# Mo State v UNLV – round 6 AFF

## 2AC

### prolif adv

#### Proliferation leads to nuclear war.

Robert Pfaltzgraff & James Schoff, February 2009, Professor of International Security Studies at The Fletcher School at Tufts, MBA from Wharton has contributed to an enduring focus on economics and international business, Founder and President of the Institute for Foreign Policy Analysis (IFPA), and James Schoff, the Associate Director of Asia-Pacific Studies at the Institute for Foreign Policy Analysis (IFPA), IFPA White Paper, “Updating U.S. Deterrence Concepts and Operational Planning,” <http://fletcher.tufts.edu/ISSP/About_Us/Faculty/Pfaltzgraff>

Moreover, as suggested above, as more nations seek or attain nuclear status, we may very well be entering an era in which nuclear “non-use” is ending. This means that the risk of deterrence failures is growing, and with it questions about the ability of the United States to control the escalation chain in a crisis situation. During the Cold War, escalation dominance was presumed to lie with the United States, or at least that it could be managed in the U.S.-Soviet context because the stakes of escalation were such that both states were putatively deterred from nuclear weapons use (against the other). Today, however, the same may not be true with respect to North Korea and Iran, let alone in the context of a Taiwan contingency, or with respect to India and Pakistan in a crisis over Kashmir. Deterrence failures in the regional context may result from an accident, a deliberate calculation, or the intervention of a third party (e.g., Israel or Taiwan) in a crisis con-tingency. However, regardless of their origins, the consequences might very well be an escalatory exchange that ultimately draws the United States into a

### warming adv

#### Scaling up of existing renewables is infeasible – only PRISMs can solve.

Charles Archambeau et. al, 2-1-2011, is currently President of Technology Research Associates corporation, consultant to the Departmant of Energy for seismic effects associated with geothermal energy production, consultant involved in the technical evaluation of the proposed high level nuclear waste repository at Yucca, board of directors for a number of U.S. and Canadian companies and has been active in their business management and scientific programs, Natural Resources Defense Council of the U.S., Randolph Ware, Sr. Research Associate at CIRES Visiting Scientist at NCAR, Founder, Chief Scientist at Radiometrics, Congressional Science Fellow at Office of Technology Assessment, Research Associate at Cooperative Institute for Research in the Environmental Sciences, Post Doctorate at Joint Institute for Laboratory Astrophysics, Tom Blees is the author of Prescription for the Planet, the president of the Science Council for Global Initiatives, member of the selection committee for the Global Energy Prize, Yoon Chang, Argonne National Laboratory, General Manager of the Integral Fast Reactor Program, Associate Laboratory Director for Engineering Research, Interim Laboratory Director, serves as the Chair of IAEA’s Technical Working Group on Nuclear Fuel Cycle Options and Spent Fuel Management, Jerry Peterson is a professor of physics at the University of Colorado and a Jefferson Science Fellow for the U.S. Department of State, Robert Serafin was the director of the National Center for Atmospheric Research (NCAR), and past president of the AMS, Tom Wigley is a senior scientist in the Climate and Global Dynamics Division of the US National Center for Atmospheric Research and former Director of the CRU, an adjunct Professor at the University of Adelaide, “IFR: An optimized approach to meeting global energy needs (Part I),” <http://bravenewclimate.com/2011/02/01/ifr-optimized-source-for-global-energy-needs-part-i/>

Fossil fuels currently supply about 80% of humankind’s primary energy. Given the imperatives of climate change, pollution, energy security and dwindling supplies, and enormous technical, logistical and economic challenges of scaling up coal or gas power plants with carbon capture and storage to sequester all that carbon, we are faced with the necessity of a nearly complete transformation of the world’s energy systems. Objective analyses of the inherent constraints on wind, solar, and other less-mature renewable energy technologies inevitably demonstrate that they will fall far short of meeting today’s energy demands, let alone the certain increased demands of the future. Nuclear power, however, is capable of providing all the carbon-free energy that mankind requires, although the prospect of such a massive deployment raises questions of uranium shortages, increased energy and environmental impacts from mining and fuel enrichment, and so on. These potential roadblocks can all be dispensed with, however, through the use of fast neutron reactors and fuel recycling. The Integral Fast Reactor (IFR), developed at U.S. national laboratories in the latter years of the last century, can economically and cleanly supply all the energy the world needs without any further mining or enrichment of uranium. Instead of utilizing a mere 0.6% of the potential energy in uranium, IFRs capture all of it. Capable of utilizing troublesome waste products already at hand, IFRs can solve the thorny spent fuel problem while powering the planet with carbon-free energy for nearly a millennium before any more uranium mining would even have to be considered. Designed from the outset for unparalleled safety and proliferation resistance, with all major features proven out at the engineering scale, this technology is unrivaled in its ability to solve the most difficult energy problems facing humanity in the 21st century.

#### No impact.

Daniel Deudney, Hewlett Fellow in Science, Technology, and Society at the Center for Energy and Environmental Studies @ Princeton University, Bulletin of Atomic Scientists, Environment and Security: Muddled and Thinking April 1991, proquest

In addition, economic decline does not necessarily produce conflict. How societies respond to economic decline may largely depend upon the rate at which such declines occur. And as people get poorer, they may become less willing to spend scarce resources for military forces. As Bernard Brodie observed about the modern era, “The predisposing factors to military aggression are full bellies, not empty ones.” The experience of economic depressions over the last two centuries may be irrelevant, because such depressions were characterized by under-utilized production capacity and falling resource prices. In the 1930s, increased military spending stimulated economies, but if economic growth is retarded by environmental constraints, military spending will exacerbate the problem.

### 2AC QTR CP

#### ‘Should’ does not mean mandatory.

Atlas, 1999, Collaboration, “Use of shall, should, may can,” rd13doc.cern.ch/Atlas/DaqSoft/sde/inspect/shall.html

shall' describes something that is mandatory. If a requirement uses 'shall', then that requirement \_will\_ be satisfied without fail. Noncompliance is not allowed. Failure to comply with one single 'shall' is sufficient reason to reject the entire product. Indeed, it must be rejected under these circumstances. Examples: "Requirements shall make use of the word 'shall' only where compliance is mandatory." This is a good example. "C++ code shall have comments every 5th line." This is a bad example. Using 'shall' here is too strong. should 'should' is weaker. It describes something that might not be satisfied in the final product, but that is desirable enough that any noncompliance shall be explicitly justified. Any use of 'should' should be examined carefully, as it probably means that something is not being stated clearly. If a 'should' can be replaced by a 'shall', or can be discarded entirely, so much the better.

#### QTR fails to translate into policy – a comprehensive energy policy like IFRs is managed across the whole government.

David Rothkopf, 10-26-2011, is President and CEO of Garten Rothkopf, an international advisory firm specializing in transformational global trends, notably those associated with energy, scholar at the Carnegie Endowment for International Peace, chairs the Carnegie Economic Strategy Roundtable, chairman of the National Strategic Investment Forum Dialogue, advisory board of the U.S. Institute of Peace, the John Hopkins/Bloomberg School of Public Health, the Center for Global Development, and the Center for the Study of the Presidency, Foreign Policy, “The time for a White House-led national energy policy is right now,” <http://rothkopf.foreignpolicy.com/Obama>

One area in which such an effort is not just needed but is effectively several generations overdue is energy policy. To date, the administration's efforts in the area of energy have concentrated on greening the U.S. energy mix and the jobs that green energy might bring. While worthy, the efforts have been bogged down and undercut for a variety of reasons: ranging from the tactical decision to put health care ahead of energy among policy priorities, the inflated and dubious nature of many green job provisions, the success of climate skeptics in impeding the cap-and-trade debate, and the recent kerfuffle over Solyndra (and, by extension, government energy loan programs, alternative energy programs in general, and the whole idea of "picking winners" associated with some elements of green energy policy).The Energy Department even initiated a worthy Quadrennial Technology Review that mimicked the Quadrennial Defense Review, Quadrennial Homeland Security Review, and the Quadrennial Diplomacy and Development Review processes at Defense, Homeland Security, and State respectively. But it was not a broad-gauge energy policy and the United States has been in need of such a policy for decades. There have been abortive efforts in that direction but they have been compromised or stopped short of becoming a regular element of U.S. government policy making. One reason for the problem is that despite the fact that the Department of Energy was created to help ensure the creation of such policies during the 1970s, it is simply incapable of overseeing the development of the kind of comprehensive policy that is needed. Unlike defense policy or diplomacy policy, critical components of a true energy policy are managed not in one agency but across the entirety of the U.S. government. It is a domestic and an international issue, a security and an economic issue, a regulatory, financial, diplomatic, and environmental issue.

#### QTR inclusion of the plan will fail and will be politically contentious – directed funds will have no policy specifics causing patchwork implementation.

Andrew C. Revkin, 9-30-2011, senior fellow at the Pace Academy for Applied Environmental Studies at Pace University, The New York Times, “Short-Termism and Energy Revolutions,” <http://dotearth.blogs.nytimes.com/2011/09/30/short-termism-and-energy-revolutions/>

You can also look at the first Quadrennial Technology Review produced by the Department of Energy (summarized by Climate Progress earlier this week). The review was conducted after the President’s Council of Advisers on Science and Technology wisely recommended regular reviews of this sort as part of its prescription for accelerating change in energy technologies. This excerpt from the new review articulates the tension pretty transparently for a government report: There is a tension between supporting work that industry doesn’t— which biases the department’s portfolio toward the long term—and the urgency of the nation’s energy challenges. The appropriate balance requires the department to focus on accelerating innovation relevant to today’s energy technologies, since such evolutionary advances are more likely to have near- to mid-term impact on the nation’s challenges. We found that too much effort in the department is devoted to research on technologies that are multiple generations away from practical use at the expense of analyses, modeling and simulation, or other highly relevant fundamental engineering research activities that could influence the private sector in the nearer term. Both near-term and long-term effort and investment are needed, of course. This is a question of balance, specifically within the limited amount of money designated for research and development. In finding that balance, I’m not sure it’s possible to overcome the political pressures tugging agencies and officials to stress refinement and deployment of known and maturing technologies (even though that’s where industry and private investors are most focused).On the left, the pressure is for resources to deploy today’s “green” technology. On the right, as illustrated in a Heritage Foundation report on ways to cut President Obama’s budget for the Energy Department, the philosophy seems to be to discourage all government spending on basic inquiry related to energy. According to Heritage, science “in service of a critical national interest that is not being met by the private sector” is fine if that interest is national defense, but not fine if it’s finding secure and sustainable (environmentally and economically) sources of energy. I solicited reactions to the Energy Department review from a variety of technology and innovation analysts. The first to weigh in are Daniel M. Kammen, an energy technology researcher at the University of California, Berkeley, who is on leave working for the World Bank, and Robert D Atkinson, the founder and president of the Information Technology and Innovation Foundation. Here’s Kammen: The idea of a regular review and status report on both energy innovation and deployment spending is a good one. Some of the findings in the QTR review are useful, although little is new. Overall, though, this is a useful exercise, and one that should be a requirement from any major programmatic effort. There are some very curious omissions from the report, such as more detail on the need to both generate and report on jobs created in this sector — a political ‘must’ these days (see, e.g., the “green jobs” review by the Renewable and Appropriate Energy Laboratory at Berkeley) — and straightforward comparisons in the way of ‘report cards’ on how the US is stacking up relative to other key players (e.g. China, Germany…).Perhaps the biggest worry in this report, however, is the missing logic and value of a ‘shift to near term priorities in energy efficiency and in electric vehicles.’ This may be a useful deployment of some resources, but a range of questions are simply never addressed. Among the questions that need firmer answers are:- Following record levels funding made available to the energy industry through the [stimulus package of spending], what are the clearly identified market failures that exist in this area that added funding will solve? Funding is always welcome, but energy efficiency in particular, can be strongly driven by regulation and standards, and because good energy efficiency innovations have such rapid payback times, would regulatory approaches, or state-federal partnerships in regulation and incentives not accomplish a great deal of what can be done in this area? Congressman Holt raises a number of key questions on related issues, while pointing to some very hopeful experiences, notably in the Apollo program, in his 16 September editorial in Science. Nobody will complain if funds come their way, but given the state-by-state laboratories we already have of differing approaches to energy efficiency, the logic of spending in this area remains to be proven (as much as we all rightly love and value and benefit from energy efficiency).- Near-term electric vehicle deployment. A similar story could be told here. As the director of the University of California at Berkeley’s Transportation Sustainability Research Center (http://tsrc.berkeley.edu) I am huge believer in electric vehicles [EVs]. However, the review does not make clear what advances in this area are already supported through [the Advanced Research Projects Agency for Energy], and what areas of near-term research are also not best driven though regulation, such as low-carbon fuel standards, R&D tax credits, ‘feebates’ that transfer funds from those individuals who purchase inefficient vehicles to those who purchase efficient ones. Similar to the story in energy efficiency, we do have already an important set of state-by-state experiments that have been in place for some time, and these warrant an assessment of how much innovation they have driven, and which ones do and do not have an application in scale-up at the federal level. Finally, the electric vehicle landscape is already very rich in terms of plans for deployment by automakers. What are the barriers five-plus years out that the companies see research-versus-deployment and market-expansion support as the most effective way to drive change in the industry? Where will this focus put the U.S. industry relative to China? Finally — and while I in some ways cringe at returning to an old story — the real need in the R&D sector is continuity and matching an increasing portfolio of strategic research with market expansion. My former student and colleague Greg Nemet have written consistently on this:- U.S. energy research and development: Declining investment, increasing need, and the feasibility of expansion- Reversing the Incredible Shrinking Energy R&D Budget How this will be achieved in the current political climate in Washington, D.C., is vital to any ‘near term’ strategy for energy R&D. Here’s Robert Atkinson: If DOE is shifting toward a more short-term focus, this is quite disturbing. It would mean that DOE has given up on addressing the challenge of climate change and instead is just focused on the near term goal of reducing oil imports and modestly reducing the expansion the coal fired power plants. If DOE thinks it is still focused on climate change, do they think they are fighting “American warming”? If so, cutting the growth of our emissions make sense. But its global warming and solving this means supporting the development of scalable, cheap low or no-carbon energy so that every country, rich and poor, will have an economic incentive to transitioning to cheap energy. Increasing building efficiency, modernizing the electric grid, alternative hydrocarbon fuels, and increasing vehicle efficiency do virtually nothing to meet this goal. They are “American warming” solutions. This is also troubling because (as you point out) who else is going to invest in the long-term, more fundamental, high risk, breakthrough research than the U.S. government. It certainly won’t be VCs. And it won’t be the Chinese who are principally interested in cutting their energy imports and exporting current generation clean energy, not developing technology to save the planet. Of course all the folks out there who have been pushing the mistaken view that we have all the clean technologies we need will hail this as the right direction. But it’s doing what the rest of the market has been doing in recent years – shifting from high risk, long-term research to short-term, low risk. If the federal government is doing this it is troubling to say the least.

#### Regulatory predictability is critical to investment in nuclear power.

Angelina Howard, 6-18-2007, Nuclear Energy Institute (NEI), “PANEL II OF A COUNCIL ON FOREIGN RELATIONS SYMPOSIUM; SUBJECT: CAN NUCLEAR ENERGY GO BEYOND THE ENERGY POLICY ACT OF 2005?,” Lexis Nexis

MS. HOWARD: Well, the incentives in the Energy Policy Act --- (laughter) -- well, the incentives in the Energy Policy Act, I think the thinking on that has evolved over -- since 2005, like many other things. And as we -- we saw a significant number of companies make the decisions to go forward with the combined construction and operant rating license after the act was passed and they -- they saw the production tax credits being included and some level of stand-by support, because the real uncertainty for nuclear was not in the technology; it was in the regulatory aspect, and would the new licensing process really work like it was intended to work? And so -- and, you know, there were reflections and memories of(Shoreham ?) and others that took so long or else were -- were never, you know, went into operation. So those were very important at the time, in 2005, as well as the loan guarantee.

#### Loan guarantees are not included in the QTR – inclusion of the plan will not steer spending – government scrutiny.

Tiffany Kaiser, 9-30-2011, Daily Tech, “DOE Review: EVs, Grid Modernization to be Focus of 2013 Spending,” <http://www.dailytech.com/DOE+Review+EVs+Grid+Modernization+to+be+Focus+of+2013+Spending/article22888.htm>

The Quadrennial Technology Review will be used to steer spending for fiscal 2013, and a budget proposal will be released in 2012 The U.S. Department of Energy (DOE) has released a new "Quadrennial Technology Review," which reveals the government's alternative energy plans for fiscal 2013. The Quadrennial Technology Review pushes alternative energy technology that can be commercialized in a 10-year period, and according to its first report, the DOE wants to focus more of its $3 billion research budget on the adoption of electric vehicles and the modernization of the power grid. The review noted that the DOE "underinvested" in transportation in fiscal 2011, where only 26 percent of spending was dedicated to this particular area. Nine percent went to electric vehicles in fiscal 2011, 4 percent went to adding fuel efficiency to vehicles, and the rest went to alternative fuels. "Currently, DOE focuses too much effort on researching technologies that are multiple generations away from practical use," said The Quadrennial Technology Review. The DOE now plans to concentrate on advanced biofuels as well as "technology that does not require new fuel-station infrastructure." Much of fiscal 2011's budget was devoted to clean electricity at 51 percent of spending, but in addition to transportation, the DOE will put aside more funding in the future for the modernization of the power grid, carbon capture/storage research, building and factory efficiency and technology that can be operated using less water like wind and solar photovoltaic. The DOE is currently facing scrutiny for a government loan to solar company Solyndra, which recently filed for bankruptcy. The government reportedly knew the company was destined to fail, according to emails the FBI found when raiding Solyndra in early September. The Quadrennial Technology Review does not address loan guarantees to private-sector companies, which was a $180 million program in fiscal 2011.

#### Inclusion of the plan won’t create effective an effective energy infrastructure – no specification of funding or policy instruments.

Alex Trembath, 9-27-2011, Policy Fellow at the Breakthrough Institute, Energetics, “DOE Releases First Quadrennial Technology Review,” <http://atrembath.blogspot.com/2011_09_01_archive.html>

The United States energy economy needs more than basic research, however. Fortunately, the QTR does not omit strategies for commercialization, maturation, and deployment of innovative clean energy technologies. As the report clarifies in its section on international competitiveness, "US economic competitiveness is a growing challenge in a world made even more competitive by developing countries striving to create sustainable economic growth and establish themselves as technology leaders." As such, the report recommends advanced technology policy to address deployment, innovation, and manufacturing. These areas are much in line with the competitiveness strategy outlined in Breakthrough's reports "Rising Tigers, Sleeping Giant" and "Post-Partisan Power," which have shown that the US needs a comprehensive and aggressive competitiveness policy in the face of increasing technology investment from China, Korea, Japan and other nations.But there are also important elements missing from the QTR. While the report effectively covers the broad energy imperatives facing the United States, specific policies and funding mechanisms are glossed over. A multi-year technology policy from DOE will require flexibility, but some policy instruments will prove essential if the nation is to achieve any of the goals laid out in the report: Increasing federal funding for energy technology R&D, as recommended by the President's Council of Advisors on Science and Technology last fall; creating a Clean Energy Deployment Administration (CEDA) to build public-private partnerships and bridge technologies from demonstration to full maturation; and reformed subsidy policies that prioritize innovation over deployment. Alternative and additional policy instruments are available, and including them in these discussions is important for building an ambitious and fruitful policy dialogue.

### 2AC agenda politics DA

#### No bipartisanship

Bendigo Advertiser 1/3 (“The US Congress has finally backed a deal,” lexis)

WASHINGTON The US Congress has finally backed a deal to avert a "fiscal cliff" of tax hikes and massive spending cuts that had threatened to unleash economic calamity.The deal increases taxes on the rich and puts off$US109 billion ($A105 billion) budget cuts for two months, lifting the clouds of immediate crisis.The deal's fate had hung in the balance for hours as House conservatives sought to add spending reductions to a version passed by the Senate in the early hours of 2013.In the end, the House voted 257 votes to 167 to pass the original bill after a fiercely contested and unusual session on New Year's Day.President Barack Obama, who campaigned for re-election on a platform of building a more equitable economic system, declared the deal was a promise kept, despite falling short of earlier hopes for a grand deficit bargain."I will sign a law that raises taxes on the wealthiest 2 per cent of Americans while preventing a middle-class tax hike that could have sent the economy back into recession," Obama said after the vote."The deficit needs to be reduced in a way that's balanced. Everyone pays their fair share. Everyone does their part," Obama said, before heading to Air Force One to resume his interrupted annual holiday in his native Hawaii.Had the deal splintered, all Americans would have been hit by tax increases and the spending cuts would have kicked in across the government, in a combined $US500 billion shock that could have rocked the fragile recovery.The House vote took place after a conservative rebellion fizzled when it became clear there were not sufficient votes in the restive Republican caucus to send an amended version of the bill cuts back to the Senate.Republican party leaders ultimately feared they would carry the can if the deal collapsed, leaving Americans enraged by higher taxes and the prospect that an economy slowly recovering from crisis could be plunged back into recession.The political feuding which spanned the Christmas and New Year holidays reflected the near impossibility in forging compromise in Washington, where power is divided between a Democratic president and the Republican House. It was also a signal that Obama, despite a thumping re-election win in November, may find it tough to achieve second-term legislative goals that include immigration reform, clean energy legislation and gun control. The truce in dysfunctional Washington is likely to be brief, given the fight that will ensue over the spending cuts that now loom at the end of February.

#### Gridlock

Free Exchange 1/1 (“Navigating the fiscal badlands,” lexis)

Set that aside for now. Take as given that fiscal matters are first on the agenda, and the goal should therefore be to try to make as much of the opportunity to improve fiscal affairs as possible. The second thing to note is that despite Washington's willingness to experiment with schemes to try and force it to act, meaningful action is extraordinarily difficult to achieve. Washington has tried business as usual. It has tried bipartisan fiscal commissions. It has tried automatic sequesters and routinised brinksmanship. Nothing works; repeated crises seem particularly bad at producing the kind of thoughtful reforms true hawks desire most. In 2008, Barack Obama won an historic landslide electoral victory which briefly gave him nominal control of both houses of Congress. And while the next two years were remarkably productive by recent standards, the president nonetheless failed to make headway on major administrative goals: health-cost-control measures like the public option, an energy bill including a carbon price, an infrastructure package, and immigration reform among them. Gridlock is the rule, and not just any gridlock: a nasty, vindictive, and dangerous inability to act on important issues.

#### Sandy thumps it.

O’Keefe 1/2 (Ed O’Keefe, “Obama calls for immediate Sandy aid vote,” Washington Post, http://www.washingtonpost.com/blogs/post-politics/wp/2013/01/02/obama-calls-for-immediate-sandy-aid-vote/)

President Obama today called on the House to immediately pass a plan to provide federal aid to deal with damage caused by Hurricane Sandy, while House Speaker John A. Boehner (R-Ohio) announced a meeting on the issue this afternoon with lawmakers from New Jersey and New York.The Senate passed a $60 billion package last week that provides funding for the two states to begin rebuilding and mitigation projects. The House’s failure to pass a measure by Thursday at noon would mean that the process would need to begin again from scratch. ““The Speaker is committed to getting this bill passed this month,” Boehner spokesman Michael Steel said, in confirming the 3 p.m. meeting with concerned lawmakers.Obama weighed in on the controversy in a White House statement issued shortly after the president returned to his Hawaii vacation.“When tragedy strikes, Americans come together to support those in need,” Obama said. “I urge Republicans in the House of Representatives to do the same, bring this important request to a vote today, and pass it without delay for our fellow Americans.”Boehner has told his colleagues that providing storm aid is his first priority for the next Congress, which begins Thursday afternoon. Aides noted that FEMA Administrator Craig Fugate recently told a House panel that his agency should be able to continue providing financial aid to affected regions until the spring, when it would then need to request more money from lawmakers.Lawmakers from both parties reacted angrily to Tuesday night’s surprise decision to not hold a vote on storm aid. New Jersey Gov. Chris Christie and New York Gov. Andrew Cuomo came together to blast the delay, calling it “inexcusable.”

#### The plan would be a political motivator for nuclear power development – solves the waste issue.

Barry Brook & Tom Blees, 10-23-2012, a leading environmental scientist, holding the Sir Hubert Wilkins Chair of Climate Change at the School of Earth and Environmental Sciences, and is also Director of Climate Science at the University of Adelaide’s Environment Institute, published three books, over 200 refereed scientific papers, is a highly cited researcher, received a number of distinguished awards for his research excellence including the Australian Academy of Science Fenner Medal, is an International Award Committee member for the Global Energy Prize, Australian Research Council Future Fellow, ISI Researcher, Ph.D., Macquarie University in Environmental Engineering, Science Council for Global Initiatives, Edgeworth David Medal Royal Society of NSW, Cosmos Bright Sparks Award, Tom Blees is the author of Prescription for the Planet, the president of the Science Council for Global Initiatives, member of the selection committee for the Global Energy Prize, BraveNewClimate, “The Case for Near-term Commercial Demonstration of the Integral Fast Reactor,” <http://bravenewclimate.com/2012/10/23/the-case-for-near-term-commercial-demonstration-of-the-integral-fast-reactor/>

Light-water reactors (LWR) of any stripe, however, produce only a tiny fraction of the potential energy in uranium, less than 1%. Fast reactors, in contrast, unlock nearly all of it. The IFR, with its metal-fuel system and pyroprocessing, is able to utilize the actinides to such an extent as to essentially solve the waste problem by reducing the radiological toxicity of the waste products from hundreds of thousands of years to a mere few hundred years. Even if the “million-year problem” of LWR spent fuel is more a political than a technical challenge (given the small volume of the waste stream), nevertheless the issue of public perception of that issue is the one that guides nuclear policy in many countries [14]. As such, the transition to fast reactors and a closed nuclear fuel cycle is both a technical advancement and a political enabler for nuclear power of all kinds.

#### Fast reactors developed and popular.

Tom Blees, 5-31-2011, is the author of Prescription for the Planet, the president of the Science Council for Global Initiatives, member of the selection committee for the Global Energy Prize, Idaho Samizdat: Nuke Notes, “Critique of MIT Nuclear Fuel Cycle Report,” <http://djysrv.blogspot.com/2011/05/critique-of-mit-nuclear-fuel-cycle.html>

The public views adequate nuclear waste management as a critical linchpin in further development of nuclear energy. The technical community, therefore, needs to provide a practical approach to deal with the waste issue. The Fukushima accidents call attention to the importance of managing spent fuel safely. It appears the best technical approach is extracting the actinides from spent fuel, which reduces the effective lifetime of nuclear wastes from ~300,000 years to ~300 years. Extracting actinides (and using them to generate power) is by far the best technical approach to dealing with nuclear wastes. The MIT Study fails to mention this important possibility. If actinide extraction is chosen as a pathway for waste “disposal,” the recovered actinides still must be transmuted to fissile material or fissioned directly. This can be done only in fast reactors. Actinides can be burned in fast reactors, generating energy and at the same time creating more fissile material for the future. A key advantage of fast reactors is that they can be utilized as “burners” when excess plutonium inventories exist, and then converted to “breeders” whenever needed. Only fast reactors can satisfy the waste-disposal mission simply and effectively while extending utilization of the uranium resources by more than two orders of magnitude. Thermal reactors—such as LWRs and high-temperature gas-cooled reactors—utilize less than 1% of uranium resources, even with recycling of plutonium and some of the uranium. Thermal-spectrum reactors, even optimized, can extend the resource utilization only marginally, and they cannot burn actinides effectively. Actinide recycling also requires an efficient processing technology, with improved economics and nonproliferation characteristics. The pyroprocessing technique based on electrorefining, developed in the IFR program, has the potential to recover the actinides from LWR spent fuel as well as to fully recycle fuel in fast reactors. The fundamentals of pyroprocessing have already been demonstrated – this is not new science. The technology is now ready for pilot-scale demonstration, and it should be given the highest priority. We do not need decades of R&D to pursue all esoteric ideas. We already have in our hands on the most advanced technology, technology that no other countries possess. The MIT Study also talks about the inter-generational equity considerations. We believe that our generation should demonstrate the technologies that will solve the energy supply and waste management problems, rather than proposing a century-long interim storage of the spent nuclear fuel.

#### Advocates of nuclear energy swamp unpopularity – strong media campaign.

Sharon Squassoni, November 2009, is a senior associate at the Carnegie Endowment for International Peace in the nonprolifera-tion program. Prior to joining Carnegie, she held various positions in the US government, including at the Congressional research Service, the Arms Control and Disarmament Agency, and the US State Department, is a frequent contributor to journals, magazines and books on nuclear proliferation and defense, The Centre for International Governance Innovation, No. 7, “The US Nuclear Industry: Current Status and Prospects under the Obama Administration,” p. 7-8, <http://www.carnegieendowment.org/files/Nuclear_Energy_7_0.pdf>

Advocates of nuclear energy have embarked on strong marketing campaigns. For example, the Nuclear Energy Institute (NEI) has run advertisements describing nuclear energy as “clean air” energy. The Clean and Safe Energy Todd Whitman and former Greenpeace activist Patrick Moore, has been funded by the nuclear industry. One industry slogan is “Know new nukes.” The slogan appears over a field of yellow soybean flowers. “Clean” energy appears to be a euphemism for renewables plus nuclear power, which is why anti-nuclear advocates were heart-ened by President Obama’s February address to Congress in which he spoke only of renewable energy, rather than clean energy (Wasserman, 2009). Opponents of nuclear energy generally have less money to spend on media campaigns, and their message is less pithy. They stress that nuclear power is not the solution to climate change and that it is dangerous, polluting, unsafe, and expensive. Only a few planned nuclear plants are in states that do not already have power plants, such as Utah, Missouri and Idaho. Most of the expected plants will be constructed on existing reactor sites, which make them more acceptable to the local public.

#### Recent polls say benefits trump Fukushima.

Tim Gitzel, September 2012, senior vice-president and chief operating officer and was appointed president, President and CEO of Cameco, extensive experience in Canadian and international uranium mining activities, executive vice-president, mining business unit for AREVA, College of Law at the University of Saskatchewan, serves as vice-chair on both the Mining Association of Canada and the Canadian Nuclear Association boards of directors, past president of the Saskatchewan Mining Association, and has served on the boards of Sask Energy, co-chair of the Royal Care campaign, a recipient of the Centennial Medal, World Nuclear Association (WNA), “US Nuclear Power Policy,” <http://www.world-nuclear.org/info/inf41_US_nuclear_power_policy.html>

Public opinion regarding nuclear power has generally been fairly positive, and has grown more so as people have had to think about security of energy supplies. Different polls show continuing increase in public opinion favorable to nuclear power in the USA. More than three times as many strongly support nuclear energy than strongly oppose it. Two-thirds of self-described environmentalists favor it. A May 2008 survey (N=2925) by Zogby International showed 67% of Americans favored building new nuclear power plants, with 46% registering strong support; 23% were opposed10. Asked which kind of power plant they would prefer if it were sited in their community, 43% said nuclear, 26% gas, 8% coal. Men (60%) were more than twice as likely as women (28%) to be supportive of a nuclear power plant. A March 2010 Bisconti-GfK Roper survey showed that strong public support for nuclear energy was being sustained, with 74% in favor of it 11. In particular, 87% think nuclear will be important in meeting electricity needs in the years ahead, 87% support license renewal for nuclear plants, 84% believe utilities should prepare to build more nuclear plants, 72% supported an active federal role in encouraging investment in "energy technology that reduces greenhouse gases", 82% agree that US nuclear plants are safe and secure, 77% would support adding a new reactor at the nearest nuclear plant, and 70% say that USA should definitely build more plants in the future. Only 10% of people said they strongly opposed the use of nuclear energy. In relation to recycling used nuclear fuel, 79% supported this (contra past US policy), and the figure rose to 85% if "a panel of independent experts" recommended it. Although 59% were confident that used reactor fuel could be stored safely at nuclear power plant sites, 81% expressed a strong desire for the federal government to move used nuclear fuel to centralized, secure storage facilities away from the plant sites until a permanent disposal facility is ready. Half of those surveyed considered themselves to be environmentalists. A February 2011 Bisconti-GfK Roper survey showed similar figures, and that 89% of Americans agree that all low-carbon energy sources – including nuclear, hydro and renewable energy – should be taken advantage of to generate electricity while limiting greenhouse gas emissions. Just 10% disagreed. Also some 84% of respondents said that they associate nuclear energy "a lot" or "a little" with reliable electricity; 79% associate nuclear energy with affordable electricity; 79% associate nuclear energy with economic growth and job creation; and 77% associate nuclear energy and clean air. A more general March 2010 Gallup poll (N=1014) on energy showed 62% in favor of using nuclear power, including 28% strongly so, and 33% against, the most favorable figures since Gallup began polling the question in 1994. However, only 51% of Democrat voters were in favour12. An early March 2011 Gallup poll just before the Fukushima accident showed 57% in favor and 38% against, and in March 2012 (N=1024) still 57% in favor with 40% against (men: 72%-27%, women 42%-51%). Regarding plant safety, the polls showed consistent 56-58% positive views over 2009-12, but men-women split similar. A survey conducted in September 2011 by Bisconti Research Inc. with GfK Roper showed that although support for nuclear power decreased following the Fukushima accident and compared with a year earlier (a survey carried out in March 2010 by Bisconti Research found 74% of Americans favored nuclear power), 62% of the 1000 adults surveyed in the latest poll were supportive of utilizing nuclear power while 35% expressed opposition. The survey found that 82% of Americans believed that lessons had been learned from Fukushima and 67% of respondents considered US nuclear power plants safe (the same level as reported one month before the nuclear accident in Japan occurred). Also 85% of said that an extension of commercial operation should be granted to those plants that comply with federal safety standards, and 59% believed more nuclear power plants should definitely be built in the future, while 75% contend that “Electric utilities should prepare now so that new nuclear power plants could be built if needed in the next decade.” Finally, further expansion of the site of the nearest already operating nuclear power plant is supported by 67% and opposed by 28%. By February 2012 support had increased slightly to 64% supported using nuclear power, while 33% opposed it. Some 81% of respondents believed that nuclear energy will be important in meeting the USA's future electricity needs (compared with 80% in September), and 82% thought the USA should "take advantage of all low-carbon energy sources, including nuclear, hydro and renewable energy." Significantly, 74% believed that nuclear power plants operating in the USA are safe, up from 67% in both 2011 surveys. However, a Harris survey in February 2012 (N=2056) showed that only 40% of US adults believed that the benefits of nuclear outweigh its risks, while 41% thought the reverse. A similar poll conducted in 2011 before the Fukushima accident occurred, indicated that 42% thought that the benefits outweighed the risks, while 37% believed the opposite. In a 2009 poll, 44% thought the benefits outweighed the benefits, while 34% thought they did not. The southern states had the highest percentage of people believing the benefits outweigh the risks (at 43%), compared with 33% in the East and 41% in the Midwest and West. Some 42% of Americans thought that the benefits of using coal outweighed the risks (up from 38% positive in 2011), while 40% said the risks outweighed the benefits.

#### Loan guarantees specifically for nuclear is popular with congress – lower tax liability.

Sharon Squassoni, November 2009, is a senior associate at the Carnegie Endowment for International Peace in the nonprolifera-tion program. Prior to joining Carnegie, she held various positions in the US government, including at the Congressional research Service, the Arms Control and Disarmament Agency, and the US State Department, is a frequent contributor to journals, magazines and books on nuclear proliferation and defense, The Centre for International Governance Innovation, No. 7, “The US Nuclear Industry: Current Status and Prospects under the Obama Administration,” p. 8, <http://www.carnegieendowment.org/files/Nuclear_Energy_7_0.pdf>

The single most important spur to build new reactors in the United States is loan guarantees. In fact, industry sources indicate they are so critical that new plants may not be built without them. These guarantees are attractive to the US Congress because they offer a way to influence markets and incentivize specific projects, and because they are “scored” as a lower liability for the taxpayer than the actual amount. Thus, a potential US$50 billion in loan guarantees could be scored by the Congressional Budget Office as only costing the taxpayer US$500 million. As originally proposed in the Energy Policy Act (EPACT) of 2005, loan guarantees would only have applied to nuclear power, but this was broadened to apply to a wide range of “innovative energy technologies,” including renewable energy technologies, which further extends their attractiveness within Congress

#### Political capital theory not true.

Lawrence Jacobs & Desmond King, 2010, University of Minnesota, Nuffield College, “Varieties of Obamaism: Structure, Agency, and the Obama Presidency,” Perspectives on Politics

But personality is not a solid foundation for a persuasive explanation of presidential impact and the shortfalls or accomplishments of Obama's presidency. Modern presidents have brought divergent individual traits to their jobs and yet they have routinely failed to enact much of their agendas. Preeminent policy goals of Bill Clinton (health reform) and George W. Bush (Social Security privatization) met the same fate, though these presidents' personalities vary widely. And presidents like Jimmy Carter—whose personality traits have been criticized as ill-suited for effective leadership—enjoyed comparable or stronger success in Congress than presidents lauded for their personal knack for leadership—from Lyndon Johnson to Ronald Reagan.7 Indeed, a personalistic account provides little leverage for explaining the disparities in Obama's record—for example why he succeeded legislatively in restructuring health care and higher education, failed in other areas, and often accommodated stakeholders. Decades of rigorous research find that impersonal, structural forces offer the most compelling explanations for presidential impact.8 Quantitative research that compares legislative success and presidential personality finds no overall relationship.9 In his magisterial qualitative and historical study, Stephen Skowronek reveals that institutional dynamics and ideological commitments structure presidential choice and success in ways that trump the personal predilections of individual presidents.10 Findings point to the predominant influence on presidential legislative success of the ideological and partisan composition of Congress, entrenched interests, identities, and institutional design, and a constitutional order that invites multiple and competing lines of authority. The widespread presumption, then, that Obama's personal traits or leadership style account for the obstacles to his policy proposals is called into question by a generation of scholarship on the presidency. Indeed, the presumption is not simply problematic analytically, but practically as well. For the misdiagnosis of the source of presidential weakness may, paradoxically, induce failure by distracting the White House from strategies and tactics where presidents can make a difference. Following a meeting with Obama shortly after Brown's win, one Democratic senator lamented the White House's delusion that a presidential sales pitch will pass health reform—“Just declaring that he's still for it doesn't mean that it comes off life support.”11 Although Obama's re-engagement after the Brown victory did contribute to restarting reform, the senator's comment points to the importance of ideological and partisan coalitions in Congress, organizational combat, institutional roadblocks, and anticipated voter reactions. Presidential sales pitches go only so far.

#### Winners win.

David M. Green, 6-11-2010, professor of political science at Hofstra University, “The Do-Nothing 44th President”

Moreover, there is a continuously evolving and reciprocal relationship between presidential boldness and achievement. In the same way that nothing breeds success like success, nothing sets the president up for achieving his or her next goal better than succeeding dramatically on the last go around. This is absolutely a matter of perception, and you can see it best in the way that Congress and especially the Washington press corps fawn over bold and intimidating presidents like Reagan and George W. Bush. The political teams surrounding these presidents understood the psychology of power all too well. They knew that by simultaneously creating a steamroller effect and feigning a clubby atmosphere for Congress and the press, they could leave such hapless hangers-on with only one remaining way to pretend to preserve their dignities. By jumping on board the freight train, they could be given the illusion of being next to power, of being part of the winning team. And so, with virtually the sole exception of the now retired Helen Thomas, this is precisely what they did.

### 2AC neoliberalism bad

#### Utilitarianism is the only framework of evaluation and alternatives are inevitability self-contradictory.

Joseph S. Nye, 1986, Phd Political Science Harvard. University; Served as Assistant Secretary of Defense for International Security Affairs; “Nuclear Ethics,” pg. 18-19

The significance and the limits of the two broad traditions can be captured by contemplating a hypothetical case.34 Imagine that you are visiting a Central American country and you happen upon a village square where an army captain is about to order his men to shoot two peasants lined up against a wall. When you ask the reason, you are told someone in this village shot at the captain's men last night. When you object to the killing of possibly innocent people, you are told that civil wars do not permit moral niceties. Just to prove the point that we all have dirty hands in such situations, the captain hands you a rifle and tells you that if you will shoot one peasant, he will free the other. Otherwise both die. He warns you not to try any tricks because his men have their guns trained on you. Will you shoot one person with the consequences of saving one, or will you allow both to die but preserve your moral integrity by refusing to play his dirty game? The point of the story is to show the value and limits of both traditions. Integrity is clearly an important value, and many of us would refuse to shoot. But at what point does the principle of not taking an innocent life collapse before the consequentialist burden? Would it matter if there were twenty or 1,000 peasants to be saved? What if killing or torturing one innocent person could save a city of 10 million persons from a terrorists' nuclear device? At some point does not integrity become the ultimate egoism of fastidious self-righteousness in which the purity of the self is more important than the lives of countless others? Is it not better to follow a consequentialist approach, admit remorse or regret over the immoral means, but justify the action by the consequences? Do absolutist approaches to integrity become self-contradictory in a world of nuclear weapons? "Do what is right though the world should perish" was a difficult principle even when Kant expounded it in the eighteenth century, and there is some evidence that he did not mean it to be taken literally even then. Now that it may be literally possible in the nuclear age, it seems more than ever to be self-contradictory.35 Absolutist ethics bear a heavier burden of proof in the nuclear age than ever before.

#### No collapse - neoliberalism is self-correcting in terms of energy – responsibility and regulations limits plundering.

Jeffrey Hollender & Bill Breen, 2010, Founder of the American Sustainable Business Council, a progressive alternative to the Chamber of Commerce, Editorial Director of the Fast Company, The Responsibility Revolution: How the Next Generation of Businesses will Win, p. xix

The responsibility revolution is about more than cutting carbon, reducing energy use, monitoring factories, or donating to charities. It’s about reimagining companies from within: innovating new ways of working, instilling a new logic of competing, identifying new possibilities for leading, and redefining the very purpose of business. Consequently, we’ve drawn on the best thinking not only from the corporate responsibility arena, but also from the realms of strategy, leadership, and management. Others, to whom we are indebted, have developed some of this book’s core principles. (We will acknowledge them as we present their ideas.) Our intent is to show how an emerging breed of business revolutionaries is turning theory into practice and building organizations that grow revenue by contributing to the greater good. This is a book about change, but it seeks to help companies change on the inside—change their priorities, the way they organize, how they compete, and the way they interact with the world. We fully concede that many companies, perhaps even most companies, won’t willingly alter their behavior. But they will change nonetheless, and it won’t be because they’ve suddenly seen the light. It will be because massive numbers of consumers, a spreading swarm of competitors, values-driven employees, and even that laggard indicator, the federal government, makes them change. Change is under way. The responsibility revolution spreads. Perhaps you’ve seen the insurrection begin to roil your industry, and you’re determined to get out in front of it. If so, welcome to the cause.

#### Prefer our evidence – they conflate bad human decision making with neoliberalism.

Jay Richards, 2009, PhD with honors in Philosophy and Theology from Princeton, Money, Greed, and God: Why Capitalism Is the Solution and Not the Problem, p. 164

Too many critics confuse the free market with the bad choices free people make. Rod Dreher, for instance, chastises fellow conservatives, saying, “We look down on the liberal libertine who asserts the moral primacy of sexual free choice, but some- how miss that the free market we so uncritically accepts exalts personal fulfillment through individual choice as the summit of human existence.”9 Perhaps they miss that fact because it’s not a fact. The free market doesn’t exalt anything. Human beings exalt and denounce things like sexual free choice. Human beings might exalt “individual choice as the summit of human exis- tence,” but a system of free exchange doesn’t do that. In a free economy, sinful entrepreneurs may entice customers with pornography, and sinful customers may buy it. But having free choices in the market doesn’t dictate what people will choose. That’s the whole point of freedom: it always involves costs—that is, trade-offs. To choose one path is to foreclose the opposite path. Even God accepted trade-offs. He chose to create a world with free beings, one that allowed those beings to turn against him. And they did. But their freedom didn’t cause them to choose the bad. It just allowed them to. So, too, with a free economy. Critics notice all the vice present in free societies. But it is only in free societies that we can fully exercise our virtue. Charity is charity, for instance, only if it’s not coerced. Besides, there’s no evidence that state control of the economy makes a citizenry more virtuous. Every social ill in modern- day America, from widespread abortion and alcoholism to family breakdown, was much worse in statist and communist countries.

#### The move to IFR is necessary to solve the root causes of exploitation - ends want and war – great divide is based on mis-understanding.

David Walters, 6-14-2011, worked as a union power plant operator for 24 years in California, currently a member of Socialist Organizer, US Section of the Fourth International, Permanent Revolution, “FUKUSHIMA, NUCLEAR ENERGY AND A SOCIALIST PROGRAM,” <http://climateandcapitalism.com/2011/06/14/socialist-arguments-for-nuclear-power/>

We have serious issues facing our class, our planet. From economic development of the productive forces in the oppressed neo-colonial world to raise their standard of living, to the phasing out of climate-changing fossil fuel use, we are going to require more, not, less energy, specifically electricity. Most on the left are at best confused by this and at worse, seek a return to some sort of pastoral green, “democratic” pre-industrial utopia. As Marxists we should reject this “we use too much” scenario that has infected the left across the world. We certainly should use energy more wisely, more efficiently and with a sense of conservation. This can happen only when the profit motive is removed and scarcity in basic necessities is a thing of the past. No one should object to this. But these things do not produce one watt of power, especially if you consider what we have to do. These include: Switching off from fossil fuels completely (they should be used only as chemical feedstock, i.e. as the basic material to make chemicals and lubricants) Increasing the development of the productive forces especially in the developing world. This means developing whole electrical grids, new, primarily non-fossil fuel, forms of generation and the infrastructure to support this, for the billions without any electrical usage at all Freeing up the productive forces to eliminate all forms of want as the material basis for a true socialist mode of production. Using nuclear energy is both the cheapest and safest way to do this. George Monbiot in his latest entry on his blog\* challenges the renewable energy advocates with some hard questions. No socialist by any means, Monbiot has brought attention to the issue of energy and what it will take to reduce carbon emissions. He notes, writing on Britain, among other things: “1. Reducing greenhouse gas emissions means increasing electricity production. It is hard to see a way around this. Because low-carbon electricity is the best means of replacing the fossil fuels used for heating and transport, electricity generation will rise, even if we manage to engineer a massive reduction in overall energy consumption. The Zero Carbon Britain report published by the Centre for Alternative Technology envisages a 55% cut in overall energy demand by 2030 – and a near-doubling of electricity production.” How is this electricity going to be produced in a sustained and regular way? We know wind generated power is erratic and variable, a problem only partially solvable by new continental wide electricity grids. We know other forms of low carbon power – tidal, coal with carbon capture and storage, large scale solar – are experimental and even if viable are likely to turn out more expensive than nuclear. We get no answer from so-called socialist Greens on this problem, at least not yet. They simply have not considered the real issues. Monbiot goes on: “3. The only viable low-carbon alternative we have at the moment is nuclear power. This has the advantage of being confined to compact industrial sites, rather than sprawling over the countryside, and of requiring fewer new grid connections (especially if new plants are built next to the old ones). It has the following disadvantages: “a. The current generation of power stations require uranium mining, which destroys habitats and pollutes land and water. Though its global impacts are much smaller than the global impacts of coal, the damage it causes cannot be overlooked. “b. The waste it produces must be stored for long enough to be rendered safe. It is not technically difficult to do this, with vitrification, encasement and deep burial, but governments keep delaying their decisions as a result of public opposition. “Both these issues (as well as concerns about proliferation and security) could be addressed through the replacement of conventional nuclear power with thorium or integral fast reactors but, partly as a result of public resistance to atomic energy, neither technology has yet been developed. (I’ll explore the potential of both approaches in a later column).” I want to address this last point. Monbiot is slowly seeing his way to something that has taken a long time: that nuclear energy is really the only way to go, even in light of the “big three” accidents: Three Mile Island, Chernobyl and Fukushima. These new technologies he mentions, the Liquid Fluoride Thorium Reactor (which doesn’t require any uranium mining, enrichment or long term disposal of spent fuel) and the Integral Fast Reactor, provide the material basis for eliminating all fossil fuels and for a future society without want, wars or exploitation that is a socialist one. Where Monbiot and I come together is not, obviously, the socialist requirement to get rid of capitalism. It is over the need for more energy, not less. It is over the realization that renewables cannot do it except in the most utopian of fantasies. The real “Great Divide” is between those among the Greens who run on fear and fantasy, and those socialists that have a materialist understanding of the need to move toward a society based not just on current human needs alone, but on expanding humanity’s ability to power such a society. Only nuclear can do this.

#### Their impact cards don’t assume the world of the aff – IFRs transform economic and geopolitical paradigms – eliminating gross inequality.

Tom Blees, 2008, the president of the Science Council for Global Initiatives, member of the selection committee for the Global Energy Prize, Prescription for the Planet, p. 335-6

When the material comforts of existence are seen as being limited, then consumption beyond one’s needs does indeed carry an undeniable ethical weight. As Ralph Waldo Emerson put it lo those many years ago, “Superfluity is theft.” Even when the energy and raw materials involved are plentiful, there remains the often conveniently ignored issue of the conditions under which goods have been produced, be they agricultural or manufactured commodities. It is disingenuous in the extreme to point to the abolition of slavery as evidence of the social evolution of mankind when millions of desperately poor people labor under conditions that can still honestly be considered as slavery. The fact that we don’t335have slaves in our home is hardly confirmation of our benevolence. The moral questions of economic fairness will not be settled by availing ourselves of the technologies promoted in this book, but should command our attention and concern indefinitely. My point is not to justify exploitation of either human or material resources, but to point out that a transformation of energy and raw material technologies as proposed herein will present a radically transformed palette upon which to paint the picture of humanity’s future. Our new course will remove the limitations by which finite natural resources and energy supplies have circumscribed our existence. Unlimited energy coupled with virtually complete recycling of materials and the production of consumer goods from plentiful or renewable resources will finally allow humanity to be unshackled from the zero-sum mentality. Raising the living standards of our billions of disadvantaged brethren will be seen as a positive development by even the most voracious consumer societies, rather than perceived with foreboding as somehow detrimental to their way of life. Admittedly this will take some getting used to. The revolution will be not just technological and political, but psychological. The passion with which consumerism is pursued is frequently grotesque in its extremes, yet the revulsion it engenders may not be so strong when it can be viewed more as shallow foolishness than callous selfishness. Much of what is considered virtuous today will be seen more as simply a matter of personal preference in a world where creature comforts are no longer in limited supply. The concept of self-denial will have to be looked at anew. Rather than concentrating on husbanding limited resources, our attention can be turned to welcoming the rest of our fellow humans into a new reality where creature comforts are the universal norm. Abundant energy and wise336use of basic resources are the keys. Clearly the technologies are already within our grasp. This won’t happen overnight, but it would be foolish to dally. The conversion of primary power systems to fast reactors will necessarily be a gradual process, which in the best-case scenario will take a few decades. Conversion of the vehicle industry to boron, however, is another story. It is entirely conceivable that boron fueled vehicles could be driving on our highways within five years. Ironically the first boron recycling plants that would be a corollary of the conversion may end up operating with natural gas for their heat requirements, since the IFR program simply won’t be able to be implemented as quickly as the boron system, and it’s questionable whether existing electrical generation systems would be able to handle the increased demand of electrically powered boron recycling plants. This would, however, be only an interim fix, and would allow the vehicle fleets to get off to a quick start. If the plasma conversion method proves feasible, though, then garbage alone will provide all the energy we need for boron recycling. Long before the conversion to boron is complete, the demand for oil will have dropped to the point where the USA, one of the world’s thirstiest countries when it comes to oil, will be able to rely solely on North American supplies, resulting in geopolitical and economic realignments that will be a harbinger of things to come. Even though oil prices will surely plummet worldwide, and while the temporary price of boron recycling may well be higher than it will be once IFRs are able to provide all the power necessary to support the system, the price disparity will easily be great enough and the environmental benefits so overwhelming that boron vehicles will surely carry the day even in the near term.

#### This means the plan is a pre-requisite - criticizing the current economic system is insufficient without a specific and workable alternative – a moral stand is not enough to start a revolution.

Lawrence Grossburg, 1992, Professor of COMS at UNC, Communication Studies Professor at UNC, We Gotta Get Out of This Place, p. 388-89

If it is capitalism that is at stake, our moral opposition to it has to be tempered by the realities of the world and the possibilities of political change. Taking a simple negative relation to it, as if the moral condemnaotion of the evil of capitalism is sufficient (granting that it does establish grotesque systems of inequality and oppression) is not likely to establish a viable political agenda. First, it is not at all clear what it would mean to overthrow capitalism in the current situation. Unfortunately, despite our desires, the “masses” are not waiting to be led into revolution, and it is not simply a case of their failure to recognize their own best interests, as if we did. Are we to decide—rather undemocratically, I might add—to overthrow capitalism in spite of their legitimate desires? Second, as much as capitalism is the cause of many of the major threats facing the world, at the moment it may also be one of the few forces of stability, unity and even, within limits, a certain “civility” in the world. The working system is, unfortunately, simply too precarious and the alternative options not all that promising. Finally, the appeal of an as yet unarticulated and even unimagined future, while perhaps powerful as a moral imperative, is simply too weak in the current context to effectively organize people, and too vague to provide any direction. Instead, the Left must think of ways to rearticulate capitalism without either giving up the critique or naively assuming that it can create capitalism with a human heart.”

#### Human life is inherently valuable.

Melinda Penner, 2005, Director of Operations – STR, Stand To Reason,“ End of Life Ethics: A Primer”, Stand to Reason, http://www.str.org/site/News2?page=NewsArticle&id=5223

Intrinsic value is very different. Things with intrinsic value are valued for their own sake. They don’t have to achieve any other goal to be valuable. They are goods in themselves. Beauty, pleasure, and virtue are likely examples. Family and friendship are examples. Something that’s intrinsically valuable might also be instrumentally valuable, but even if it loses its instrumental value, its intrinsic value remains. Intrinsic value is what people mean when they use the phrase "the sanctity of life." Now when someone argues that someone doesn’t have "quality of life" they are arguing that life is only valuable as long as it obtains something else with quality, and when it can’t accomplish this, it’s not worth anything anymore. It's only instrumentally valuable. The problem with this view is that it is entirely subjective and changeable with regards to what might give value to life. Value becomes a completely personal matter, and, as we all know, our personal interests change over time. There is no grounding for objective human value and human rights if it’s not intrinsic value. Our legal system is built on the notion that humans have intrinsic value. The Declaration of Independence: "We hold these truths to be self-evident, that all men are created equal, that each person is endowed by his Creator with certain unalienable rights...." If human beings only have instrumental value, then slavery can be justified because there is nothing objectively valuable that requires our respect. There is nothing other than intrinsic value that can ground the unalienable equal rights we recognize because there is nothing about all human beings that is universal and equal. Intrinsic human value is what binds our social contract of rights. So if human life is intrinsically valuable, then it remains valuable even when our capacities are limited. Human life is valuable even with tremendous limitations. Human life remains valuable because its value is not derived from being able to talk, or walk, or feed yourself, or even reason at a certain level. Human beings don’t have value only in virtue of states of being (e.g., happiness) they can experience. The "quality of life" view is a poison pill because once we swallow it, we’re led down a logical slippery slope. The exact same principle can be used to take the life of human beings in all kinds of limited conditions because I wouldn't want to live that way. Would you want to live the life of a baby with Down’s Syndrome? No? Then kill her. Would you want to live the life of an infant with cerebral palsy? No? Then kill him. Would you want to live the life of a baby born with a cleft lip? No? Then kill her. (In fact, they did.) Once we accept this principle, it justifies killing every infant born with a condition that we deem a life we don’t want to live. There’s no reason not to kill every handicapped person who can’t speak for himself — because I wouldn’t want to live that way. This, in fact, is what has happened in Holland with the Groningen Protocol. Dutch doctors euthanize severely ill newborns and their society has accepted it.

#### Deliberative policymaking through debate over nuclear power is the crucial to solving the environment - reflecting as a critical intellectual is not enough.

Marian Herbick & Jon Isham, October 2010, Marian Herbick is a senior at the University of Vermont, where she is studying natural resource planning and wildlife biology, member of the Rubenstein School of Environment and Natural Resources and the Honors College, Jon Isham, department of economics and the program in environmental studies at Middlebury College. teaches in environmental economics, environmental policy, introductory microeconomics, social capital in Vermont, and global climate change, “The Promise of Deliberative Democracy,” <http://www.thesolutionsjournal.com/node/775>

Getting to 350 parts per million CO2 in the atmosphere will require massive investments in clean-energy infrastructure—investments that can too often be foiled by a combination of special interests and political sclerosis. Take the recent approval of the Cape Wind project by the U.S. Department of the Interior. In some ways, this was great news for clean-energy advocates: the project’s 130 turbines will produce, on average, 170 megawatts of electricity, almost 75 percent of the average electricity demand for Cape Cod and the islands of Martha’s Vineyard and Nantucket.1 But, because of local opposition by well-organized opponents, the approval process was lengthy, costly, and grueling —and all for a project that will produce only 0.04 percent of the total (forecasted) U.S. electricity demand in 2010.2,3 Over the next few decades, the world will need thousands of large-scale, low-carbon electricity projects—wind, solar, and nuclear power will certainly be in the mix. But if each faces Cape Wind–like opposition, getting to 350 is unlikely. How can the decision-making process about such projects be streamlined so that public policy reflects the view of a well-informed majority, provides opportunities for legitimate critiques, but does not permit the opposition to retard the process indefinitely? One answer is found in a set of innovative policy-making tools founded on the principle of deliberative democracy, defined as “decision making by discussion among free and equal citizens.”4 Such approaches, which have been developed and led by the Center for Deliberative Democracy (cdd.stanford.edu), America Speaks ([www.americaspeaks.org](http://www.americaspeaks.org/)), and the Consensus Building Institute (cbuilding.org), among others, are gaining popularity by promising a new foothold for effective citizen participation in the drive for a clean-energy future. Deliberative democracy stems from the belief that democratic leadership should involve educating constituents about issues at hand, and that citizens may significantly alter their opinions when faced with information about these issues. Advocates of the approach state that democracy should shift away from fixed notions toward a learning process in which people develop defensible positions.5 While the approaches of the Center for Deliberative Democracy, America Speaks, and the Consensus Building Institute do differ, all of these deliberative methodologies involve unbiased sharing of information and public-policy alternatives with a representative set of citizens; a moderated process of deliberation among the selected citizens; and the collection and dissemination of data resulting from this process. For example, in the deliberative polling approach used by the Center for Deliberative Democracy, a random selection of citizens is first polled on a particular issue. Then, members of the poll are invited to gather at a single place to discuss the issue. Participants receive balanced briefing materials to review before the gathering, and at the gathering they engage in dialogue with competing experts and political leaders based on questions they develop in small group discussions. After deliberations, the sample is asked the original poll questions, and the resulting changes in opinion represent the conclusions that the public would reach if everyone were given the opportunity to become more informed on pressing issues.6 If policymakers look at deliberative polls rather than traditional polls, they will be able to utilize results that originate from an informed group of citizens. As with traditional polls, deliberative polls choose people at random to represent U.S. demographics of age, education, gender, and so on. But traditional polls stop there, asking the random sample some brief, simple questions, typically online or over the phone. However, participants of deliberative polls have the opportunity to access expert information and then talk with one another before voting on policy recommendations. The power of this approach is illustrated by the results of a global deliberative process organized by World Wide Views on Global Warming ([www.wwviews.org](http://www.wwviews.org/)), a citizen’s deliberation organization based in Denmark.7 On September 26, 2009, approximately 4,000 people gathered in 38 countries to consider what should happen at the UN climate change negotiations in Copenhagen (338 Americans met in five major cities). The results derived from this day of deliberation were dramatic and significantly different from results of traditional polls. Overall, citizens showed strong concern about global warming and support for climate-change legislation, contrary to the outcomes of many standard climate-change polls. Based on the polling results from these gatherings, 90 percent of global citizens believe that it is urgent for the UN negotiations to produce a new climate change agreement; 88 percent of global citizens (82 percent of U.S. citizens) favor holding global warming to within 2 degrees Celsius of pre-industrial levels; and 74 percent of global citizens (69 percent of U.S. citizens) favor increasing fossil-fuel prices in developed countries. However, a typical news poll that was conducted two days before 350.org’s International Day of Climate Action on October 24, 2009, found that Americans had an overall declining concern about global warming.7 How can deliberative democracy help to create solutions for the climate-change policy process, to accelerate the kinds of policies and public investments that are so crucial to getting the world on a path to 350? Take again the example of wind in the United States. In the mid-1990s, the Texas Public Utilities Commission (PUC) launched an “integrated resource plan” to develop long-term strategies for energy production, particularly electricity.8 Upon learning about the deliberative polling approach of James Fishkin (then at the University of Texas at Austin), the PUC set up deliberative sessions for several hundred customers in the vicinity of every major utility provider in the state. The results were a surprise: it turned out that participants ranked reliability and stability of electricity supply as more important characteristics than price. In addition, they were open to supporting renewable energy, even if the costs slightly exceeded fossil-fuel sources. Observers considered this a breakthrough: based on these public deliberations, the PUC went on to champion an aggressive renewable portfolio standard, and the state has subsequently experienced little of the opposition to wind-tower siting that has slowed development in other states.8 By 2009, Texas had 9,500 megawatts of installed wind capacity, as much as the next six states (ranked by wind capacity) in the windy lower and upper Midwest (Iowa, Minnesota, Colorado, North Dakota, Kansas, and New Mexico).9 Deliberative democracy has proven effective in a wide range of countries and settings. In the Chinese township of Zeguo, a series of deliberative polls has helped the Local People’s Congress (LPC) to become a more effective decision-making body.10 In February 2008, 175 citizens were randomly selected to scrutinize the town’s budget—and 60 deputies from the LPC observed the process. After the deliberations, support decreased for budgeting for national defense projects, while support rose for infrastructure (e.g., rural road construction) and environmental protection. Subsequently, the LPC increased support for environmental projects by 9 percent.10 In decades to come, China must be at the forefront of the world’s investments in clean-energy infrastructure. The experience of Zeguo, if scaled up and fully supported by Chinese leaders, can help to play an important role. Deliberative democracy offers one solution for determining citizen opinions, including those on pressing issues related to climate change and clean energy. If democracy is truly about representing popular opinion, policymakers should seek out deliberative polls in their decision-making process.

## 1AR

### prolif adv

#### Accidental nuclear war is likely - even rational leaders will lose control of the escalation ladder.

Matthew Kroenig, 5-26-2012, assistant professor in the Department of Government at Georgetown University and a research affiliate with The Project on Managing the Atom at Harvard University, he served as a strategist on the policy planning staff in the Office of the Secretary of Defense where he received the Office of the Secretary of Defense’s Award for Outstanding Achievement. He is a term member of the Council on Foreign Relations and has held academic fellowships from the National Science Foundation, the Belfer Center for Science and International Affairs at Harvard University, the Center for International Security and Cooperation at Stanford University, and the Institute on Global Conflict and Cooperation at the University of California, “The History of Proliferation Optimism: Does It Have A Future?,” http://www.npolicy.org/article.php?aid=1182andrtid=2

The proliferation optimist position, while having a distinguished pedigree, has several major problems. Many of these weaknesses have been chronicled in brilliant detail by Scott Sagan and other contemporary proliferation pessimists.[34] Rather than repeat these substantial efforts, I will use this section to offer some original critiques of the recent incarnations of proliferation optimism. First and foremost, proliferation optimists do not appear to understand contemporary deterrence theory. I do not say this lightly in an effort to marginalize or discredit my intellectual opponents. Rather, I make this claim with all due caution and with complete sincerity. A careful review of the contemporary proliferation optimism literature does not reflect an understanding of, or engagement with, the developments in academic deterrence theory in top scholarly journals such as the American Political Science Review and International Organization over the past few decades.[35] While early optimists like Viner and Brodie can be excused for not knowing better, the writings of contemporary proliferation optimists ignore the past fifty years of academic research on nuclear deterrence theory. In the 1940s, Viner, Brodie, and others argued that the advent of Mutually Assured Destruction (MAD) rendered war among major powers obsolete, but nuclear deterrence theory soon advanced beyond that simple understanding.[36] After all, great power political competition does not end with nuclear weapons. And nuclear-armed states still seek to threaten nuclear-armed adversaries. States cannot credibly threaten to launch a suicidal nuclear war, but they still want to coerce their adversaries. This leads to a credibility problem: how can states credibly threaten a nuclear-armed opponent? Since the 1960s academic nuclear deterrence theory has been devoted almost exclusively to answering this question.[37] And, unfortunately for proliferation optimists, the answers do not give us reasons to be optimistic. Thomas Schelling was the first to devise a rational means by which states can threaten nuclear-armed opponents.[38] He argued that leaders cannot credibly threaten to intentionally launch a suicidal nuclear war, but they can make a “threat that leaves something to chance.”[39] They can engage in a process, the nuclear crisis, which increases the risk of nuclear war in an attempt to force a less resolved adversary to back down. As states escalate a nuclear crisis there is an increasing probability that the conflict will spiral out of control and result in an inadvertent or accidental nuclear exchange. As long as the benefit of winning the crisis is greater than the incremental increase in the risk of nuclear war, threats to escalate nuclear crises are inherently credible. In these games of nuclear brinkmanship, the state that is willing to run the greatest risk of nuclear war before back down will win the crisis as long as it does not end in catastrophe. It is for this reason that Thomas Schelling called great power politics in the nuclear era a “competition in risk taking.”[40] This does not mean that states eagerly bid up the risk of nuclear war. Rather, they face gut-wrenching decisions at each stage of the crisis. They can quit the crisis to avoid nuclear war, but only by ceding an important geopolitical issue to an opponent. Or they can the escalate the crisis in an attempt to prevail, but only at the risk of suffering a possible nuclear exchange. Since 1945 there were have been many high stakes nuclear crises (by my count, there have been twenty) in which “rational” states like the United States run a risk of nuclear war and inch very close to the brink of nuclear war.[41] By asking whether states can be deterred or not, therefore, proliferation optimists are asking the wrong question. The right question to ask is: what risk of nuclear war is a specific state willing to run against a particular opponent in a given crisis? Optimists are likely correct when they assert that Iran will not intentionally commit national suicide by launching a bolt-from-the-blue nuclear attack on the United States or Israel. This does not mean that Iran will never use nuclear weapons, however. Indeed, it is almost inconceivable to think that a nuclear-armed Iran would not, at some point, find itself in a crisis with another nuclear-armed power and that it would not be willing to run any risk of nuclear war in order to achieve its objectives. If a nuclear-armed Iran and the United States or Israel have a geopolitical conflict in the future, over say the internal politics of Syria, an Israeli conflict with Iran’s client Hezbollah, the U.S. presence in the Persian Gulf, passage through the Strait of Hormuz, or some other issue, do we believe that Iran would immediately capitulate? Or is it possible that Iran would push back, possibly even brandishing nuclear weapons in an attempt to deter its adversaries? If the latter, there is a real risk that proliferation to Iran could result in nuclear war. An optimist might counter that nuclear weapons will never be used, even in a crisis situation, because states have such a strong incentive, namely national survival, to ensure that nuclear weapons are not used. But, this objection ignores the fact that leaders operate under competing pressures. Leaders in nuclear-armed states also have very strong incentives to convince their adversaries that nuclear weapons could very well be used. Historically we have seen that in crises, leaders purposely do things like put nuclear weapons on high alert and delegate nuclear launch authority to low level commanders, purposely increasing the risk of accidental nuclear war in an attempt to force less-resolved opponents to back down.

#### Quantitative risk analysis proves proliferation risks nuclear war within a decade.

Martin Hellman, 2011, Professor Emeritus of electrical engineering at Stanford University, a member of the National Academy of Engineering, a fellow of the Institute of Electrical and Electronics Engineers, and a Marconi International Fellow, “How Risky is Nuclear Optimism?,” <http://www-ee.stanford.edu/~hellman/publications/75.pdf>

Fortunately, quantitative risk analysis can illuminate the danger by gleaning more information from the available data than might first appear possible. Think of each year since 1945 as a coin toss with a heavily weighted coin, so that tails shows much more frequently than heads. Tails means that a nuclear war did not occur that year, while heads corresponds to a nuclear catastrophe, so the last 65 years correspond to 65 tails in a row. Risk analysis reclaims valuable information by looking not only at the gross outcome of each toss (whether it showed heads or tails), but also at the nuances of how the coin behaved during the toss. If all 65 tosses immediately landed tails without any hesitation, that would be evidence that the coin was more strongly weighted in favor of tails and provide additional evidence in favor of nuclear optimism. Conversely, if any of the tosses teetered on edge, leaning first one way and then the other, before finally showing tails, nuclear optimism would be on shaky ground. In 1962, the nuclear coin clearly teetered on edge, with President John F. Kennedy later estimating the odds of war during the Cuban Missile Crisis at somewhere between “one-in-three and even” (Sorenson, 1965: 705). Other nuclear near misses are less well known and had smaller chances of ending in a nuclear disaster. But, when the survival of civilization is at stake, even a partial hesitation before the nuclear coin lands tails should be of grave concern. During the 1961 Berlin crisis, Soviet and US tanks faced off at Checkpoint Charlie in a contest of wills so serious that President John F. Kennedy briefly considered a nuclear first strike option against the Soviet Union (Burr, 2001). . In 1973, when Israel encircled the Egyptian Third Army, the Soviets threatened to intervene, leading to implied nuclear threats (Ury, 1985). The 1983 Able Archer incident was, in the words of Secretary of Defense Robert Gates, “one of the potentially most dangerous episodes of the Cold War” (Gates, 2006: 270). This incident occurred at an extremely tense time, just two months after a Korean airliner had been shot down after it strayed into Soviet airspace, and less than eight months after President Ronald Reagan’s “Star Wars” speech. With talk of fighting and winning a nuclear war emanating from Washington, Gates noted that Soviet leader Yuri Andropov developed a “seeming fixation on the possibility that the United States was planning a nuclear strike against the Soviet Union” (Gates, 2006: 270). The Soviets reasoned that the West would mask preparations for such an attack as a military exercise. Able Archer was just such an exercise, simulating the coordinated release of all NATO nuclear weapons. Certain events during the 1993 Russian coup attempt that were not recognized by the general public led a number of US intelligence officers at the North American Aerospace Defense Command (NORAD) headquarters to call their families and tell them to leave Washington out of fear that the Russians might launch a nuclear attack (Pry, 1999). In 1995, Russian air defense mistook a meteorological rocket launched from Norway for a US submarine launched ballistic missile, causing the Russian “nuclear football” – a device which contains the codes for authorizing a nuclear attack- to be opened in front of President Boris Yeltsin. This was the first time such an event had occurred, and fortunately Yeltsin was sober enough to make the right decision (Pry, 1999). Confusion and panic during the 9/11 attacks led an airborne F-16 pilot to mistakenly believe that the USA was under attack by Russians instead of terrorists. In a dangerous coincidence, the Russian Air Force had scheduled an exercise that day, in which strategic bombers were to be flown toward the United States. Fortunately, the Russians learned of the terrorist attack in time to ground their bombers (Podvig, 2006). The August 2008 Russian invasion of Georgia would have produced a major crisis if President George W. Bush had followed through on his earlier promises to Georgia: “The path of freedom you have chosen is not easy but you will not travel it alone. Americans respect your courageous choice for liberty. And as you build a free and democratic Georgia, the American people will stand with you” (Bush, 2005). The danger was compounded because most Americans are unaware that Georgia fired the first shots and Russia was not solely to blame (Tagliavini, 2009). Ongoing tensions could well produce a rematch, and Sarah Palin, reflecting the mood of many Americans, has said that the United States should be ready to go to war with Russia should that occur (Meckler, 2008). The majority of the above incidents occurred post-Cold War, challenging the widespread belief that the nuclear threat ended with the fall of the Berlin Wall. Further, nuclear proliferation and terrorism have added dangerous new dimensions to the threat: India and Pakistan combined have approximately 150 nuclear weapons. These nations fought wars in 1947, 1965, 1971, and 1999. India suffered a major attack by Pakistani-based terrorists as recently as November 2008. Pakistan is subject to chaos and corruption. In October 2009, internal terrorists attacked Pakistan’s Army General Headquarters, killing nine soldiers and two civilians. A. Q. Khan, sometimes called “the father of the Islamic bomb,” ran a virtual nuclear supermarket and is believed to have sold Pakistani nuclear know-how to North Korea, Iran, and Libya. If terrorists were to obtain 50 kg of highly enriched uranium (HEU), it would be a small step from there to a usable nuclear weapon. 1 The worldwide civilian inventory of HEU is estimated at 50,000 kg. HEU is used in over 100 research reactors worldwide, many of which are not adequately guarded. South Africa stores the HEU from its dismantled nuclear arsenal at its Pelindaba facility. In November 2007, two armed teams, probably with internal collusion, circumvented a 10,000 volt fence and other security measures. They were inside the supposedly secure facility for almost an hour but, fortunately, were scared off before obtaining any HEU (Bunn, 2009). In the recent film, Nuclear Tipping Point, former secretary of state Henry Kissinger said that “if the existing nuclear countries cannot develop some restraints among themselves – in other words, if nothing fundamental changes – then I would expect the use of nuclear weapons in some 10-year period is very possible” (Nuclear Security Project, 2010). Richard Garwin, a former member of the President’s Science Advisory Committee (1962”65 and 1969”72) holds an even more pessimistic view. In Congressional hearings he testified: “We need to organize ourselves so that if we lose a couple hundred thousand people, which is less than a tenth percent of our population, it doesn’t destroy the country politically or economically . . . We need to have a way to survive such an attack, which I think is quite likely – maybe 20 percent per year probability, with American cities and European cities included” (Energy and Water Subcommittee, 2007: 31). These incidents show that the nuclear coin has teetered on edge far too often, yet society’s lack of concern and resultant inaction demonstrate that nuclear optimism is a widespread illusion. A prerequisite for defusing the nuclear threat is to make society aware of the risk that it bears before catastrophe strikes.

### Warming adv

#### Even with current investment levels it won’t trade-off - intermittency.

Tom Blees, 12-24-2009, is the author of Prescription for the Planet, the president of the Science Council for Global Initiatives, member of the selection committee for the Global Energy Prize, “Unnatural gas,” <http://bravenewclimate.com/2009/12/24/unnatural-gas/>

But any type of power plant is going to experience undue wear and tear from the increased variability that is part and parcel of wind and solar integration into the grid (particularly wind, for obvious reasons, though solar power can dip quickly when clouds move in). In areas where gas turbines have been used to compensate for the vagaries of renewables, utility companies are finding that they’re taking quite a beating, with an expected diminution in their service lives. So how can wind and solar be best integrated into the power grid without relying on gas? And how can we do it without investing up to two trillion dollars in a smart grid? Let’s not. Let’s forget about integrating wind and solar power into the grid at all (except for small solar installations like rooftop solar, for those who want to go that route). Let’s remove the urgency of building a smart grid and rely instead on the gradually smartening grid we’ve already got. This relatively dumb grid works pretty well so far and we could take our time revamping it. If Gen III and Gen IV nuclear power plants are used to replace coal- and gas-fired generators we’ll get clean electricity quite reliably no matter how intelligent our grid is. This is not to suggest that we should abandon the building of wind and solar farms (the question of their economics is another issue beyond the scope of this article). Instead of hooking them to the grid, though, we could easily and cheaply build electrolysis systems at each site to generate hydrogen, and with that hydrogen we can make ammonia (That’s NH3. The nitrogen is simply taken from the air). Indeed, the economics may warrant building ammonia plants right at the site of wind and solar farms, or at least producing the hydrogen there and trucking it to nearby ammonia plants. This would take the problem of intermittency completely out of the picture. Hydrogen production would proceed as electricity supply allows, utilizing every watt no matter how variable its production. Similarly, electrolysis systems could be integrated into the grid at nuclear power plants so that they could run at full capacity around the clock regardless of demand. That hydrogen, too, could be utilized to produce ammonia.

#### Conversion to borocars will happen immediately – IFR fuel is preferable to any other system – means we lessen oil use.

Tom Blees, 2008, the president of the Science Council for Global Initiatives, member of the selection committee for the Global Energy Prize, Prescription for the Planet, p. 165

Already five years ago oxygen extractors were almost small enough, even with their efficiency being barely 5% of the theoretical limit. Give that challenge to the wizards at Sandia Labs and sit back and watch the fur fly. We’ll be tooling around in borocars in a heartbeat. On the other hand, there are a lot of new electric car technologies on the horizon that seem to show great promise, from the aforementioned Phoenix to high-tech capacitor systems. And work being done on so-called flow batteries holds out the possibility of being able to simply pump out discharged electrolytes and pump in a fully charged solution, which wouldn’t take much longer than fueling up with gasoline today. It’s possible that by the time this book is in your hands a viable electric car will be on the road. What 165 use for boron then? Well, you still have that home in Winnipeg, remember? And long trips in remote areas could be impossible with all-electric vehicles, though for most uses they would be just peachy. The average car trip in America is about 29 miles, so usually it would work just fine to plug in at home. If Phoenix Motorcars actually succeeds in building a car with long range per charge and a ten minute charge cycle as they’re promising, admittedly the need for boron will be minimized. Nevertheless it could well be used in trucks, trains, heavy equipment, portable generators, or for safely and cheaply transporting energy in areas (such as much of the developing world) where power grids are inadequate or nonexistent. Our Winnipeg family could get by just fine with an electric car, though, as long as they kept a boron powered generator out in the garage. A boron/electric hybrid, however, would be the best of both worlds. Not only would you have terrific range even beyond the grid, but the charging cable that plugs into your house every night (assuming we make these plug-in hybrids) could operate in reverse if the power went out. All you’d have to do is start the car to kick in the boron power. Of course with a truly efficient boron/electric hybrid you might drive around with a tank of boron for months before ever having occasion to use it. Would that be a bad thing? Absolutely not. From an efficiency standpoint it would be the best situation. Any time energy is converted from one form to another it incurs an energy penalty. So it would be more efficient just to use electricity straight from the IFR to charge up our cars.

### agenda politics DA

#### Ideology

Richard Fleisher et. al, 2008, Richard Fleisher, Fordham University Professor Department of Political Science, Jon R. Bond, Texas A&M University Professor Department of Political Science, and B. Dan Wood Texas A&M University Professor Department of Political Science, “Which Presidents Are Uncommonly Successful in Congress?” in Presidential Leadership: The Vortex of Power,” http://webdoc.sub.gwdg.de/ebook/p/2005/american\_congress/congress.wustl.edu/fleisher.pdf

We should also continue to work to improve our understanding of the conditions that affect presidential success, and how they operate. Our finding of significant interactions of party polarization with public approval and majority control is noteworthy. Party control sets the basic condition for presidential success, and presidents do somewhat better in their honeymoon year. The marginal effect of public opinion on success is conditioned by the level of partisanship in Congress. At low levels of partisanship, the president’s standing with the public has a modest positive effect on success. But at high levels of partisanship, which have characterized Congress in recent decades, the marginal effect of public approval diminishes (and even turns negative in the House). Party polarization also interacts with party control, enhancing the benefit of majority status. Thus, polarized parties further reduce the ability of presidential activities to affect success even at the margins. In polarized periods, electoral processes reduce the number of moderate and cross-pressured members, the very members who are most inclined to search beyond the primary cues of party and ideology for guidance in making decisions. Fewer members who look beyond party and ideology, means fewer members subject to presidential persuasion. This condition places a high premium on having majorities in the House and Senate. Unless the level of partisanship in Congress declines, a rational strategy for a president who seeks to improve his legislative success is to focus on maintaining or winning partisan majorities in the House and Senate. President Bush seems to have successfully followed this strategy in the 2002 midterm elections. Ironically, electoral activities aimed at electing sympathetic majorities in Congress are likely to contribute to more party polarization.

#### High salience issues.

Jeffrey S. Peake, March 2001, professor at Bowling Green State University Political Research Quarterly, “Presidential Agenda Setting in Foreign Policy,” Vol. 54,No. 1, p. 69-86

Issues examined here are less salient than issues studied previously High salience hinders the President's capacity to affect the agenda. If Congress and the media consistently attend to an issue (due to its high salience), it is less likely that activity by the President designed to increase the salience of an issue will have as noticeable an effect compared to an issue that is less salient. Moderate to low salience issues may provide the President opportunities to noticeably affect congressional or media attention. Lower salience decreases the competition Presidents receive from the media, possibly increasing the President's influence in relation to other agenda setters. Salience is also tied to the political importance of an issue. Increased political importance leads to high salience over time for an issue among the media, the people, and Congress, so the President is not without competition to influence the agenda. Congress and the media attend to highly salient issues regardless of the President's agenda.

#### Err aff

Richard Fleisher et. al, 2008, Richard Fleisher, Fordham University Professor Department of Political Science, Jon R. Bond, Texas A&M University Professor Department of Political Science, and B. Dan Wood Texas A&M University Professor Department of Political Science, “Which Presidents Are Uncommonly Successful in Congress?” in Presidential Leadership: The Vortex of Power,” http://webdoc.sub.gwdg.de/ebook/p/2005/american\_congress/congress.wustl.edu/fleisher.pdf

Presidency scholars claim that presidential success is a function of both skill and political conditions. Although students of presidential-congressional relations have been unable to demonstrate convincingly that presidential activities systematically affect success, the literature provides substantial theory and evidence regarding the political conditions that determine presidential success in Congress. Our analysis contributes additional evidence that presidential success on the floor of Congress is determined primarily by whether political conditions are favorable or unfavorable. Although our model leaves some variance unexplained, few of the residuals would be considered outliers. That is, none of the ten presidents analyzed here were uncommonly successful or unsuccessful relative to the conditions they faced. The few instances of uncommon success could occur by random chance. Presidential skill, nonetheless, continues to occupy a central, if not dominant, position in the literature. This analysis cannot refute skill as an explanation. Previous research has found a number of interesting and important cases on which a skilled performance (or lack of it) made the difference between success and failure. But the debate over the relative importance of skills cannot be resolved simply by agreeing that skills matter some of the time on some issues. If presidential skill is to provide a theoretical understanding of presidential success on par with that provided by political conditions, then we should be able to observe more than idiosyncratic effects on a small number of issues. The burden of providing systematic evidence rests on proponents of the skill part of the explanation. The persistent failure to find systematic evidence should raise doubts about skill as scientific theory.