ceremony was held at the Venne-Old Elk compressor station, named in honor of Chairman Carl Venne and Secretary Andrew Old Elk, two deceased Crow leaders who helped spearhead the natural gas project. Old Elk died in 2007 and Venne died in February.¶ Jason Frankenburg, vice president of Ursa Major, praised the two leaders for helping the project become a reality. “Many said it couldn’t be done,” he said. But, he added, “once a vision is shared it’s unstoppable.”¶ The Crow could see hundreds of thousands of dollars in royalties from the project.¶ The Crow Reservation is at the edge of the Powder River Basin, which produces nearly half the nation’s coal. With a view toward more development, the tribe is partnering with The Australian-American Energy Co., Montana State University, Idaho State University and the Idaho National Laboratory in Idaho Falls to develop a college of technology at Little Big Horn College in Crow Agency.¶ That will guarantee a trained workforce, Black Eagle said. And that may be the best part of all.

#### Several states with native populations can produce natural gas

Texas Window on State Government 2012 http://www.window.state.tx.us/specialrpt/energy/nonrenewable/gas.php

Natural gas is extracted through subsurface drilling. Natural gas does not require refining in the sense crude oil does, but it does require cleaning, due to the presence of other gases and liquids. These are removed at a gas processing plant where, as a safety measure, an odorant called mercaptan is added to the naturally odorless methane, giving it a distinctive rotten egg smell.¶ Four states – Texas, Louisiana, New Mexico and Oklahoma – and the Gulf of Mexico accounted for more than three-quarters of all natural gas produced in the U.S. until the late-1990s. In 2005, these four states plus Gulf production represented 68.4 percent of all U.S. production.[23](http://www.window.state.tx.us/specialrpt/energy/nonrenewable/gas.php#23) Texas natural gas production reached its peak in 1972, at more than 9.6 trillion cubic feet or more than 40 percent of all U.S. production.[24](http://www.window.state.tx.us/specialrpt/energy/nonrenewable/gas.php#24) In 2006, Texas produced more than 5.1 trillion cubic feet or 27.8 percent of all natural gas produced in the U.S., still more than any other state (**Exhibit 5-6**).[25](http://www.window.state.tx.us/specialrpt/energy/nonrenewable/gas.php#25)¶ Production in western states (California, Colorado, Montana, Nevada, Utah and Wyoming) has helped to make up for declining production from Texas, Louisiana, New Mexico and Oklahoma, while Alaskan production has remained steady (**Exhibit 5-7**).[26](http://www.window.state.tx.us/specialrpt/energy/nonrenewable/gas.php#26)

### A2 Can’t Solve Global Warming

#### No turns- Preponderance of comprehensive life cycle analyses conclude aff

**Fulton and Mellquist 2011** (Mark Fulton, Managing Director Global Head of Climate Change Investment Research, and Nils Mellquist, Vice President and Senior Research Analyst, August 25, 2011, “Comparing Life-Cycle Greenhouse Gas Emissions from Natural Gas and Coal,” Worldwatch Institute, http://goo.gl/NhfkG)

Natural gas has been widely discussed as a less carbon-intensive alternative to coal as a power sector fuel. In April 2011, the U.S. Environmental Protection Agency released revised methodologies for estimating fugitive methane emissions from natural gas systems. These revisions mostly affected the production component of the natural gas value chain (namely, gas well cleanups), causing a very substantial increase in the methane emissions estimate from U.S. natural gas systems.12 This large increase in the upstream component of the natural gas value chain caused some to question the GHG advantage of gas versus coal over the entire life-cycle from source to use. As a result of this renewed attention, while it remains unambiguous that natural gas has a lower carbon content per unit of energy than coal does, several recent bottom-up studies have questioned whether natural gas retains its greenhouse gas advantage when the entire life cycles of both fuels are considered.3 Particular scrutiny has focused on shale formations, which are the United States’ fastest growing marginal supply source of natural gas. Several recent bottom-up life-cycle studies have found the production of a unit of shale gas to be more GHG-intensive than that of conventional natural gas.4 Consequently, if the upstream emissions associated with shale gas production are not mitigated, a growing share of shale gas would increase the average life-cycle greenhouse gas footprint of the total U.S. natural gas supply. Applying the latest emission factors from the EPA’s 2011 upward revisions, our top-down life-cycle analysis (LCA)5 finds that the EPA’s new methodology increases the life-cycle emissions estimate of natural gas-fired electricity for the baseline year of 2008 by about 11 percent compared with its 2010 methodology. But even with these adjustments, we conclude that on average, U.S. natural gas-fired electricity generation still emitted 47 percent less GHGs than coal from source to use using the IPCC’s 100-year global warming potential for methane of 25. This figure is consistent with the findings of all but one of the recent life-cycle analyses that we reviewed. While our LCA finds that the EPA’s updated estimates of methane emissions from natural gas systems do not undercut the greenhouse gas advantage of natural gas over coal, methane is nevertheless of concern as a GHG, and requires further attention. In its recent report on improving the safety of hydraulic fracturing, the U.S. Secretary of Energy’s Advisory Board’s Subcommittee on Shale Gas Production recommended that immediate efforts be launched to gather improved methane emissions data from shale gas operations.6 In the meantime, methane emissions during the production, processing, transport, storage, and distribution of all forms of natural gas can be mitigated immediately using a range of existing technologies and best practices, many of which have payback times of three years or less.7 Such capture potential presents a commercial and investment opportunity that would further improve the life-cycle GHG footprint of natural gas. Although the adoption of these practices has been largely voluntary to date, the EPA proposed new air quality rules in July 2011 that would require the industry to mitigate many of the methane emissions associated with natural gas development, and in particular with shale gas development.8

### A2 Management

#### Mangagement is the only viable alternative to extinction – its too late to let nature ‘be’

Michael **Soule** (U.S. biologist, Ph.D. in Population Biology at Stanford University) **1995** “Reinventing Nature: Responses to Postmodern Deconstruction” p. 159

Should we actively manage wildlands and wild waters? The decision ahs already been made in most places. Some of the ecological myths discussed here contain, wither explicitly or implicitly, the idea that nature is self-regulating and capableof caring for itself. This notion leads to the theory of management know as benign neglect – nature will do fine, thank you, if human beings just leave it alone. Indeed**,** a century ago, a hands-off policy was the best policy. Now it is not. Given nature’s current fragmented and stressed condition, neglect will result in an accelerating spiral of deterioration**. Once people create large gaps in forests, isolate and disturb habitats, pollute, overexploit, and introduce species from other continents, the viability of many ecosystems and native species is compromised, resilience dissipates,** and diversity can collapse. When artificial disturbance reaches a certain threshold, **even small changes can produce large effects**, and these will be compounded by climate change. For example, a storm that would be considered normal and beneficial may, following widespread clearcutting, cause disastrous blowdowns, landslides, and erosion. If global warming occurs, tropical storms are predicted to have greater force than now. Homeostasis, balance, and Gaia are dangerous models when applied at the wrong spatial and temporal scales. **Even fifty years ago, neglect might have been the best medicine, but that was a world with a lot more big, unhumanized, connected spaces, a world with one-thrid the number of people**, and a world largelyunaffected by chainsaws, bulldozers, pesticides, and exotic, weedy species. The alternative to neglect is active caring – in today’s parlance, an affirmative approach to wildlands: to maintain and restore them**, to become stewards, accepting all the domineering baggage that word carries. Until humans are able to control their numbers and their technologies,** management is the only viable alternative to massive attrition of living nature. But management activities are variable in intensity**, or** something that antimanagement purists ignore. In general, the greater the disturbance and the smaller the habitat remnant, the more intense the management must be. So if we must manage, where do we look for eithical guidance?

#### The act of the 1ac is necessary to generate political will to spur real action – absent that ecological collapse is inevitable in the short-term

Timothy **Clark** (Director of Natrualism.org) **2005** “Avoiding Collapse:

Determinism, Altruism, and the Creation of Political Will” http://www.naturalism.org/environment.htm

It’s often remarked that, given modern society’s prodigious problem-solving resources, all we need is the “political will” to **achieve our objectives,** for instance **to** reduce greenhouse gases, save the rainforest, and preserve diversity of species while maintaining a reasonable standard of living. Diamond himself writes in Collapse that Because we are the cause of our environmental problems, we are the ones in control of them, and we can choose or not choose to stop causing them and start solving them. The future is up for grabs, lying in our own hands. We don’t need new technologies to solve our problems; while new technologies can make some contribution, for the most part we “just” need the political will to apply solutions already available. Of course, that’s a big “just.” But many societies did find the necessary political will in the past. Our modern societies have already found the will to solve some of our problems, and to achieve partial solutions to others (pp. 521-2). As Diamond recognizes, finding the political will to forestall collapse isn’t necessarily straightforward. In fact, the question of how to motivate ourselves raises very knotty issues of self-control, at the personal, social, and planetary scales. If we have the means, but not the will, to save ourselves, then even the best technologies will be to no avail. In light of the preceding discussion of causality and behavior, what follows are a few suggestions that might help to generate and sustain the desire for sustainability itself. Acknowledge the causality of self-control. The first step towards self-control is to recognize that our motives themselves depend on a host of factors, and that to create and maintain motivation requires that the conditions which nurture a desire be brought into existence. As section 1 above implies, political will is no exception to determinism. Our collective desire for sustainability is itself a function of specific causes, not something that we can magically bootstrap into existence, and it’s unlikely it will manifest itself in sufficient measure without deliberate engineering on our part. To some extent, therefore, **freeing ourselves from the myth of radical, supernatural freedom is an important component of any strategy to generate the political will to save the planet**. This insight about our causal embeddedness, applied to global self-control, is perhaps one of the more momentous contributions a full-fledged naturalism can make toward human flourishing. Forecasting doom. More specifically, political will to take environmental action is generated by knowing that unless we act, collapse is a strong possibility in the next 50 to 75 years – not that far off. That’s the motive-inducing realization that must be promulgated far and wide. Scientifically respectable doom-sayers such as Diamond have a crucial role to play in avoiding collapse, as do we in recommending his book to others. The **conditional** forecast of doom **that he presents** is itself a potent spur to action, one that may well make the difference in avoiding the fate of Easter Island**.**