# Round 2 vs. Chico LP (Neg)

## 1NC

### 1

#### A. Interpretation – Financial incentives directly increase government expenditures for energy production – R&D is support.

Gielecki et al 1 (Mark, an economist with the Department of Energy, Fred Mayes, and Lawrence Prete, "Incentives, Mandates, and ¶ Government Programs for ¶ Promoting Renewable Energy" http://lobby.la.psu.edu/\_107th/128\_PURPA/Agency\_Activities/EIA/Incentive\_Mandates\_and\_Government.htm-)

Over the years, incentives and mandates for renewable energy have been used to advance different energy policies, such as ensuring energy security or promoting environmentally benign energy sources. Renewable energy has beneficial attributes, such as low emissions and replenishable energy supply, that are not fully reflected in the market price. Accordingly, governments have used a variety of programs to promote renewable energy resources, technologies, and renewable-based transportation fuels. (1) This paper discusses: (1) financial incentives and regulatory mandates used by Federal and State governments and Federal research and development (R&D), (2), (3) and (2) their effectiveness in promoting renewables.¶ A financial incentive is defined in this report as providing one or more of the following benefits:¶ A transfer of economic resources by the Government to the buyer or seller of a good or service that has the effect of reducing the price paid, or, increasing the price received, respectively; ¶ Reducing the cost of production of the good or service; or, ¶ Creating or expanding a market for producers.¶ The intended effect of a financial incentive is to increase the production or consumption of the good or service over what it otherwise would have been without the incentive. Examples of financial incentives are: tax credits, production payments, trust funds, and low-cost loans. Research and development is included as a support program because its effect is to decrease cost, thus enhancing the commercial viability of the good(s) provided.

#### B. Violation – The plan increases research and development, which is not a financial incentive.

#### C. Reasons to Prefer

#### 1. Ground –

Our interpretation is key to Negative ground. Allowing research and development on the topic allows them to say that their technology only leads to energy production in the long-run. That moots the negative of energy production links to K’s and DA’s, since the link doesn’t happen for several years. This is uniquely problematic for R&D aff’s, because R&D is used for undeveloped tech.

#### 2. Limits –

Our interpretation is key to predictable limits. Allowing R&D on the topic let’s them claim advantages off of things not pertaining to production like energy leadership and confidence from a government signal.

#### D. Topicality is a voting issue for both Fairness and Educational reasons.

### 2

#### Text: The United States federal government should ban the use of Yucca mountain for storage of nuclear waste and mandate that all waste be stored on site according to the safety standard recommendations in the NRC task force report on spent-fuel storage. The Department of Defense should procure small modular reactors for military bases in the United States.

#### NRC recommendation solves the risks with storing waste in the SQUO

Alvarez 12 (Robert, Senior Scholar at IPS, where he is currently focused on nuclear disarmament, environmental, and energy policies, “Improving Spent-Fuel Storage at Nuclear Reactors”, Winter, ISSUES IN SCIENCE AND TECHNOLOGY, RSR)

Until the NAS completes its study, if it agrees to do so, the bulk of current attention is focused on the NRC’s analysis of the Fukushima disaster. As in JapanIn its interim report, the NRC task force recognized these shortcomings and recommended that the NRC order reactor operators to: • “. . . provide sufficient safety-related instrumentation, able to withstand design-basis natural phenomena, to monitor key spent fuel pool parameters (i.e., water level, temperature, and area radiation levels) from the control room.” • “. . . revise their technical specifications to address requirements to have one train of onsite emergency electrical power operable for spent fuel pool makeup and spent fuel pool instrumentation when there is irradiated fuel in the spent fuel pool, regardless of the operational mode of the reactor.” • “. . . have an installed seismically qualified means to spray water into the spent fuel pools, including an easily accessible connection to supply the water (e.g., using a portable pump or pumper truck) at grade outside the building.” Improving pool safety is certainly important.

#### DOD is key – solves commercialization, overcomes restrictions and doesn’t link to politics.

Madia, Chairman of the Board of Overseers and Vice President for the SLAC National Accelerator Laboratory at Stanford University, ‘12

[William, Spring, "Small Modular Reactors: A Potential Game-changing Technology", energyclub.stanford.edu/index.php/Journal/Small\_Modular\_Reactors\_by\_William\_Madia]

To determine if SMRs hold the potential for changing the game in carbon-free power generation, it is imperative that we test the design, engineering, licensing, and economic assumptions with some sort of public-private development and demonstration program. Instead of having government simply invest in research and development to “buy down” the risks associated with SMRs, I propose a more novel approach. Since the federal government is a major power consumer, it should commit to being the “first mover” of SMRs. This means purchasing the first few hundred MWs of SMR generation capacity and dedicating it to federal use. The advantages of this approach are straightforward. The government would both reduce licensing and economic risks to the point where utilities might invest in subsequent units, thus jumpstarting the SMR industry. It would then also be the recipient of additional carbon-free energy generation capacity. This seems like a very sensible role for government to play without getting into the heavy politics of nuclear waste, corporate welfare, or carbon taxes.¶ If we want to deploy power generation technologies that can realize near-term impact on carbon emissions safely, reliably, economically, at scale, and at total costs that are manageable on the balance sheets of most utilities, we must consider SMRs as a key component of our national energy strategy.

#### Their IL to their China and desal is about revitalizing the commercial nuclear industry. CP does that by spurring commercialization and expanding the entire industry.

#### IFRs are bad – don’t solve the waste problem and lead to nuclear terror.

Pearce, reelance author and journalist based in the UK, ‘12

[Fred, serves as environmental consultant for New Scientist magazine and is the author of numerous books, including When The Rivers Run Dry and With Speed and Violence, “Are Fast-Breeder Reactors A Nuclear Power Panacea?”, Yale Environment 360, 7-30-12,

<http://e360.yale.edu/feature/are_fast-breeder_reactors_a_nuclear_power_panacea/2557/>, RSR]

The skeptics include Adrian Simper, the strategy director of the UK’s Nuclear Decommissioning Authority, which will be among those organizations deciding whether to back the PRISM plan. Simper warned last November in an internal memorandum that fast reactors were “not credible” as a solution to Britain’s plutonium problem because they had “still to be demonstrated commercially” and could not be deployed within 25 years. The technical challenges include the fact that it would require converting the plutonium powder into a metal alloy, with uranium and zirconium. This would be a large-scale industrial activity on its own that would create “a likely large amount of plutonium-contaminated salt waste,” Simper said. Simper is also concerned that the plutonium metal, once prepared for the reactor, would be even more vulnerable to theft for making bombs than the powdered oxide. This view is shared by the Union of Concerned Scientists in the U.S., which argues that plutonium liberated from spent fuel in preparation for recycling “would be dangerously vulnerable to theft or misuse.”

### 3

#### 1 CIR will pass now – vote count.

Martinez 1/24 (Gueillermo, columnist for the florida sun sentinel and on the editorial board, 2013, http://www.sun-sentinel.com/news/opinion/fl-gmcol-oped0124-20130124,0,4256316.column)

Obama, White House officials, and even members of Congress say that this time it is different. And one can hope that is the case, for since Ronald Reagan last approved an amnesty program in 1986, immigration has been relegated to the all-talk-and-no-action category in American politics.¶ This year, after Hispanic voters helped put Obama in the White House with 70 percent of its vote, that is the least the administration can do for a group that desperately seeks security for its family members; who want their relatives to come out of the shadows, work, and pay taxes. In other words, live a normal life.¶ Even many of the better-known Republicans in Congress and conservative commentators in the media understand the party has to change its stand on this issue or lose the Hispanic vote for years to come.¶ Sen. Marco Rubio, R-Fla., understands it so well he has been busy outlining his own plan to reform immigration law. It includes tougher enforcement on the border, a verification program, an increase in visa to scientists, and an agricultural workers program. And yes, it also addresses the issue of living in this country without papers.¶ So far Rubio's unwritten proposal has the approval of Congressman Paul Ryan, the Republican candidate for Vice President last November. It also has been praised by commentators like Sean Hannity and Bill O'Reilly. Grover Norquist, president of Americans for Tax Reform, has called Rubio's plan a "step in the right direction."¶ However, some question his proposal on how to grant undocumented workers in this country a pass to legal residency and eventually citizenship. His plan does both, but has undocumented workers waiting in line for others who enter the country legally before they would be granted the much desired status.¶ Some liberals feel this would make undocumented workers spend years, if not decades, before they can apply for legalization. Rubio said he does not have an answer yet.¶ Still, this is the first time in decades when there is actually an opportunity to solve the problem of the millions who live in our midst without papers.¶ The 2012 presidential elections readied an awful lot of people. These conservative and Republicans now understand the demographics of the Hispanic vote is against the GOP and they must adapt or forever be a minority party.¶ This is the time for President Obama to prioritize the issue and not allow other equally important parts of his agenda distract from his promise to enact immigration reform in the first year of his second term, as he did four years ago.¶ At this point this is doable. The whipping Latinos gave Republicans in the last election is still fresh in everyone's mind. There should be enough Republican votes in the House and Senate to pass legislation.

#### 2. Obama’s political capital is key.

Hesson 1/2 (Ted, Immigration Editor at ABC News, Analysis: 6 Things Obama Needs To Do for Immigration Reform, http://abcnews.go.com/ABC\_Univision/News/things-president-obama-immigration-reform/story?id=18103115#.UOTq55JIAho)

On Sunday, President Barack Obama said that immigration reform is a "top priority" on his agenda and that he would introduce legislation in his first year.¶ To find out what he needs to do to make reform a reality, we talked to Lynn Tramonte, the deputy director at America's Voice, a group that lobbies for immigration reform, and Muzaffar Chishti, the director of the New York office of the Migration Policy Institute, a think tank. Here's what we came up with.¶ 1. Be a Leader¶ During Obama's first term, bipartisan legislation never got off the ground. The president needs to do a better job leading the charge this time around, according to Chishti. "He has to make it clear that it's a high priority of his," he said. "He has to make it clear that he'll use his bully pulpit and his political muscle to make it happen, and he has to be open to using his veto power." His announcement this weekend is a step in that direction, but he needs to follow through.¶ 2. Clear Space on the Agenda¶ Political priorities aren't always dictated by the folks in D.C., as the tragic Connecticut school shooting shows us. While immigration had inertia after the election, the fiscal cliff and gun violence have been the most talked about issues around the Capitol in recent weeks. The cliff could recede from view now that Congress has passed a bill, but how quickly the president can resolve the other issues on his agenda could determine whether immigration reform is possible this year. "There's only limited oxygen in the room," Chishti said.

#### 3. Key Senators oppose IFRs

Rizvi 7 (Haider, Inter Press Service News Agency, Bush's Nuclear 'Reprocessing' Plan Under Fire, November 26th, http://www.commondreams.org/archive/2007/11/26/5448)

NEW YORK - The Bush administration is pushing for plans to reuse spent nuclear fuel in power reactors across the United States, but key senators and nuclear analysts have raised economic and security concerns about reusing the weapons-grade fuel.¶ "We have serious concerns about the implications of current plans for commercial spent fuel reprocessing," a group of seven Democratic and one Republican senators told Byron Dorgan (D-ND), chairman of the Senate Subcommittee on Energy and Water Development Appropriations, in a letter last week.¶ The letter urged Dorgan and Ranking Member Pete Domenici (R-NM) to cut funding for spent fuel reprocessing in an energy appropriations bill that is expected to be considered along with many other spending plans next month.¶ The reprocessing is being promoted as part of the administration's Global Nuclear Energy Partnership (GNEP), a plan to form an international partnership to reprocess spent nuclear fuel in a way that renders the plutonium in it usable for nuclear energy but not for nuclear weapons.¶ The energy and water development appropriations bill currently before the Senate would provide $243 million for the initiative, whereas the House version would commit $120 million.¶ Those who signed the letter include Senators Russ Feingold (D-WI), Ron Wyden (D-OR), John Sununu (R-NH), Tom Harkin (D-IA), Bernard Sanders (D-VT), John Kerry (D-MA), Daniel Akaka (D-HI), and Edward Kennedy (D-MA).¶ The eight senators said reprocessing is "not a solution" to the problem of nuclear waste and held that it could weaken U.S. efforts to halt global nuclear proliferation. In addition, they argued that the Energy Department's plans could cost taxpayers at least $200 billion.¶ Arms control activists have welcomed the senators' call for funding cuts and said their letter reflects a growing skepticism in Congress about the administration's reprocessing initiative.¶ "There are a variety of concerns about the program ranging from cost, to nuclear proliferation risks, to past failures in this area," said Leonor Tomero, director for nuclear nonproliferation at the Washington, DC-based Center for Arms Control and nonproliferation.¶ In her view, the Energy Department's request for hundreds of millions of dollars is not reasonable because its initiative and the GNEP "will not provide a viable solution" to the nuclear waste problem.¶ The Senate Committee on Energy and Natural Resources recently held a hearing on GNEP where many of its members expressed their concerns and raised serious questions about the Energy Department's plans.¶ In addition to the senators' objections, the administration's current proposal has also been criticized by the National Academy of Sciences (NAS), a pro bono committee of experts that advises the federal government on scientific issues. In its annual report this year, the NAS described the Energy Department's plan as an "unwise" effort that lacked "economic justification."

#### 4. Immigration reform is key to food security

Fitz 12 (Marshall Fitz is the Director of Immigration Policy at the Center for American Progress, Time to Legalize Our 11 Million Undocumented Immigrants, November 14th, http://www.americanprogress.org/issues/immigration/report/2012/11/14/44885/time-to-legalize-our-11-million-undocumented-immigrants/)

Nowhere is the tension between immigrant labor and the economy more obvious than in agriculture. By most estimates, undocumented immigrants make up more than half of the workers in the agriculture industry. Likewise the U.S. Department of Agriculture has estimated that each farm job creates three “upstream” jobs in professions such as packaging, transporting, and selling the produce, meaning that what happens in the agricultural sector affects the economy as a whole.¶ Agriculture is particularly susceptible to the whims of the labor market, since crops become ripe at a fixed time and must be picked quickly before they rot. Migrant laborers often travel a set route, following the growing season as it begins in places such as Florida and works its way north. Disrupting this flow of pickers can be devastating to local economies and the nation’s food security.¶ After the passage of Georgia’s anti-immigrant law, H.B. 87, for example, the Georgia Agribusiness Council estimated that the state could lose up to $1 billion in produce from a lack of immigrant labor. A survey of farmers conducted by the Georgia Department of Agriculture found 56 percent of those surveyed were experiencing difficulty finding workers—a devastating blow to the state. Even a program by Gov. Nathan Deal (D-GA) to use prison parolees to fill the worker shortage quickly fell apart, with most walking off the job after just a few hours.¶ Creating a process for legalizing these undocumented workers would help stabilize the agricultural workforce and enhance our nation’s food security. It would also diminish the incentive of states to go down the economically self-destructive path that Georgia, Alabama, Arizona, and others have pursued.

#### 5. Food shortages lead to extinction.

Brown, founder of the Worldwatch Institute and the Earth Policy Institute, ‘9

[Lester, “Can Food Shortages Bring Down Civilization?” Scientific American, May]

The biggest threat to global stability is the potential for food crises in poor countries to cause government collapse. Those crises are brought on by ever worsening environmental degradation One of the toughest things for people to do is to anticipate sudden change. Typically we project the future by extrapolating from trends in the past. Much of the time this approach works well. But sometimes it fails spectacularly, and people are simply blindsided by events such as today's economic crisis. For most of us, the idea that civilization itself could disintegrate probably seems preposterous. Who would not find it hard to think seriously about such a complete departure from what we expect of ordinary life? What evidence could make us heed a warning so dire--and how would we go about responding to it? We are so inured to a long list of highly unlikely catastrophes that we are virtually programmed to dismiss them all with a wave of the hand: Sure, our civilization might devolve into chaos--and Earth might collide with an asteroid, too! For many years I have studied global agricultural, population, environmental and economic trends and their interactions. The combined effects of those trends and the political tensions they generate point to the breakdown of governments and societies. Yet I, too, have resisted the idea that food shortages could bring down not only individual governments but also our global civilization. I can no longer ignore that risk. Our continuing failure to deal with the environmental declines that are undermining the world food economy--most important, falling water tables, eroding soils and rising temperatures--forces me to conclude that such a collapse is possible. The Problem of Failed States Even a cursory look at the vital signs of our current world order lends unwelcome support to my conclusion. And those of us in the environmental field are well into our third decade of charting trends of environmental decline without seeing any significant effort to reverse a single one. In six of the past nine years world grain production has fallen short of consumption, forcing a steady drawdown in stocks. When the 2008 harvest began, world carryover stocks of grain (the amount in the bin when the new harvest begins) were at 62 days of consumption, a near record low. In response, world grain prices in the spring and summer of last year climbed to the highest level ever.As demand for food rises faster than supplies are growing, the resulting food-price inflation puts severe stress on the governments of countries already teetering on the edge of chaos. Unable to buy grain or grow their own, hungry people take to the streets. Indeed, even before the steep climb in grain prices in 2008, the number of failing states was expanding [see sidebar at left]. Many of their problem's stem from a failure to slow the growth of their populations. But if the food situation continues to deteriorate, entire nations will break down at an ever increasing rate. We have entered a new era in geopolitics. In the 20th century the main threat to international security was superpower conflict; today it is failing states. It is not the concentration of power but its absence that puts us at risk.States fail when national governments can no longer provide personal security, food security and basic social services such as education and health care. They often lose control of part or all of their territory. When governments lose their monopoly on power, law and order begin to disintegrate. After a point, countries can become so dangerous that food relief workers are no longer safe and their programs are halted; in Somalia and Afghanistan, deteriorating conditions have already put such programs in jeopardy.Failing states are of international concern because they are a source of terrorists, drugs, weapons and refugees, threatening political stability everywhere. Somalia, number one on the 2008 list of failing states, has become a base for piracy. Iraq, number five, is a hotbed for terrorist training. Afghanistan, number seven, is the world's leading supplier of heroin. Following the massive genocide of 1994 in Rwanda, refugees from that troubled state, thousands of armed soldiers among them, helped to destabilize neighboring Democratic Republic of the Congo (number six).Our global civilization depends on a functioning network of politically healthy nation-states to control the spread of infectious disease, to manage the international monetary system, to control international terrorism and to reach scores of other common goals. If the system for controlling infectious diseases--such as polio, SARS or avian flu--breaks down, humanity will be in trouble. Once states fail, no one assumes responsibility for their debt to outside lenders. If enough states disintegrate, their fall will threaten the stability of global civilization itself.

### 4

#### Nuclear energy embodies the essence of enframing objects as standing reserve

Kinsella 7 Dr. William J. Kinsella 2007 (Heidegger and Being at the Hanford Reservation: Standing Reserve, Enframing, and Environmental Communication Theory; Environmental Communication Vol. 1, No. 2, November 2007, pp.194-217 Dr. William J. Kinsella is an associate professor at North Carolina State University. His work on nuclear energy communication has encompassed the areas of nuclear fusion, environmental cleanup across the US nuclear weapons complex, and commercial nuclear energy in US and global contexts.)

In his essay on ‘‘the question concerning technology,’’ Heidegger (1977a) critiqued the reduction of nature to a ‘‘standing reserve’’ (bestand), a stockpile of phenomena appropriated for human exploitation. Hanford is a compelling example, as the place was taken from its former residents, farmers and ranchers who had taken it in turn from their Native American predecessors, by the government for use as a plutonium factory. Hanford’s plutonium ‘‘product,’’ as it is known in the jargon of workers and officials, remains an essential element in the US nuclear ‘‘stockpile.’’ The example is even more fitting, however, because Heidegger viewed atomic energy as the quintessential product of modern science, technology, and Western metaphysics, which he linked in an instrumental ‘‘enframing’’ (gestell ) of the natural world (Foltz, 1995; Heidegger, 1966, 1969, 1977a). Enframing involves a stance toward the world that ‘‘challenges,’’ ‘‘regulates,’’ and ‘‘secures’’ its elements to create a standing reserve of usable resources (Heidegger, 1977a, p. 16). Human intervention in nuclear processes enframes nature in a way that is historically unprecedented, but was already implicit in the founding premises of modernism (Kinsella, 2004, 2005).

#### The rapacious drive to secure energy is a symptom of “challenging-forth,” a mindset that renders everything as disposable. Only through rejecting challenging forth and embracing bringing forth can we avoid this hollowing out of Being

Waddington 5 A Field Guide to Heidegger: Understanding 'The Question concerning Technology' more by David Waddington Educational Philosophy and Theory, Vol. 37, No. 4, 2005 http://concordia.academia.edu/DavidWaddington/Papers/538046/A\_Field\_Guide\_to\_Heidegger\_Understanding\_The\_Question\_concerning\_Technology

Most essays on technology focus primarily on practical issues surrounding the use of particular technologies . Heidegger’s essay, however, does not—instead, it focuses on the ways of thinking that lie behind technology. Heidegger (1977, p. 3) thinks that by coming to understand these ways of thinking, humans can enter into a ‘free relationship’ with technology. After dismissing the conventional account of technology, which supposedly states that technology is simply a means to an end, Heidegger commences a discussion on ancient craftsmanship. He suggests that the ancient craftsmanship involves the four Aristotelian causes: material, formal, ﬁnal, and efﬁcient. Intuitively, one might think that the efﬁcient cause of a given craft-item (the craftsman) was the most signiﬁcant of the four. However, although the craftsman has an important role in that she unites the four causes by considering each of them carefully, each of the four causes is equally co-responsible for the particular craft-item that is produced. Heidegger comments, ‘The four ways of being responsible bring something into appearance. They let it come forth into presencing’ (1977, p. 9). Appropriately enough, Heidegger names this process bringing-forth . Notably, bringing-forth is not merely a descriptive genus under which the four causes are subsumed—rather, it is a uniﬁed process, ‘a single leading-forth to which [each of the causes] is indebted’ (Lovitt, 1972, p. 46).Heidegger writes that bringing-forth ‘comes to pass only insofar as something concealed comes into unconcealment’ (1977, p. 11). Thus, instead of the craft-item being created by the craftsman, as one would think, it was revealed or unconcealed .In ‘The Thing’, Heidegger comments on the making of a jug, The jug is not a vessel because it was made; rather, the jug had to be made because it is this holding vessel. The making … lets the jug come into its own. But that which in the jug’s nature is its own is never brought about by its making. (1971, p. 168)Clearly, revealing/unconcealing in the mode of bringing-forth contains strong hints of Platonism. Bringing-forth is the mode of revealing that corresponds to ancient craft. Modern technology, however, has its own particular mode of revealing, which Heidegger calls challenging-forth . Thinking in the mode of challenging-forth is very different from thinking in the mode of bringing-forth: when challenging-forth, one sets upon the elements of a situation both in the sense of ordering (i.e. setting a system upon) and in a more rapacious sense (i.e. the wolves set upon the traveler and devoured him). In bringing-forth, human beings were one important element among others in the productive process; in challenging-forth, humans control the productive process. Efﬁciency is an additional important element of thinking in the mode of challeng-ing forth; the earth, for example, is set upon to yield the maximum amount of ore with the minimum amount of effort. Essentially, challenging-forth changes the way we see the world—as Michael Zimmerman pointedly remarks, ‘To be capable of transforming a forest into packaging for cheeseburgers, man must see the forest not as a display of the miracle of life, but as raw material, pure and simple’ (1977, p. 79).Production in the mode of challenging-forth reveals objects that have the status of standing-reserve . Objects that have been made standing-reserve have been reduced to disposability in two different senses of the word: (1) They are disposable in the technical sense; they are easily ordered and arranged. Trees that once stood chaotically in the forest are now logs that can be easily counted, weighed, piled, and shipped. (2) They are also disposable in the conventional sense; like diapers and cheap razors, they are endlessly replaceable/interchangeable and have little value. For the most part, challenging things forth into standing-reserve is not a laudable activity, and thus it makes sense to wonder what drives human beings to think in this way. Heidegger’s answer to this motivational question is unconventional— instead of suggesting that the origins of this motivation are indigenous to human beings, he postulates the existence of a phenomenon that ‘sets upon man to order the real as standing-reserve’ (1977, p. 19). Heidegger calls this mysterious phenomenon enframing ( Ge-stell in German). The word ‘Ge-stell’ gathers together several meanings of the -stellen family of German verbs: in Ge-stell, humans are ordered ( bestellen ), commanded ( bestellen ), and entrapped ( nachstellen ) (Harries 1994,p. 229). Heidegger thinks that our default state is that of being trapped by Ge-stell; this is what he means when he writes, ‘As the one who is challenged forth in this way, man stands within the essential realm of [Ge-stell]. He can never take up a relationship to it only subsequently’ (1977, p. 24; Sallis, 1971, p. 162). According to Heidegger (1977, p. 25), there are different ‘ordainings of destining’ for human beings. Although the default destining is that of Ge-stell, it is possible to choose an alternate road. Heidegger thinks that human beings have been granted the special role of ‘Shepherds of Being’—we have been granted the power to reveal the world in certain ways (Ballard, 1971, p. 60). Trapped in Ge-stell, we tend to reveal things in the mode of challenging-forth, but we can also choose to reveal things in the mode of bringing-forth. Heidegger comments, ‘Placed between these possibilities, man is endangered from out of destining’ (1977, p. 26). However, by carefully considering the ways of thinking that lie behind technology, we can grasp the ‘saving power’. We can realize that we, the Shepherds of Being, have a choice : we can bring-forth rather than challenge-forth. Thus, once we understand the thinking behind technology, we become free to choose our fate—‘… we are already sojourning in the open space of destining’ (Heidegger, 1977, p. 26).

### Solvency

#### IFRs are only blueprints and won’t be competitive—empirics prove high costs.

Wauchope, ‘12

[Noel Wauchope works as a Division 1 registered nurse. Noel has been an anti-nuclear campaigner for many years and used to write for the now defunct Nation Review on the subject, as well as being the spokesperson for Women’s Electoral Lobby on nuclear issues, July 5, 2012, “In dispraise of Integral Fast Nuclear Reactors,” http://www.independentaustralia.net/2012/environment/in-dispraise-of-integral-fast-nuclear-reactors/]

For instance, they ignore the fact that IFRs need plutonium or enriched uranium as fuel. So, to have fast reactors, Australia would need to import these, or set up nuclear reprocessing or uranium enrichment here. This would also involve issues such as cost, politics, public opinion, issues concerning our growing renewable energy systems, radioactive waste storage — just to mention some of the more obvious of the considerable obstacles to Australia ever getting fast reactors. Nuclear lobbyists seem naively oblivious to the importance of these factors in the minds of the general public. In Australia, the high priest now is Barry Brook. He and his acolytes proselytise the case for Australia to get IFRs. This latest enthusiasm seems to have been inspired by Britain’s present crisis of nuclear waste. Britain had, and still has, nearly 100 metric tonnes of weapons grade plutonium, to deal with. So, they set up the Thermal Oxide Reprocessing Plant (THORP) at Sellafield in Cumbria, which began operating in 1997. It was supposed to make money by recycling plutonium from spent fuel to make mixed oxide fuel (MOX) and then sell it overseas. Trouble was, it was a commercial disaster — costing $2.3 billion to build, and $750 million each year to run. It was closed in August 2011. So, what to do with the radioactive wastes? The cheapest and least dangerous solution was deep burial and the UK government is trying to persuade Cumbria to host an underground radioactive mausoleum — but, for some reason, the Cumbrians are not very keen on the idea… So, along come the nuclear entrepreneur whiz kids. Why not have another try at turning toxic wastes into a profitable export, they say. Sell them off overseas to other countries — we will design a gadget to use these, and sell the gadget, too! Enter the Integral Fast Reactors. The Brits are considering starting with one type of these, the Power Reactor Innovative Small Module — General Electric’s PRISM fast reactor. This reactor “consumes” weapons grade plutonium, producing electricity, and turning the plutonium into other radioactive wastes that are not quite as useful for making bombs. General Electric Hitachi proposes to “burn” the UK’s stockpile of plutonium in GEH’s Prism fast reactors”. It’s a complicated process. Now, doesn’t that sound good? It would get rid of Britain’s massive amount of plutonium wastes, make it (almost) unsuitable for weapons, make money for UK, and give cheap electricity to the colonials, hmm… say, in Australia! Yep, Barry Brook and his crew think that this is a great idea for Australia. What’s wrong with this? Lots. First of all, I always think “follow the money”. Because of various factors, these reactors will be hugely expensive to build. The construction materials have to be especially tough and durable because of obvious – and non-obvious – safety concerns. The PRISM reactor is cooled by liquid sodium, which can very readily catch fire. They are kept as small reactors, to make it easier to maintain safety features. Apart from the high costs of building these reactors, because they are small, they would not be economic to sell except in large numbers; they need to be pretty well mass produced to make them viable for export. Bearing in mind that they still exist only as blueprints — it will be a very long stretch until somebody (in Australia?) places an order for them in large numbers. The Integral Fast Reactor is, after all, just another type of nuclear reactor — it runs on radioactive fuel, provides heat to make electricity and produces radioactive waste. It also uses reprocessed nuclear wastes for its fuel, therefore nuclear reprocessing plants would be needed. So far, all existing nuclear reprocessing has proved to be an expensive failure. For instance, the USA’s MOX reprocessing fuel plant is still under construction — it has cost billions of dollars, is over budget and also behind schedule. In Japan, the super expensive Monju prototype fast breeder reactor is costing 1,000 times more than conventional reactors to run. Beyond all that, there is the safety factor, mentioned briefly before. The metal fuel gets hot and, unlike oxide based fuels, when it heats, it swells. If the fuel expands too much, it can crack the surrounding cladding — and that presents a big problem. And just as safety impinges on costs, so does security. These small nuclear reactors have to be guarded, and so does the plutonium and enriched uranium fuel being transported to the reactor. And so do the eventual radioactive wastes produced by the IFRs. Security alone would be a huge expense — and more so because it would involve guarding not just a few big reactors, but a large number of small ones.

#### Default neg—overwhelming empirics and the world’s leading nuclear tech developers conclude IFRs fail

Lovins, ‘9

[Amory B. Lovins is a physicist and Cofounder, Chairman, and Chief Scientist of Rocky Mountain Institute and Cofounder and Chairman Emeritus of Fiberforge, Inc. Published in 29 books and hundreds of papers. He has consulted for more than three decades for major firms and governments (including the U.S. DoE and DOD) on advanced energy and resource efficiency in ~50 countries, March 21, 2009, ““New” nuclear reactors, same old story,” Rocky Mountain Institute, http://www.rmi.org/Knowledge-Center/Library/2009-07\_NuclearSameOldStory]

IFRs might in principle offer some safety advantages over today’s light-water reactors, but create different safety concerns, including the sodium coolant’s chemical reactivity and radioactivity. Over the past half-century, the world’s leading nuclear technologists have built about three dozen sodium-cooled fast reactors, 11 of them Naval. Of the 22 whose histories are mostly reported, over half had sodium leaks, four suffered fuel damage (including two partial meltdowns), several others had serious accidents, most were prematurely closed, and only six succeeded. Admiral Rickover canceled sodium-cooled propulsion for USS Seawolf in 1956 as “expensive to build, complex to operate, susceptible to prolonged shutdown as a result of even minor malfunctions, and difficult and time-consuming to repair.” Little has changed. As Dr. Tom Cochran of NRDC notes, fast reactor programs were tried in the US, UK, France, Germany, Italy, Japan, the USSR, and the US and Soviet Navies. All failed. After a half-century and tens of billions of dollars, the world has one operational commercial-sized fast reactor (Russia’s BN600) out of 438 commercial power reactors, and it’s not fueled with plutonium.

#### Nuclear engineer shortage prevents solvency.

Szondy, ‘12

[David, freelance writer -- Gizmag, 2-16, “Feature: Small modular nuclear reactors - the future of energy?” <http://www.gizmag.com/small-modular-nuclear-reactors/20860/>]

Not only complicated, but expensive and potentially dangerous. Though hundreds of reactors were built all over the world and some countries, such as France, generate most of their electricity from it, nuclear power has faced continuing questions over cost, safety, waste disposal and proliferation. One hundred and four nuclear plants provide the United States with 20 percent of the nation's power, but a building permit hadn't been issued since 1978 with no new reactors coming on line since 1996 and after the uproar from the environmental movement after nuclear accidents at Three Mile Island, Chernobyl and Fukushima, it seemed unlikely that any more would ever be approved - until now. This fierce domestic opposition to nuclear power has caused many governments to take an almost schizophrenic stance regarding the atom.¶ Germany, for example, decided to abandon nuclear power completely in favor of alternative energy, but then the severe winter of 2011-12 got so cold that the Danube was freezing and Berlin had to put some of the mothballed reactors back into service. This opposition also means that many Western countries have a shortage of nuclear engineers because many see it as a dying industry not worth getting into. This is particularly acute in the United States and Britain, neither of which have retained the capacity for building the huge reactor vessels and must farm this out to overseas manufacturers.

#### Natural gas will wreck the industry

WSJ, ’12

[“Cheap Natural Gas Unplugs U.S. Nuclear-Power Revival”]

What killed the revival wasn't last year's nuclear accident in Japan, nor was it a soft economy that dented demand for electricity. Rather, a shale-gas boom flooded the U.S. market with cheap natural gas, offering utilities a cheaper, less risky alternative to nuclear technology. "It's killed off new coal and now it's killing off new nuclear," says David Crane, chief executive of NRG Energy Inc., NRG +3.58% a power-generation company based in Princeton, N.J. "Gas has come along at just the right time to upset everything." Across the country, utilities are turning to natural gas to generate electricity, with 258 plants expected to be built from 2011 through 2015, federal statistics indicate. Not only are gas-fired plants faster to build than reactors, they are much less expensive. The U.S. Energy Information Administration says it costs about $978 per kilowatt of capacity to build and fuel a big gas-fired power plant, compared with $5,339 per kilowatt for a nuclear plant. Already, the inexpensive natural gas is putting downward pressure on electricity costs for consumers and businesses. The EIA has forecast that the nation will add 222 gigawatts of generating capacity between 2010 and 2035—equivalent to one-fifth of the current U.S. capacity. The biggest chunk of that addition—58%—will be fired by natural gas, it said, followed by renewable sources, including hydropower, at 31%, then coal at 8% and nuclear power at 4%. "What utility doesn't want cheap fuel?" says Steve Piper, associate director of energy fundamentals at SNL Financial, a research company. He predicts natural gas will remain the "default fuel" for as long as gas production remains high and prices stay low.

### Water Adv

#### Global nuclear renaissance solves their water advantage – their scenario is about water in China, Egypt, India and Pakistan. Their energy collective evidence says these countries are rapidly expanding their nuclear capacity.

#### Higher price in desal now will cause shift to conservation

Boals 9

[Connor Boals Infographics by Hannah Nester Circle of BlueDrinking From The Sea, <http://www.circleofblue.org/waternews/2009/world/drinking-from-the-sea-demand-for-desalination-plants-increases-worldwide/>, June 29]

“The most reliable, most cost effective and most environmentally friendly source of water is conservation, increased efficiency and waste prevention,” Scow said. “We have so many opportunities to save water. Those needs need to be addressed first.” Many in the industry see a silver lining in the higher pricing of desalinated water: people will be thriftier and use less. “Yes, the price is obscenely high, but what’s the alternative if you don’t have any water?” Pankratz said. “Until we look at water differently and start valuing it for what its real cost is, we won’t have a good picture, and people won’t be conserving water like they should.” Palmer said that the pricing of water in Australia has always been too cheap. “We are the driest continent, and our prices for municipal water are about half of what people charge in Europe, where there is admittedly more water,” he said. “[Desalinated] water is three times more expensive, therefore you don’t want to waste it,” he said. “So water authorities have to charge accordingly, and people will use less water and waste less water.”

#### No spillover – they don’t have a single piece of evidence that the plan spurs nuclear desalination, or that countries will use it.

#### Conservation alone can solve the world’s water problems

Bouguerra 8

[Environmental and economic challenges of water desalination [Mohamed Larbi BOUGUERRA](http://base.d-p-h.info/fr/corpus_auteur/fiche-auteur-839.html) 02 / 2008 <http://base.d-p-h.info/fr/fiches/dph/fiche-dph-7355.html>, Author’s lecture during the roundtable on « Natural resources and security » during the seminar on « Natural resources » organized on the 18th of January 2008 by the French Embassy in Amman and the Institut Français du Proche-Orient.]

For some analysts, water desalination may appear as a technological fix to the water needs of our modern societies or, sometimes, as a political trick as in the case of the Israeli- Palestinian conflict. Natural resources such as water are of course limited and finite. Desalination is deceiving. It’s a fool paradise rubbing that fact. Illimited abundance in any field or realm is a hoax. Rather, one must take into account of all the techniques aiming at a wise water use, to conserving of the resource and processes intented to save water. One must manage water in order to eliminate leakages which amount up to 20-30% on average worldwide (NAFW not accounted for water). According to recent studies, it appears that conservation measures may meet the new water needs for a cost which is 10 to 25% of incurred expenses of water desalination. In that regard, water efficiency must be improved. Leakages and wastings must be eliminated. According to the Washington based Worldwatch Institute, we can avoid thus desalination and its negative effects on the environment and the atmosphere. Finally one must point to the fact that desalinated water quality must be carefully monitored for bromate, a suspected carcinogen. According to international regulations, bromate levels may not exceed 10 ppb on average over a year in a reservoir.

#### Not sufficient to solve – they haven’t read any evidence that desal produces enough water to prevent water wars.

#### Desal destroys plankton and marine species

Matthews 11

[Richard Matthews is a consultant, eco-entrepreneur, green investor and author of numerous articles on sustainable positioning, enviro-politics and eco-economics. He is the owner of THE [GREEN MARKET](http://en.wikipedia.org/wiki/Green_market), a leading sustainable business blog and one of the Web’s most comprehensive resources on the business of the environment., <http://globalwarmingisreal.com/2011/03/23/are-desalination-technologies-the-answer-to-the-world-water-crisis/>, Are Desalination Technologies the Answer to the World Water Crisis?]

In addition to its high cost, desalination technologies are harmful to the environment. Removing salt from seawater produces brine, which contains twice the salt of seawater; they also contain contaminants that can affect marine life when dumped back to the sea. If brine is disposed on land, it could seep through the soil and pollute water reserves underground. The US [Environmental Protection Agency](http://www.epa.gov/climatechange/endangerment.html) found that desalination plants kill at least 3.4 billion fish and other marine life annually. This represents a $212.5 million loss to commercial fisheries. Desalination plants can also destroy up to 90 percent of plankton and fish eggs in the surrounding water.

#### Plankton key to all life on earth

IBMEC 12

[Island Bay Marine Education Center, <http://www.octopus.org.nz/Plankton.html>, The Marine Education Centre is a not for profit charitable organisation, focussed on conservation through education, promoting the on-going care and sustainable use of Our Ocean, <http://www.octopus.org.nz/Plankton.html>]

WHY SHOULD WE CARE ABOUT PLANKTON? Plankton are the basis of all life in the ocean and food for larger marine animals from shellfish to large fish and even whales. The largest fish in the world, the Whale Shark, is a plankton feeder and "krill", one of the ocean's smallest animals, is dinner for its largest, the blue whale! Studying plankton can tell scientists about water quality and the amount of nutrients in different areas of the oceans, and how many fish there are likely to be in future years. Almost 70% of the oxygen we breathe comes from the oceans and is made by phytoplankton. Without phytoplankton, there would be no life in the oceans or on Earth!! Plankton also absorbs most of the carbon dioxide (CO2) in the atmosphere (caused by cutting down forests and burning fossil fuels) by converting it to oxygen (O2) or by sinking it to the bottom of the sea where it canÕt escape. Land plants are really important too, but the health of the oceans is even more important. Plankton are the most abundant life form on Earth, except for bacteria. In fact, all the plankton in the oceans weigh more than all the dolphins, fish and whales put together! Plankton may be microscopic in size, but they play a giant role in the Earth's ecosystems!! Plankton is very important for all life on this planet. Without it both the ocean and the land would become a desert. Where there's lots of sunlight, phytoplankton grows quickly, mopping up carbon dioxide, releasing oxygen and providing food for zooplankton and the rest of the ocean food web including whales. When plankton die they fall to the bottom of the ocean and break down like compost and help fertilise new plankton growth.. But not all dead plankton breaks down quickly. Some of it gets buried in layers of sand and mud which builds up over time crushing and heating the plankton and causing chemical changes.

#### No scientific data to support drought-induced conflict theory – most recent ev.

Buhaug, et. al, ‘12

[Halvard (Professor at the Centre for the Study of Civil War at Peace Research Institute), Ole Thiesen (doctoral candidate at the Norwegian University of Science and Technology), and Helge Holtermann (Doctoral Researcher at the Centre for the Study of Civil War at the Peace Research Institute), Winter, “Climate Wars? Assessing the Claim That Drought Breeds Conflict”, International Security, Vol. 36, No. 3, Project Muse, RSR]

In his acceptance lecture on the occasion of the Nobel Peace Prize award, President Barack Obama stated, “There is little scientific dispute that if we do nothing, we will face more drought, more famine, more mass displacement—all of which will fuel more conflict for decades.”79 So far, there is little scientific evidence to support this claim. The results presented in this article demonstrate that there is no direct, short-term relationship between drought and civil war onset, even within contexts presumed most conducive to violence. At the same time, the analysis solidifies claims of recent scholarship on the importance of ethnically inclusive institutions for maintaining peace. Ethnopolitical exclusion is strongly and robustly related to the local risk of civil war. These findings contrast with efforts to blame violent conflict and atrocities on exogenous non-anthropogenic events, such as drought or desertification. The primary causes of intrastate armed conflict and civil war are political, not environmental. Consequently, the future security of Africa depends not on climate mitigation but on political and socioeconomic development. A likely objection to this conclusion relates to the magnitude of things to come; the rate and extent of past warming and drying will increase manifold in coming decades, so we cannot use historical data to project future trends. This may hold some truth, as there are limits to the coping capacity of any (agrarian) society. Crops grow only under given climatic conditions, and livestock perish in the absence of water and pasture. At the same time, gloomy interjections tend to ignore technological, societal, and political developments that might mediate (or accentuate) adverse environmental change. Increasing urbanization relieves some of the pressure on rural lands; technological innovation, DNA manipulation, irrigation, and desalination plantations promise significant increases in agricultural productivity (even though implementing such technologies successfully may prove challenging); and increasing economic interdependence and the spread of liberal democratic values would [End Page 105] suggest a more equitable distribution of resources and better disaster preparedness and response. The last ten to fifteen years have seen a striking drop in the frequency of civil wars in Africa, at a time when temperatures have risen to unprecedented levels and drying has prevailed across much of the continent. Although a drought is unlikely to directly cause civil war, climate change will affect human security in a broader sense. Drought and other climatic shocks frequently cause dismay and poverty, and more extreme weather in the years to come suggests more human suffering. For this reason alone, we should invest more in solid research on the social dimensions of climate change. But to raise alarm about coming “climate wars” may do more harm than good,80 as it could lead to a militarization of the issue and raising of barriers to prevent immigration, thereby harming those who are most in need of assistance. Finally, future research needs to apply a broader understanding of political violence and armed conflict than is normally the case today. Given data limitations and a perception that major, state-based conflicts carry greater potential for political instability and state collapse than small-scale interethnic skirmishes, recent scholarship has focused almost exclusively on civil wars.81 This is reflected in the contemporary discourse on climate security, which is dominated by a state-centric approach. In contrast, narratives and news reports of conflict over diminishing resources frequently concern clashes between rivaling ethnic groups or between pastoralists and sedentary farmers. The conflicts in Assam in India, Darfur in Sudan, Kenya, Mali, and Mauritania, all central cases in the environmental security literature, were at least initially interethnic conflicts without explicit state involvement. Key questions in this regard are how environmental conditions and rapid environmental change affect intercommunal relations and local land use disputes, and what role the state plays in ending or fueling these conflicts. [End Page 106]

### Waste Adv

#### Reprocessing increases waste – contaminates more materials.

Biello 10 (David, Is Reprocessing the Answer to Eliminating Fissile Materials from Bombs and Nuclear Waste? Scientific American, 15 April 2010, http://www.scientificamerican.com/article.cfm?id=is-reprocessing-the-answer-to-eliminating-fissile-materials, da 9-3-12)

But reprocessing can end up producing more waste. According to the DOE, reprocessing spent fuel ends up increasing the total cumulative volume of nuclear waste by more than six times—thanks to more materials being contaminated with plutonium—from a little less than 74,000 cubic meters destined for some form of repository to nearly 460,000 cubic meters. Reprocessing also results in radioactive liquid waste: the French reprocessing plant in La Hague discharges 100 million liters of liquid waste (pdf) into the English Channel each year. "They have polluted the ocean all the way to the Arctic," Makhijani says. "Eleven western European countries have asked them to stop reprocessing."

#### Nuclear waste recycling does not solve on-site waste or Yucca – best case scenario takes decades to solve.

Lester, expert testifying before the House Subcommittee on Energy, 5 (Richard K., The Economics of Reprocessing in the United States, Massachusetts Institute of Technology, 12 July 2005, http://web.mit.edu/ipc/publications/pdf/The\_Economics\_of\_Reprocessing.pdf, da 9-16-12)

A similar point can be made about the waste¶ management implications of reprocessing. The selection¶ of PUREX reprocessing technology would not¶ fundamentally change either the impending problem of¶ inadequate interim spent fuel storage capacity or the¶ problem of finding a suitable site for final waste¶ disposal. The need for additional storage capacity and¶ for a final repository, whether at Yucca Mountain or¶ elsewhere, would still remain.¶ Advanced reprocessing technologies, if coupled with¶ transmutation schemes, could in principle improve the¶ prospects for successful disposal. Such schemes would¶ partition plutonium and other long-lived actinides from¶ the spent fuel – and possibly also certain long-lived¶ fission products – and transmute them into shorter-lived¶ and more benign species. The goals would be to reduce¶ the thermal load on the repository, thereby increasing its¶ storage capacity, and to shorten the time for which the¶ waste must be isolated from the biosphere. It is¶ important for research to continue on advanced fuel¶ cycle technologies potentially capable of achieving these¶ goals will be important to pursue. But even in the best¶ case these technologies are not likely to be available for¶ large-scale deployment for at least two or three decades.¶ Indeed, there is no guarantee that the desired¶ performance objectives could be achieved on any¶ timescale. The eventual economic impact of such¶ schemes cannot now be predicted with confidence. But¶ the strong likelihood is that they would be more costly¶ than conventional PUREX reprocessing and MOX¶ recycle, since they would entail more complex¶ separations processes, more complete recovery of¶ radionuclides, a more complex fuel fabrication process,¶ and the need to transmute a broader array of¶ radionuclides than just the plutonium isotopes.

#### No Yucca mountain – Nevada killed it.

Joyce, NPR, ‘12

[Christopher, “Yucca Mountain Is Dead. Now What?”, Real Clear Science, 1-27-12,

<http://www.realclearscience.com/2012/01/27/yucca_mountain_is_dead_now_what_245217.html>, RSR]

A panel of experts Thursday set forth a plan for getting rid of thousands of tons of highly radioactive nuclear waste. Most of it is spent fuel from nuclear power reactors. It was supposed to go to a repository in Nevada called Yucca Mountain, but the government has abandoned that plan. Yucca Mountain was largely done in by Nevadans, led by powerful Democratic Senate Majority Leader Harry Reid, who didn't want their state to be the country's nuclear waste dump.

#### No nuclear terrorism – too many difficulties.

Gavin, Tom Slick Professor of International Affairs at UT Austin, ‘10

 [Francis, Winter 2009/2010, “Same As It Ever Was: Nuclear Alarmism, Proliferation, and the Cold War,” International Security 34.3]

Coherent policies to reduce the risk of a nonstate actor using nuclear weapons clearly need to be developed. In particular, the rise of the Abdul Qadeer Khan nuclear technology network should give pause.49 But again, the news is not as grim as nuclear alarmists would suggest. Much has already been done to secure the supply of nuclear materials, and relatively simple steps can produce further improvements. Moreover, there are reasons to doubt both the capabilities and even the interest many terrorist groups have in detonating a nuclear device on U.S. soil. As Adam Garfinkle writes, "The threat of nuclear terrorism is very remote."50 Experts disagree on whether nonstate actors have the scientific, engineering, financial, natural resource, security, and logistical capacities to build a nuclear [End Page 19] bomb from scratch. According to terrorism expert Robin Frost, the danger of a "nuclear black market" and loose nukes from Russia may be overstated. Even if a terrorist group did acquire a nuclear weapon, delivering and detonating it against a U.S. target would present tremendous technical and logistical difficulties.51 Finally, the feared nexus between terrorists and rogue regimes may be exaggerated. As nuclear proliferation expert Joseph Cirincione argues, states such as Iran and North Korea are "not the most likely sources for terrorists since their stockpiles, if any, are small and exceedingly precious, and hence well-guarded."52 Chubin states that there "is no reason to believe that Iran today, any more than Sadaam Hussein earlier, would transfer WMD [weapons of mass destruction] technology to terrorist groups like al-Qaida or Hezbollah."53 Even if a terrorist group were to acquire a nuclear device, expert Michael Levi demonstrates that effective planning can prevent catastrophe: for nuclear terrorists, what "can go wrong might go wrong, and when it comes to nuclear terrorism, a broader, integrated defense, just like controls at the source of weapons and materials, can multiply, intensify, and compound the possibilities of terrorist failure, possibly driving terrorist groups to reject nuclear terrorism altogether." Warning of the danger of a terrorist acquiring a nuclear weapon, most analyses are based on the inaccurate image of an "infallible ten-foot-tall enemy." This type of alarmism, writes Levi, impedes the development of thoughtful strategies that could deter, prevent, or mitigate a terrorist attack: "Worst-case estimates have their place, but the possible failure-averse, conservative, resource-limited five-foot-tall nuclear terrorist, who is subject not only to the laws of physics but also to Murphy's law of nuclear terrorism, needs to become just as central to our evaluations of strategies."54

### China/Competition Adv

#### Plan isn’t sufficient – their Cullinane 11 evidence just isolates nuclear power as “an example of their larger efforts to marshal their scientific and economic forces as instruments of national power.”

#### Can’t solve Chinese competition – their author advocates an over-arching strategy including export protections, SMRs and presidential leadership – that’s not part of the plan

Cullane AFF AUTHOR 11 (Scott, America Falling Behind: The Strategic Dimensions of Chinese Commercial Nuclear Energy, 28 September 2011, http://www.ensec.org/index.php?option=com\_content&view=article&id=319:america-falling-behind-the-strategic-dimensions-of-chinese-commercial-nuclear-energy&catid=118:content&Itemid=376, da 1-16-13)

It appears that over the past two decades the US government has grown to accept America’s economic soft power as a permanent condition and hence has not felt compelled to promote or actively defend America’s position. The PRC is now showing that America’s economic strength can be mitigated and co-opted. To adequately counter Chinese activities the US will have to make greater efforts to clearly identify the situation and ensure that policy conforms to strategy in order for the US to advance its position. Prudent actions for US government include:¶ • Build a permanent storage facility, either at Yucca Mountain or elsewhere, to dispose of nuclear waste material. The lack of a permanent storage area is a limiting factor on any expansion of domestic nuclear power plants. ¶ • Streamline the licensing and authorization process for new reactors. Some recent progress has been made in this area, but more can be done to improve efficiencies. ¶ • Continue to build on the incentives for the construction of nuclear power plants that were put in place by the Energy Policy Act of 2005.¶ • Re-write US export controls to guard against PRC industrial espionage, improve US counterintelligence in places of nuclear research, and confront problems associated with deemed-export at US research institutions. ¶ • Invest in nuclear energy research, specifically in safer more efficient reactors that reduce the upfront costs that often hamper nuclear power plant construction. Small reactors or modular construction represent two areas with good potential. ¶ • Create a whole of government strategy for the construction and export of nuclear reactors § Marked 11:11 § and related equipment. ¶ • These previous steps will allow the US to engage the PRC from a position of strength and begin a more serious dialogue that links economic cooperation on reactor construction to safer proliferation practices. America cannot stop the PRC from developing and exporting reactors, but the US can present more attractive, more technically sophisticated options and use diplomatic and economic pressure to influence China to act responsibly when exporting nuclear technology. ¶ • Perhaps most importantly, consistent and strong leadership from the executive branch will be critical for implementing these policy changes and for framing the issue of nuclear commerce with regards to China in terms of security and international influence, not only in commercial terms. ¶ The United States today still holds many advantages, both potential and actual, over the PRC. The innovative culture inherent in America is still pushing forward research. America has the means and tools at its disposal to remain competitive and successful in a world where China is a global power. The question is what America will decide it wants its place in the nuclear world to be. Nuclear energy commerce is important for US energy security with proliferation implications, but it is even more important because it is indicative of larger efforts on both sides of the Pacific to shape the 21st century.

## 2NC

#### Michelle lost the speech doc ☹.

## 1NR

### China

#### Can’t solve Chinese competition – their author advocates an over-arching strategy including export protections, SMRs and presidential leadership – that’s not part of the plan

Cullane AFF AUTHOR 11 (Scott, America Falling Behind: The Strategic Dimensions of Chinese Commercial Nuclear Energy, 28 September 2011, http://www.ensec.org/index.php?option=com\_content&view=article&id=319:america-falling-behind-the-strategic-dimensions-of-chinese-commercial-nuclear-energy&catid=118:content&Itemid=376, da 1-16-13)

It appears that over the past two decades the US government has grown to accept America’s economic soft power as a permanent condition and hence has not felt compelled to promote or actively defend America’s position. The PRC is now showing that America’s economic strength can be mitigated and co-opted. To adequately counter Chinese activities the US will have to make greater efforts to clearly identify the situation and ensure that policy conforms to strategy in order for the US to advance its position. Prudent actions for US government include:¶ • Build a permanent storage facility, either at Yucca Mountain or elsewhere, to dispose of nuclear waste material. The lack of a permanent storage area is a limiting factor on any expansion of domestic nuclear power plants. ¶ • Streamline the licensing and authorization process for new reactors. Some recent progress has been made in this area, but more can be done to improve efficiencies. ¶ • Continue to build on the incentives for the construction of nuclear power plants that were put in place by the Energy Policy Act of 2005.¶ • Re-write US export controls to guard against PRC industrial espionage, improve US counterintelligence in places of nuclear research, and confront problems associated with deemed-export at US research institutions. ¶ • Invest in nuclear energy research, specifically in safer more efficient reactors that reduce the upfront costs that often hamper nuclear power plant construction. Small reactors or modular construction represent two areas with good potential. ¶ • Create a whole of government strategy for the construction and export of nuclear reactors § Marked 11:11 § and related equipment. ¶ • These previous steps will allow the US to engage the PRC from a position of strength and begin a more serious dialogue that links economic cooperation on reactor construction to safer proliferation practices. America cannot stop the PRC from developing and exporting reactors, but the US can present more attractive, more technically sophisticated options and use diplomatic and economic pressure to influence China to act responsibly when exporting nuclear technology. ¶ • Perhaps most importantly, consistent and strong leadership from the executive branch will be critical for implementing these policy changes and for framing the issue of nuclear commerce with regards to China in terms of security and international influence, not only in commercial terms. ¶ The United States today still holds many advantages, both potential and actual, over the PRC. The innovative culture inherent in America is still pushing forward research. America has the means and tools at its disposal to remain competitive and successful in a world where China is a global power. The question is what America will decide it wants its place in the nuclear world to be. Nuclear energy commerce is important for US energy security with proliferation implications, but it is even more important because it is indicative of larger efforts on both sides of the Pacific to shape the 21st century.

#### Government investment in nuclear recycling hinders nuclear leadership – expenses and resource diversion

Lester, expert testifying before the House Subcommittee on Energy, 5 (Richard K., The Economics of Reprocessing in the United States, Massachusetts Institute of Technology, 12 July 2005, http://web.mit.edu/ipc/publications/pdf/The\_Economics\_of\_Reprocessing.pdf, da 9-16-12)

What if, in spite of these arguments, Congress still¶ seeks to intervene to stimulate large scale reprocessing in¶ the near term? Because a purely private initiative would¶ be economically unviable, such an intervention, to be¶ effective, would inevitably require a major commitment¶ of federal funds.¶ 5¶ The need for direct government¶ involvement would also place heavy demands on the¶ government’s nuclear-skilled human resources, who¶ would necessarily be involved in the selection of a site,¶ the development of a licensing framework, the¶ management of contractors, and so on. The resources –¶ both human and financial – that are potentially available¶ to the government to support the development of¶ nuclear power are not unlimited. A new federal¶ reprocessing initiative would therefore risk diverting¶ resources from other policy initiatives that are likely to¶ make a greater positive contribution to the future of¶ nuclear power over the next few decades

### CP

#### Lack of reactor development is eroding US nuclear leadership - SMR deployment is key

Rosner and Goldberg 11 (Robert (William E. Wrather Distinguished Service Professor in the Departments of Astronomy and Astrophysics and Physics) and Stephen (Special Assistant to the Director at the Argonne National Laboratory) , *Energy Policy Institute at Chicago*, “Small Modular Reactors – Key to Future Nuclear Power Generation in the U.S.”, Technical Paper, Revision 1, November 2011, <https://epic.sites.uchicago.edu/sites/epic.uchicago.edu/files/uploads/EPICSMRWhitePaperFinalcopy.pdf>, accessed 7-31-12, RSR)

As stated earlier, SMRs have the potential to achieve significant greenhouse gas emission reductions. They could provide alternative baseload power generation to facilitate the retirement of older, smaller, and less efficient coal generation plants that would, otherwise, not be good candidates for retrofitting carbon capture and storage technology. They could be deployed in regions of the U.S. and the world that have less potential for other forms of carbon-free electricity, such as solar or wind energy. There may be technical or market constraints, such as projected electricity demand growth and transmission capacity, which would support SMR deployment but not GW-scale LWRs. From the on-shore manufacturing perspective, a key point is that the manufacturing base needed for SMRs can be developed domestically. Thus, while the large commercial LWR industry is seeking to transplant portions of its supply chain from current foreign sources to the U.S., the SMR industry offers the potential to establish a large domestic manufacturing base building upon already existing U.S. manufacturing infrastructure and capability, including the Naval shipbuilding and underutilized domestic nuclear component and equipment plants. The study team learned that a number of sustainable domestic jobs could be created – that is, the full panoply of design, manufacturing, supplier, and construction activities – if the U.S. can establish itself as a credible and substantial designer and manufacturer of SMRs. While many SMR technologies are being studied around the world, a strong U.S. commercialization program can enable U.S. industry to be first to market SMRs, thereby serving as a fulcrum for export growth as well as a lever in influencing international decisions on deploying both nuclear reactor and nuclear fuel cycle technology. A viable U.S.-centric SMR industry would enable the U.S. to recapture technological leadership in commercial nuclear technology, which has been lost to suppliers in France, Japan, Korea, Russia, and, now rapidly emerging, China.

#### SMR production is also key to US nuclear tech leadership– it supports development of the most advanced technologies

King et al 11 (Marcus (Associate Director of Research at The George Washington University's Elliott School of International Affairs), LaVar Huntzinger (Center for Naval Analyses) and Thoi Nguyen (Professor at the University of Santa Clara), “Feasibility of Nuclear Power on U.S. Military Installations”, CNA, March 2011, RSR)

Finally, a significant appeal of SMRs is their ability to be manufactured substantially within a factory environment using state-of-the-art 6 fabrication and manufacturing. While other industries already use advanced modular construction techniques, including for the balance-of-plant systems in nuclear plants, they have not been applied to the modularization of the nuclear steam supply system. Development and demonstration efforts will be needed in order to adapt the most advanced technologies and processes to domestic nuclear plant fabrication and manufacture. This should yield significant improvements in product performance, quality, and economics. Such an effort can help support the revitalization of U.S. manufacturing, spurring domestic job creation and international leadership in key nuclear supply areas.

#### DoD provides appropriate expertise for spillover.

Cohen, Executive Director of the Clean Air Task Force, ‘12

[Armond, “DoD: A Model for Energy Innovation?”, May 29, <http://www.catf.us/blogs/ahead/2012/05/29/dod-a-model-for-energy-innovation/>]

Unlike most other agencies, including the Energy Department, the Pentagon is the ultimate customer for the new technology it helps create, spending some $200 billion each year on R&D and procurement. The implications of DoD’s role as customer have not been widely appreciated, as: · DoD, uniquely in government, supports multi-year, billion-dollar “end to end” innovation efforts that produce technology that is continuously tested, deployed and refined on bases and in the field, providing real world feedback that leads to increases in performance and reductions in cost. By contrast, most of the federal government’s civilian energy innovation efforts involve research loosely connected at best with the few commercialization efforts that it supports. · DoD and its contractors know how to bring together multiple innovations to achieve system-level advances leading to big performance gains (examples range from nuclear submarines to unmanned aircraft to large-scale information systems). This systems approach is precisely what is needed to advance clean energy technologies. · Relatively stable, multi-year funding allows the Pentagon to pursue “long cycle” innovation that is necessary for large, capital- intensive technologies and supports a highly capable contractor base that can respond to changing national security demands. · The Pentagon’s scope and budget has allowed it to experiment with new and creative innovation tools such as the well-known Defense Advanced Projects Research Agency, which has produced extraordinary technological breakthroughs; and the Environmental Security Technology Certification Program, which develops and demonstrates cost-effective improvements in environmental and energy technologies for military installations and equipment. · Because of DoD’s size and demands for performance and reliability, it is unique among government and private sector organizations as a demonstration test-bed. Smart-grid technologies and advanced energy management systems for buildings are already poised to benefit from this aspect of the Pentagon’s innovation system. · DoD has collaborated effectively with other federal agencies, including the Department of Energy and its predecessors (for example, to advance nuclear energy technologies). Continuing competition and cooperation between DoD and DOE will spur energy innovation.  DoD’s innovation capabilities can enhance U.S. national security, improve U.S. international competitiveness, and spur global energy restructuring and greenhouse gas emissions reductions. At the same time, while providing enormous opportunities to develop and test energy efficiency technologies and small scale distributed energy appropriate to forward bases, the Pentagon is unlikely to become an all-purpose hub for advancing all categories of clean-energy technologies, because its energy innovation activities will be sustainable only where they can support the nation’s defense capabilities. Therefore, many other large-scale technologies that are of great importance to improving the environment, such as carbon-free central station generation or zero carbon transportation, may not as easily fit with DoD’s mission. Possible exceptions might include small modular nuclear reactors that can be used for producing independent, non-grid power at military bases, or, conceivably, zero-carbon liquid fuels other than anything resembling current generation biofuels.

#### DoD installations are key - market pull.

Marqusse, Executive Director of the Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP) at the Department of Defense, ‘12

[Jeffrey, “Military Installations and Energy Technology Innovation”, March, <http://bipartisanpolicy.org/sites/default/files/Energy%20Innovation%20at%20DoD.pdf>]

The key reason that DoD cannot passively rely on the private sector to provide a suite of new, cost-effective energy technologies is the difficulty of the transition from research and development to full deployment. Many have noted this challenge; it is often described as the “Valley of Death,” a term widely used in the early and mid-1990s to describe the obstacles to commercialization and deployment of environmental technologies. DoD’s environmental technology demonstration program, the Environmental Security Technology Certification Program (ESTCP), was created to overcome that hurdle. Why can’t DoD rely on the Department of Energy (DOE) to solve the commercialization and deployment problem? DOE has a mixed record in this area. Reasons for past failures at DOE are: 1) the lack of a market within DOE for the technologies; 2) overly optimistic engineering estimates; 3) lack of attention to potential economic or market failures; 4) a disconnect between business practices at DOE and commercial practices, which leads to demonstration results that are not credible in the private sector; and 5) programs completely driven by a technology “push,” rather than a mix of technology push and market-driven pull.81 Many of these issues can be viewed as arising from the first: the lack of a market within DOE. Since DOE is neither the ultimate supplier nor buyer of these technologies at the deployment scale, it is not surprising that there are challenges in creating a system that can bring technologies across the Valley of Death. DoD’s market size allows it to play a critical role in overcoming this challenge for the energy technologies the department’s installations require, as it has for environmental technologies. In addressing the barriers energy technologies face, and understanding the role DoD installations can play, it is important to understand the type and character of technologies that DoD installations need. Energy technologies span a wide spectrum in costs, complexities, size, and market forces. Installation energy technologies are just a subset of the field, but one that is critical in meeting the nation’s and DoD’s energy challenges. DOE, in its recent strategic plans and quadrennial technology review, has laid out the following taxonomy (figure 3.5): It is useful to divide these energy technologies into two rough classes based on the nature of the market and the characteristics of deployment decisions. There are technologies whose capital costs at full scale are very high, for which a modest number of players will play a key role in implementation decisions. Examples include utility-scale energy generation, large-scale carbon sequestration, commercial production of alternative fuels, nextgeneration utility-grid-level technologies, and manufacturing of new transportation platforms. Some of these technologies produce products (e.g., fuel and power from the local utility) that DoD installations buy as commodities, but DoD does not expect to buy the underlying technology. A second but no less important class of energy technologies are those that will be widely distributed upon implementation, and the decisions to deploy them at scale will be made by thousands, if not millions, of decision makers. These include: 1) Technologies to support improved energy efficiency and conservation in buildings; 2) Local renewable or distributed energy generation; and 3) Local energy control and management technologies. Decisions on implementing these technologies will be made in a distributed sense and involve tens of thousands of individual decision makers if they are ever to reach large-scale deployment. These are the energy technologies that DoD installations will be buying, either directly through appropriated funds or in partnership with third-party financing through mechanisms such as Energy Saving Performance Contracts (ESPCs) or Power Purchase Agreements (PPAs). In the DOE taxonomy shown above, these distributed installation energy technologies cover the demand space on building and industrial efficiency, portions of the supply space for clean electricity when restricted to distributed generation scale, and a critical portion in the middle where microgrids and their relationship to energy storage and electric vehicles reside.

#### No waste confidence solvency deficit - the rule has no real impact on licensing.

Davis and Blee 12. [Edward, President of the Pegasus Group and a former President of the American Nuclear Energy Council, David, former U.S. Deputy Assistant Secretary of Energy and Executive Director of the U.S. Nuclear Infrastructure Council, "EDWARD DAVIS AND DAVID C. BLEE: NRC’s Waste Confidence ‘Moratorium’ – Carpe Diem" Nuclear Town Hall -- August 16 -- www.nucleartownhall.com/blog/category/doe/]

The United States Nuclear Regulatory Commission’s (NRC) August 7, 2012 order to defer any final agency action approving the issuance of new reactor licenses or to grant new license renewals for existing operating reactors — in response to a Federal Appeals Court remand of the agency’s existing waste confidence rule — does not represent the draconian “Full-Stop” that the some of the industry’s opponents claim. ¶ Under the order, the agency will continue with its technical and licensing reviews while holding any final decisions in abeyance until the NRC has developed and completed its work responsive to the Court’s remand. Accordingly, the Order could impact very few, if any, near-term combined license (COL) applications. Moreover, under the NRC’s rules for license renewals, no operating plant would be directly affected where a timely renewal license application has already been submitted to NRC. Current spent fuel storage is certainly safe and not in question.

#### Housing the plan in DOD avoids the entire link to politics.

Davenport, energy and environment correspondent for National Journal, covered energy and environment for Politico and Congressional Quarterly, was a fellow with the Metcalf Institute for Marine and Environmental Reporting, ‘12

[Coral, 2/10/12, “White House Budget to Expand Clean-Energy Programs Through Pentagon,” The National Journal ]

The White House believes it has figured out how to get more money for clean-energy programs touted by President Obama without having it become political roadkill in the wake of the Solyndra controversy: **Put it in the Pentagon**. While details are thin on the ground, lawmakers who work on both energy- and defense-spending policy believe the fiscal 2013 budget request to be delivered to Congress on Monday probably won't include big increases for wind and solar power through the Energy Department, a major target for Republicans since solar-panel maker Solyndra defaulted last year on a $535 million loan guarantee. But they do expect to see increases in spending on alternative energy in the Defense Department, such as programs to replace traditional jet fuel with biofuels, supply troops on the front lines with solar-powered electronic equipment, build hybrid-engine tanks and aircraft carriers, and increase renewable-energy use on military bases. While Republicans will instantly shoot down requests for fresh spending on Energy Department programs that could be likened to the one that funded Solyndra, many support alternative-energy programs for the military. "I do expect to see the spending," said Rep. Jack Kingston, R-Ga., a member of the House Defense Appropriations Subcommittee, when asked about increased investment in alternative-energy programs at the Pentagon. "I think in the past three to five years this has been going on, but that it has grown as a culture and a practice - and it's a good thing." "If Israel attacks Iran, and we have to go to war - and the Straits of Hormuz are closed for a week or a month and the price of fuel is going to be high," Kingston said, "the question is, in the military, what do you replace it with? It's not something you just do for the ozone. It's strategic." Sen. Lindsey Graham, R-S.C., who sits on both the Senate Armed Services Committee and the Defense Appropriations Subcommittee, said, "I don't see what they're doing in DOD as being Solyndra." § Marked 11:58 § "We're not talking about putting $500 million into a goofy idea," Graham told National Journal . "We're talking about taking applications of technologies that work and expanding them. I wouldn't be for DOD having a bunch of money to play around with renewable technologies that have no hope. But from what I understand, there are renewables out there that already work." A senior House Democrat noted that this wouldn't be the first time that the **Pentagon has been utilized to advance policies that wouldn't otherwise be supported**. "They did it in the '90s with medical research," said Rep. Henry Waxman, D-Calif., ranking member of the House Energy and Commerce Committee. In 1993, when funding was frozen for breast-cancer research programs in the National Institutes of Health, Congress boosted the Pentagon's budget for breast-cancer research - to more than double that of the health agency's funding in that area. **Politically, the strategy makes sense**. Republicans are ready to fire at the first sign of any pet Obama program, and renewable programs at the Energy Department are an exceptionally ripe target. That's because of Solyndra, but also because, in the last two years, the Energy Department received a massive $40 billion infusion in funding for clean-energy programs from the stimulus law, a signature Obama policy. When that money runs out this year, a request for more on top of it would be met with flat-out derision from most congressional Republicans. Increasing renewable-energy initiatives at the Pentagon can also help Obama advance his broader, national goals for transitioning the U.S. economy from fossil fuels to alternative sources. As the largest industrial consumer of energy in the world, the U.S. military can have a significant impact on energy markets - if it demands significant amounts of energy from alternative sources, it could help scale up production and ramp down prices for clean energy on the commercial market. Obama acknowledged those impacts in a speech last month at the Buckley Air Force Base in Colorado. "The Navy is going to purchase enough clean-energy capacity to power a quarter of a million homes a year. And it won't cost taxpayers a dime," Obama said. "What does it mean? It means that the world's largest consumer of energy - the Department of Defense - is making one of the largest commitments to clean energy in history," the president added. "That will grow this market, it will strengthen our energy security." Experts also hope that Pentagon engagement in clean-energy technology could help yield breakthroughs with commercial applications. Kingston acknowledged that the upfront costs for alternative fuels are higher than for conventional oil and gasoline. For example, the Air Force has pursued contracts to purchase biofuels made from algae and camelina, a grass-like plant, but those fuels can cost up to $150 a barrel, compared to oil, which is lately going for around $100 a barrel. Fuel-efficient hybrid tanks can cost $1 million more than conventional tanks - although in the long run they can help lessen the military's oil dependence, Kingston said Republicans recognize that the up-front cost can yield a payoff later. "It wouldn't be dead on arrival. But we'd need to see a two- to three-year payoff on the investment," Kingston said. Military officials - particularly Navy Secretary Ray Mabus, who has made alternative energy a cornerstone of his tenure - have been telling Congress for years that the military's dependence on fossil fuels puts the troops - and the nation's security - at risk. Mabus has focused on meeting an ambitious mandate from a 2007 law to supply 25 percent of the military's electricity from renewable power sources by 2025. (Obama has tried and failed to pass a similar national mandate.) Last June, the DOD rolled out its first department-wide energy policy to coalesce alternative and energy-efficient initiatives across the military services. In January, the department announced that a study of military installations in the western United States found four California desert bases suitable to produce enough solar energy - 7,000 megawatts - to match seven nuclear power plants. And so far, those **moves have met with approval from congressional Republicans**. Even so, any request for new Pentagon spending will be met with greater scrutiny this year. The Pentagon's budget is already under a microscope, due to $500 billion in automatic cuts to defense spending slated to take effect in 2013. But even with those challenges, clean-energy spending probably won't stand out as much in the military budget as it would in the Energy Department budget. Despite its name, the Energy Department has traditionally had little to do with energy policy - its chief portfolio is maintaining the nation's nuclear weapons arsenal. Without the stimulus money, last year only $1.9 billion of Energy's $32 billion budget went to clean-energy programs. A spending increase of just $1 billion would make a big difference in the agency's bottom line. But it would probably be easier to tuck another $1 billion or $2 billion on clean-energy spending into the Pentagon's $518 billion budget. Last year, the Pentagon spent about $1 billion on renewable energy and energy-efficiency programs across its departments.