# Round 1 vs. Wyoming BF (Aff) – Weber RR

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### Inherency

#### Observation One: Inherency

#### Obama pushing nuclear incentives now.

Pistilli 12 (Melissa, reporting on market-shaking news in the resource and mining investment sector with Resource Investing News since 2008, 10-11-12, “Nuclear Power Prominent in US Presidential Candidates’ Energy Policies” 10/11 <http://uraniuminvestingnews.com/12783/nuclear-power-united-states-energy-policies-romney-obama-election.html>)

The Obama administration’s energy policy supports the expansion of nuclear energy. Under Obama, the government’s 2012 budget allocated $36 billion in loan guarantees for new nuclear reactors and more than $800 million in loan guarantees for nuclear research, an IBISWorld report states. The research report also highlights Obama’s Clean Electricity Standard and its push for more electricity to be produced from zero-carbon sources. “These climate-change policies will lead to a boost in nuclear-energy production,” said IBISWorld. New nuclear reactors approved This year, the US approved construction of reactors for the first time in nearly 30 years; they are expected to come online by 2017. The Southern Company (NYSE:SO) won approval from the US Nuclear Regulatory Commission (NRC) to construct two new reactors at its Vogtle power plant near Waynesboro, Georgia. Currently, another 16 plants across the country have applied to the NRC to build 25 more reactors. Last month, the NRC issued a license that allows General Electric-Hitachi Global Laser Enrichment (GLE) to build and operate the first uranium enrichment plant with classified laser technology, a more cost-effective process than employing centrifuges. The plant “could provide a steady supply of uranium enriched right here in the US to the country’s nuclear reactors,” GLE CEO Chris Monetta said. The US Department of Energy (DOE) “has played a pivotal role in advancing a public-private cost-sharing program that supports the development of smaller reactors,” according to former Environmental Protection Agency administrator and former New Jersey Governor Christine Todd Whitman and Dr. Patrick More, co-founder and former leader of Greenpeace — current co-chairs of the Clean and Safe Energy Coalition. Where will waste go? However, the US nuclear revival has been held up by the fact that the country lacks a long-term plan for dealing with nuclear waste. Currently, most plants keep waste onsite in temporary storage pools, but that is only a short-term solution to a long-term problem. In June 2012, a federal appeals court ruled that the NRC has not provided “reasonable assurance” that it has a long-term waste-management solution — as a result, the NRC will not be approving any new projects for some time. The plan had been to move waste to a repository at Nevada’s Yucca Mountain. The US government has already signed contracts with several utilities, including Southern, for waste disposal at Yucca Mountain. The repository was supposed to open in 1998, but politics and legal issues stalled the project for years. Obama put the project on ice in 2010, appointing the Blue Ribbon Commission on America’s Nuclear Future to develop recommendations for creating a safe, long-term solution to nuclear waste management and storage. The Commission delivered its final report in January of this year, calling for the creation of a federal agency aimed at soliciting and evaluating voluntary proposals from states interested in hosting nuclear disposal areas. The idea is similar to what Romney proposed in October 2011 and would involve states offering disposal sites in exchange for monetary compensation. What next? The freeze on new reactor approvals hasn’t stopped the Obama administration from pushing forward on nuclear energy research and development. In late September, the US Department of Energy announced $13 million in funding for university-led nuclear innovation projects under the Nuclear Energy University Programs (NEUP). “The awards … build upon the Obama Administration’s broader efforts to promote a sustainable nuclear industry in the U.S. and cultivate the next generation of scientists and engineers,” the DOE press release states. The funding was awarded to research groups at the Georgia Institute of Technology, the University of Illinois at Urbana-Champaign and the University of Tennessee.

#### There’s global expansion of nuclear now – Fukushima doesn’t matter.

Marketwire 12 (5/3/12, – Part of the Paragon Report on uranium ore stock future

<http://finance.yahoo.com/news/nuclear-renaissance-back-track-122000381.html>)

NEW YORK, NY--(Marketwire -05/03/12)- Last year the Fukushima disaster in Japan started a downward spiral for companies in the Uranium Industry. Approximately one year later the industry looks to be finally recovering as the Global X Uranium ETF (URA) is up nearly 12 percent year-to-date. "Fukushima put a speed bump on the road to the nuclear renaissance," Ganpat Mani, president of Converdyn, said at a nuclear industry summit. "It's not going to delay the programs around the world." The Paragon Report examines investing opportunities in the Uranium Industry and provides equity research on Cameco Corporation (CCJ - News) and Uranium One, Inc. (UUU.TO - News). Approximately 650 million people in China and India currently are living without electricity. With the high costs of fossil fuel the most viable options for these countries would be nuclear power. Indonesia, Egypt, and Chile are among some of the nations that have plans to build their first nuclear power station, the list of countries operating atomic plants currently stands at 30. According to numbers released by the World Nuclear Association there are 61 reactors that are presently under construction, and plans to build another 162. "In two years, there will be very strong demand on the market, as new reactors start operating, and as new contracts with the existing fleet kick in," Areva SA's Chief Commercial Officer Ruben Lazo said in a previous interview.

#### But, the US is not reversing course on reprocessing.

Saillan 10 (Charles, attorney with the New Mexico Environment Department, Harvard Environmental Law Review, 2010, “DISPOSAL OF SPENT NUCLEAR FUEL IN THE UNITED STATES AND EUROPE: A PERSISTENT ENVIRONMENTAL PROBLEM”, Vol. 34, RSR)

The U.S. government’s position on reprocessing changed in 1974 when India exploded a nuclear weapon in the state of Rajasthan. 150 The weapon’s plutonium was isolated with reprocessing equipment imported for “peaceful purposes.” 151 Rightly concerned about the dangers of nuclear proliferation, President Ford announced that the United States would no longer view reprocessing as a necessary step in the nuclear fuel cycle. He called on other nations to place a three-year moratorium on the export of reprocessing technology. 152 In 1977, President Carter indefinitely deferred domestic efforts at reprocessing and continued the export embargo. 153 Although President Reagan reversed the ban on domestic reprocessing in 1981, 154 the nuclear industry has not taken the opportunity to invest in the technology. In 2006, the George W. Bush Administration proposed a Global Nuclear Energy Partner ship (“GNEP”) for expanded worldwide nuclear power production. 155 As a key component of the GNEP proposal, the United States would provide other nations with a reliable supply of nuclear fuel, and it would take back the spent fuel for reprocessing at a commercial facility in the United States, thus avoiding the spread of reprocessing technology. 156 However, the Obama Administration substantially curtailed GNEP in 2009, and is “no longer pursuing domestic commercial reprocessing.” 157

### Observation 2

#### Observation Two: Waste

#### In the short term US nuclear waste is stored on-site.

Galbraith 11 (Kate, Staff Writer, “A New Urgency to the Problem of Storing Nuclear Waste”, New York Times, 11-27-11, http://www.nytimes.com/2011/11/28/business/energy-environment/a-new-urgency-to-the-problem-of-storing-nuclear-waste.html, RSR)

Other countries are also looking at waste in new ways in the post-Fukushima world. Right now, worldwide, most spent fuel waste is stored on the site of the facility that produced it, in spent-fuel pools and, after it eventually cools, dry casks. Experts say dispersed storage is expensive and that central storage would be more secure. Few countries , apart from Sweden and Finland, have moved forward on centralized disposal sites, deep in the earth, designed to hold the waste permanently. France is evaluating a permanent disposal site for spent fuel , near the remote northeastern village of Bure.

#### On-site storage is dangerous – storage pools are vulnerable to accidents.

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 Japan, U.S. spent-fuel pools are not required to have defense-in-depth nuclear safety features. They are not covered by the types of heavy containment structures that cover reactor vessels. Reactor operators are not required have backup power supplies to circulate water in the pools and keep them cool in the event of onsite power failures. Reactor control rooms rarely have instrumentation keeping track of the pools’ water levels and chemistry. (In one incident at a U.S. reactor, water levels dropped to a potentially dangerous level after operators simply failed to look into the pool area.) Some reactors may not have the necessary capabilities to restore water to pools when needed. Quite simply, spent-fuel pools at nuclear reactors are not required to have the same level of nuclear safety protection as required for reactors, because the assumption was that they would be used only for short-term storage before the rods were removed for reprocessing or permanent storage. In 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. For decades, nuclear safety research has consistently pointed out that severe accidents could occur at spent-fuel pools that would result in catastrophic consequences. A severe pool fire could render about 188 square miles around the nuclear reactor uninhabitable, cause as many as 28,000 cancer fatalities, and cause $59 billion in damage, according to a 1997 report for the NRC by Brookhaven National Laboratory. If the fuel were exposed to air and steam, the zirconium cladding around the fuel would react exothermically, catching fire at about 800 degrees Celsius. Particularly worrisome are the large amounts of cesium-137 in spent-fuel pools, because nearly all of this dangerous isotope would be released into the environment in a fire, according to the NRC. Although it is too early to know the full extent of long-term land contamination from the accident at the Dai-Ichi station, fragmentary evidence has been reported of high cesium-137 levels as far away as metropolitan Tokyo. The NRC also has reported that spent-fuel fragments were found a mile away from the reactor site. The damage from a large release of fission products, particularly cesium-137, was demonstrated at Chernobyl. More than 100,000 residents from 187 settlements were permanently evacuated because of contamination by cesium-137. The total area of this radiation-control zone is huge: more than 6,000 square miles, equal to roughly two-thirds the area of New Jersey. During the following decade, the population of this area declined by almost half because of migration to areas of lower contamination.

#### The densely packed fuel is enough to trigger a full scaled meltdown – Fukushima proves.

Kinitisch 11 (Eli, Reporter at Science Magazine, “Waste Panel Expected To Back Interim Storage”, Science Magazine, Vol. 333, 7-8-11, RSR)

In any case, experts agree, some new plan for waste storage is essential. Waste currently stored in pools and casks at U.S. sites does not pose “unmanageable … safety or security risks,” says a subcommittee report. But every ton that stays at reactor sites makes those risks slightly greater. Fuel in U.S. spent fuel pools is packed four times as densely as it was 25 years ago, raising concerns about the risk of explosions or meltdown if the pools were to empty in an accident. The tsunami that devastated the Fukushima nuclear plant in Japan in March may have resulted in a loss of water in one of its ponds (Science, 1 April, p. 24). A draft commission report says the issue of the safety of keeping fuel densely packed in pools should be “reexamined,” although “it is still too early to draw deﬁ nitive conclusions” from the Fukushima accident. It calls for an expert panel at the National Academies to tackle the subject.

#### These catastrophic meltdowns cause extinction – reactors contain 100x the radiation of nuclear bombs.

Lendman 11 (Stephen, Research Associate of the Centre for Research on Globalization,

03/ 13, “Nuclear Meltdown in Japan,”, The People’s Voice <http://www.thepeoplesvoice.org/TPV3/Voices.php/2011/03/13/nuclear-meltdown-in-japan>, accessed 8-2-12, RSR)

Reuters said the 1995 Kobe quake caused $100 billion in damage, up to then the most costly ever natural disaster. This time, from quake and tsunami damage alone, that figure will be dwarfed. Moreover, **under a worst case** core **meltdown, all bets are off as the entire region and beyond will be threatened with permanent contamination**, making the most affected areas unsafe to live in. On March 12, Stratfor Global Intelligence issued a "Red Alert: Nuclear Meltdown at Quake-Damaged Japanese Plant," saying: Fukushima Daiichi "nuclear power plant in Okuma, Japan, appears to have caused a reactor meltdown." Stratfor downplayed its seriousness, adding that such an event "does not necessarily mean a nuclear disaster," that already may have happened - the ultimate nightmare short of nuclear winter. According to Stratfor, "(A)s long as the reactor core, which is specifically designed to contain high levels of heat, pressure and radiation, remains intact, the melted fuel can be dealt with. If the (core's) breached but the containment facility built around (it) remains intact, the melted fuel can be....entombed within specialized concrete" as at Chernobyl in 1986. In fact, that disaster killed nearly one million people worldwide from nuclear radiation exposure. In their book titled, "Chernobyl: Consequences of the Catastrophe for People and the Environment," Alexey Yablokov, Vassily Nesterenko and Alexey Nesterenko said: "For the past 23 years, it has been clear that there is a danger greater than nuclear weapons concealed within nuclear power. **Emissions from** this **one reactor** exceeded a hundred**-fold the radioactive contamination of** the bombs dropped on **Hiroshima and Nagasaki.**" "**No** citizen of any **country** can be assured that he or she **can be protected from radioactive contamination. One nuclear reactor can pollute half the globe.** Chernobyl fallout covers the entire Northern Hemisphere." Stratfor explained that if Fukushima's floor cracked, "it is highly likely that the melting fuel will burn through (its) containment system and enter the ground. This has never happened before," at least not reported. If now occurring, "containment goes from being merely dangerous, time consuming and expensive to nearly impossible," making the quake, aftershocks, and tsunamis seem mild by comparison. Potentially, millions of lives will be jeopardized. Japanese officials said Fukushima's reactor container wasn't breached. Stratfor and others said it was, making the potential calamity far worse than reported. Japan's Nuclear and Industrial Safety Agency (NISA) said the explosion at Fukushima's Saiichi No. 1 facility could only have been caused by a core meltdown. In fact, 3 or more reactors are affected or at risk. Events are fluid and developing, but remain very serious. The possibility of an extreme catastrophe can't be discounted. Moreover, independent nuclear safety analyst John Large told Al Jazeera that by venting radioactive steam from the inner reactor to the outer dome, a reaction may have occurred, causing the explosion. "When I look at the size of the explosion," he said, "it is my opinion that there could be a very large leak (because) fuel continues to generate heat." Already, Fukushima way exceeds Three Mile Island that experienced a partial core meltdown in Unit 2. Finally it was brought under control, but coverup and denial concealed full details until much later. According to anti-nuclear activist Harvey Wasserman, Japan's quake fallout may cause nuclear disaster, saying: "This is a very serious situation. **If the cooling system fails** (apparently it has at two or more plants), the super-heated **radioactive fuel rods will melt**, and (if so) you could conceivably have an explosion," that, in fact, occurred. As a result, **massive radiation releases may follow**, impacting the entire region. "**It could be**, literally, **an apocalyptic event.**

#### -site waste storage is the EASIEST target for a terrorist attack – it’s the most vulnerable.

Rogers 6 (Ken, Professor and Chair of the Political Science Department at Coastal Carolina University, “Radioactive Waste Storage/Disposal Policy: A Paradigm for Homeland Security and Energy Security”, Midsouth Political Science Review, 2006, Vol. 8, RSR)

The inability of U.S. policymakers to come to grips with the problem of what to do with the continued generation of radioactive waste has both homeland security and energy security implications. Clearly, the events of 9/11 have focused attention on the potential for a terrorist attack on nuclear facilities. While much of this concern has been directed towards an attack on the reactors themselves, the radioactive waste stored on-site – especially the waste stored outdoors above ground in dry casks – is more problematic since it is far more vulnerable to any terrorist assault. Thus, the major terrorist threat to nuclear power facilities is not to the reactors, but the radioactive waste that they generate.

#### On site storage vulnerable to terrorist theft – fewer security measures due to assumed radioactive safeguards.

Bunn 9 (Matthew, Associate Professor at Harvard University's John F. Kennedy School of Government, “Reducing the greatest risks of nuclear theft & terrorism”, Daedalus, American Academy of Arts and Sciences, Fall, RSR)

A building with nuclear material that terrorists could readily make into a nuclear bomb needs more security than a building with lower-quality material that would be very difficult for adversaries to use to make a bomb. But this sensible “graded safeguards” approach, used in national regulations and international recommendations around the world, must avoid slipping into what might be called “cliffed safeguards,” in which security falls off catastrophically if nuclear material is beyond some arbitrary threshold that has little relation to real risk. For example, under current Nuclear Regulatory Commission (nrc) rules in the United States, nuclear material that would normally require security measures costing millions of dollars a year requires none of that if it is radioactive enough to cause a radiation dose of one Sievert per hour at one meter– a level considered radioactive enough to make the material “self-protecting.” But studies at the national laboratories have shown that at this level of radiation, thieves who carried the material out to a waiting truck with their bare hands would not even receive a big enough dose of radiation to make them feel sick. In a world of suicidal terrorists, these rules–and similar, though less extreme, international rules– urgently need to be revised. More broadly, in-depth assessments of how different chemical, physical, isotopic, and radiological properties of a material affect the odds that adversaries would succeed in making a bomb from it should be used to determine how much security can be relaxed for particular types of material while keeping overall risks low. In making these assessments, it is important to remember that heu at enrichment levels far below the 90 percent U-235 level considered “weapons grade” can still readily be used in a bomb, at the cost of using somewhat more material. So past policies that have focused cooperative security upgrades only on sites whose heu is at least 80 percent U-235 should certainly be revised. Similarly, while weapons designers prefer weapons-grade plutonium, produced specifically to contain 90 percent or more Pu-239, the “reactor grade” plutonium produced in the spent fuel from typical power reactors can also be used to make fearsome explosives, despite the extra neutrons, heat, and radiation generated by the less desirable plutonium isotopes it contains. Indeed, repeated government studies have concluded that any state or group capable of making a bomb from weapons-grade plutonium would also be able to make a bomb from reactor-grade plutonium. 6

#### Nuclear terrorism is likely and causes extinction – security experts agree.

Rhodes 9 (Richard, affiliate of the Center for International Security and Cooperation at Stanford University, Former visiting scholar at Harvard and MIT, and author of “The Making of the Atomic Bomb” which won the Pulitzer Prize in Nonfiction, National Book Award, and National Book Critics Circle Award, “Reducing the nuclear threat: The argument for public safety” 12-14, <http://www.thebulletin.org/web-edition/op-eds/reducing-the-nuclear-threat-the-argument-public-safety>, RSR)

The response was very different among nuclear and national security experts when Indiana Republican Sen. Richard Lugar surveyed PDF them in 2005. This group of 85 experts judged that the possibility of a WMD attack against a city or other target somewhere in the world is real and increasing over time. The median estimate of the risk of a nuclear attack somewhere in the world by 2010 was 10 percent. The risk of an attack by 2015 doubled to 20 percent median. There was strong, though not universal, agreement that a nuclear attack is more likely to be carried out by a terrorist organization than by a government. The group was split 45 to 55 percent on whether terrorists were more likely to obtain an intact working nuclear weapon or manufacture one after obtaining weapon-grade nuclear material. "The proliferation of weapons of mass destruction is not just a security problem," Lugar wrote in the report's introduction. "It is the economic dilemma and the moral challenge of the current age. On September 11, 2001, the world witnessed the destructive potential of international terrorism. But the September 11 attacks do not come close to approximating the destruction that would be unleashed by a nuclear weapon. Weapons of mass destruction have made it possible for a small nation, or even a sub-national group, to kill as many innocent people in a day as national armies killed in months of fighting during World War II. "The bottom line is this," Lugar concluded: "For the foreseeable future, the United States and other nations will face an existential threat from the intersection of terrorism and weapons of mass destruction." It's paradoxical that a diminished threat of a superpower nuclear exchange should somehow have resulted in a world where the danger of at least a single nuclear explosion in a major city has increased (and that city is as likely, or likelier, to be Moscow as it is to be Washington or New York). We tend to think that a terrorist nuclear attack would lead us to drive for the elimination of nuclear weapons. I think the opposite case is at least equally likely: A terrorist nuclear attack would almost certainly be followed by a retaliatory nuclear strike on whatever country we believed to be sheltering the perpetrators. That response would surely initiate a new round of nuclear armament and rearmament in the name of deterrence, however illogical. Think of how much 9/11 frightened us; think of how desperate our leaders were to prevent any further such attacks; think of the fact that we invaded and occupied a country, Iraq, that had nothing to do with those attacks in the name of sending a message.

#### In the long term, waste will be stored at Yucca – only option.

Tollefson 11 (Jeff, former Knight fellow in science journalism at MIT, “Battle of Yucca Mountain rages on”, Nature, Vol. 473, No. 266, 5-19-11, RSR)

The commission intends to issue a draft report in July and a final one next January. With its recommendations in hand, the administration is expected to propose legislation that would establish a new process for identifying nuclear waste storage sites. Yet such a process could well take decades, the GAO report concludes, and the government’s reversal at Yucca Mountain could serve to galvanize public opposition at other candidate sites. Since the debate began, “no states have expressed an interest in hosting a permanent repository for this spent nuclear fuel ... including the states with sites currently storing the waste”, the report adds. The commission’s scheme for an interim storage facility may prove no more appealing, given fears that ‘interim’ means permanent as long as the present impasse continues. Such fears have in the past halted interim storage proposals in states such as Wyoming. And even if one community decides that it is willing to play host to the waste, that doesn’t mean others won’t challenge nuclear-waste transportation routes. Nevertheless, the nation will need to find a permanent repository at some point, and Yucca Mountain, it seems, is down but not out. “Yucca Mountain has nine lives,” says Ed Davis, a nuclear consultant who heads the Pegasus Group in Washington DC. “And nobody knows how many lives have been used up.”

#### Yucca explosion is likely - earthquakes, volcanoes, and ground water

Warrick 98 (Joby, Staff, At Nevada Nuclear Waste Site, The Issue Is One of Liquidity; Studies Citing Risk of Water Seepage Imperil Yucca Mountain Project, The Washington Post, December 15, p. A3)

More recent studies raised different kinds of concerns. A report in March by the California Institute of Technology found new evidence of geological instability in the region, including relatively rapid shifting of the Earth's crust near the mountain. The movement raises the probability of future earthquakes or volcanic eruptions.¶ And last week, a Russian geologist claimed that hot water from deep underground had flooded the mountain at least once in the geologically recent past. Yuri V. Dublyansky, of the Siberian branch of the Russian Academy of Sciences, said flooding could happen again, with potentially calamitous results.¶ "We can be reasonably sure that Yucca Mountain was at some point in the past saturated with water. The crucial question is when," said Dublyansky, who obtained rock samples from inside the mountain while working for Nevada state officials who hope to defeat the project. "Any decision on whether Yucca Mountain should be a repository for nuclear waste should be preceded by a resolution of that question."¶ The evidence of past flooding comes from crystals of calcite and other minerals that were formed when the mountain was already old, said Dublyansky, now a research fellow for the Maryland-based Institute for Energy and Environmental Research. Microscopic bubbles inside the rocks, known as "fluid inclusions," prove that the crystals were formed in the presence of hot water -- which could only have come from underground thermal springs, Dublyansky said.¶ At his request, the findings were reviewed by independent scientists from Austria, Great Britain and Nevada -- all of whom backed his basic conclusions. But U.S. government scientists ridiculed Dublyansky's research as unscholarly. "We are disturbed," said Joe Whelan of the U.S. Geological Survey in a written critique, "by Dr. Dublyansky's shrewd and nonscientific arguments that seem to be crafted for readers unfamiliar with the specific Yucca Mountain geologic relations."¶ Szymanski, the former Energy Department geologist, also had argued that a thermal upwelling had occurred at Yucca Mountain and sees the new evidence as vindication. He thinks a combination of water and the red-hot temperatures of the nuclear waste casks could spark an explosion that could spew lethal doses of radiation into the atmosphere.¶ "This is direct evidence," Szymanski said. "And if anybody doubts the results, they can go back and measure them again. They're very easy to verify."

#### Yucca explosion results in extinction – top geologists agree.

Broad 90 (William, NYT Staff, The New York Times, November 18)

One scientist, however, has quietly but persistently warned that this vision of a safe repository is little more than a delusion.¶ Jerry S. Szymanski (pronounced sha-MAN-ski) is a geologist who works on the Yucca Mountain project for the United States Department of Energy, which is in charge of evaluating the site and would run the repository. For years, he has argued that ground water under the mountain could eventually well up, flood the facility and prompt a calamity of vast proportions. The geological action is easy to visualize. Crustal stresses in the area slowly open fractures and faults under and within the mountain. Water seeps into them. An earthquake occurs, compressing the fractures and forcing the ground water upward into the dump. As the inrushing water comes into contact with the hot canisters of nuclear waste, the water is vaporized, threatening to cause explosions, ruptures and the release of radioactivity.¶ Szymanski has worked for the D.O.E. since 1983. He takes pains to distance himself from foes of nuclear power. "This report is not the act of a disgruntled employee or an antinuclear freak," he wrote in the preface of a study he made on Yucca Mountain. "Rather, it is the act of a deeply concerned scientist, a public servant and a pro-nuclear activist."¶ He chain-smokes Winstons and drinks Scotch, neither of which seems to impair his ability to take brisk hikes up the mountain with his dog Max, a fierce-looking but friendly creature that is half Labrador, half pit bull. Szymanski's eyes flash when he speaks of those who oppose his view of the evidence. "It's banality of thought," he growls, "absence of depth." That same kind of banality, he says, was responsible for the Holocaust, around which his earliest memories revolve, and for a brutal crackdown in his native Poland, which prompted him to flee that country two decades ago with his wife and 6-month-old son. Today, he says, banality is prompting the Federal Government to court disaster.¶ Squinting in the bright Nevada sunlight, a cigarette firmly in his mouth, Szymanski walks into Trench No. 8, a deep scar on the side of Yucca Mountain dug at the behest of the Energy Department. It runs across a fault. He bends down to examine a one-yard-wide vein of rock whose creamy color stands in contrast to the dark, surrounding earth tones. His fingers play over its surface. The vein was deposited, he says, by mineral-laden water that welled up and turned this desolate site into an oasis.¶ "This is above the repository level," he says with studied understatement. The implication is clear and troubling -- where water once flowed, it might flow again.¶ The repository would hold up to 70,000 metric tons of waste. A large release would have an environmental impact that, by some estimates, would exceed that of a nuclear war. For perspective, the explosion of the Chernobyl reactor in the Soviet Union shot into the atmosphere just a few dozen pounds of highly radioactive nuclear waste, one of the most dangerous components of which was cesium 137 (it would also be a significant part of the waste at Yucca Mountain). Various studies say the consequences of Chernobyl will eventually be somewhere between 17,000 and 475,000 deaths from cancer, as well as an alarming number of serious ailments.¶ For half a decade, Szymanski's was a lone voice. His grim appraisal was opposed by almost everyone else on the Yucca Mountain project, who let their displeasure be known in subtle and not-so-subtle ways. But recently, growing ranks of geologists have backed his view. The dispute is by no means resolved.¶ If Szymanski is right and his warnings are heeded, it could mark the end of the Yucca Mountain project. The retreat would be a stunning setback for the Government and the nuclear-power industry, which is poised for a revival. If he is right and his warnings go unheeded, some experts say it might be the beginning of the ultimate end.¶ "You flood that thing and you could blow the top off the mountain," says Charles B. Archambeau, a geophysicist at the University of Colorado who has reviewed Szymanski's work and found it persuasive. "At the very least, the radioactive material would go into the ground water and spread to Death Valley, where there are hot springs all over the place, constantly bringing water up from great depths. It would be picked up by the birds, the animals, the plant life. It would start creeping out of Death Valley. You couldn't stop it. That's the nightmare. It could slowly spread to the whole biosphere. If you want to envision the end of the world, that's it."

#### Reprocessing would remove the waste problem – the waste we currently store can be reused

Bastin 8 (Clinton, Former Chemical Engineer at the Atomic Energy Commission, 21st Century Science and Technology, “We Need to Reprocess Spent Nuclear Fuel, And Can Do It Safely, At Reasonable Cost”, 2008, [http://www.21stcenturysciencetech.com/Articles%202008/ Summer\_2008/Reprocessing.pdf](http://www.21stcenturysciencetech.com/Articles%202008/Summer_2008/Reprocessing.pdf), RSR)

The concept of used nuclear fuel as “nuclear waste” is a fiction created by the opponents of nuclear energy. Used nuclear fuel isn’t waste at all, but a renewable resource that can be reprocessed into new nuclear fuel and valuable isotopes. When we entered the nuclear age, the great promise of nuclear energy wasitsrenewability, making it an inexpensive and efficient way to produce electricity. It was assumed that the nations making use of nuclear energy would reprocess their spent fuel, completing the nuclear fuel cycle by recycling the nuclear fuel after it was burned in a reactor, to extract the 95 to 99 percent of unused uranium in it that can be turned into new fuel. This means that if the United States buries its 70,000 metric tons of spent nuclear fuel, we would be wasting 66,000 metric tons of uranium-28, which could be used to make new fuel. In addition, we would be wasting about 1,200 metric tons of fissile uranium-25 and plutonium-29, which can also be burned as fuel. Because of the high energy density in the nucleus, this relatively small amount of U.S. spent fuel (it would fit in one small house) is equivalent in energy to about 20 percent of the U.S. oil reserves. About 96 percent of the spent fuel the United States is now storing can be turned into new fuel. The 4 percent of the socalled waste that remains—2,500 metric tons—consists of highly radioactive materials, but these are also usable. There are about 80 tons each of cesium-17 and strontium-90 that could be separated out for use in medical applications, such as sterilization of medical supplies. Using isotope separation techniques, and fast-neutron bombardment for transmutation (technologies that the United States pioneered but now refuses to develop), we could separate out all sorts of isotopes, like americium, which is used in smoke detectors, or isotopes used in medical testing and treatment. Right now, the United Statesmust import 90 percent of its medical isotopes, used in 40,000 medical procedures daily. The diagram shows a closed nuclear fuel cycle. At present, the United States has no reprocessing, and stores spent fuel in pools or dry storage at nuclear plants. Existing nuclear reactors use only about 1 percent of the total energy value in uranium resources; fast reactors with fuel recycle would use essentially 100 percent, burning up all of the uranium and actinides, the long-lived fission products. In a properly managed and safeguarded system, the plutonium produced in fast reactors would remain in its spent fuel until needed for recycle.Thus, there need be no excess buildup of accessible plutonium. The plutonium could also be fabricated directly into new reactor fuel assemblies to be burned in nuclear plants.

#### Reprocessing solves the blow up of Yucca Mountain.

Broad 95 (William, NYT staff, Scientists fear atomic explosion of buried waste, The New York Times, March 5, p. 1)

Dr. Bowman says the explosion thesis is alive and well. On Friday he finished an 11-page draft paper thick with graphs and equations that lays it out in new detail.¶ The team criticisms, he said in an interview, repeatedly fall flat. For instance, dispersal could happen relatively quickly, especially if water percolated through the dump. Even if slow, plutonium 239 decays into uranium 235, which harbors the same explosive risks but requires millions of years to decay into less dangerous elements.¶ So too with the other criticisms, he says. Water could aid the slowing of neutrons and make sure the reaction went forward rather than automatically slowing down. And a pile could explode, he insists, while conceding that the blast from a single one might have a force of a few hundred tons of high explosive rather than the thousand or more originally envisioned.¶ On the other hand, his new paper says plutonium in amounts as small as one kilogram, or 2.2 pounds, could be dangerous.¶ "We got some helpful criticism and that, combined with additional work, has made our thesis even stronger," he said.¶ The most basic solution, Dr. Bowman said, would be removing all fissionable material from nuclear waste in a process known as reprocessing or by transmuting it in his proposed accelerator. Other possible steps would include making steel canisters smaller and spreading them out over larger areas in underground galleries -- expensive steps in a project already expected to cost $15 billion or more.¶ A different precaution, Dr. Bowman said, would be to abandon the Yucca site, where the volcanic ground is relatively soluble. Instead, the deep repository might be dug in granite, where migration of materials would be slower and more difficult.

### Observation 3

#### Observation Three: Peak uranium

#### Peak uranium is coming by 2016.

Keen 12 (Kip, Uranium supply crunch by 2016 - nuclear expert says, Mineweb, 24 January 2012, http://www.mineweb.co.za/mineweb/view/mineweb/en/page72103?oid=143915&sn=Detail&pid=102055, da 8-27-12)

A nuclear expert gave uranium supply three more years - at most - before it seriously falls behind demand from the nuclear power industry.¶ "2016: We have to have supply in the market or the lights will gradually go out in the nuclear system," said Thomas Drolet, the president of Drolet & Associates Energy Services, during a presentation at Cambridge House's Vancouver Resource Investment conference on Monday.¶ A uranium supply crunch is widely anticipated to hit the nuclear industry starting next year as Cold War era sources of uranium dry up. To illustrate the severity of the shortage that the nuclear industry faces, Drolet highlighted 2010 uranium production from mining - 118 million pounds - versus consumption: 190 million pounds.¶ "You can do the delta difference yourself," Drolet said, referring to how much of a supply gap miners will have to make up for in coming years. ¶ That uranium is "going to have to come from somewhere," he said.¶ The Fukushima nuclear disaster in Japan, Drolet argued, only delayed the onset of the coming pinch on uranium supply. But even in his "downside" analysis the uranium deficit still comes by 2015.

#### Increased domestic production of uranium is key to our tritium supply – foreign sources cannot solve.

Rowny 12 [edward, retired Lieutenant General, was chief negotiator with the rank of ambassador in the START arms control negotiations with the Soviet Union and has served as an arms control adviser and negotiator for five presidents, Roll Call, 3-29-2012,

http://www.rollcall.com/issues/57\_118/edward-rowny-safe-uranium-enrichment-should-be-us-priority-213505-1.html]

Oil may grab headlines, but nuclear power for civilian use is growing, as it should. It is efficient, extremely safe and friendly to the environment. As with oil, the U.S. would be wise to produce its own supply of enriched uranium, the fuel for nuclear power plants. Farming out the process to other nations — or to companies headquartered overseas — is risky and increases our vulnerabilities. The U.S. government should pay more attention than it has in recent years to the nation’s dwindling ability to enrich its own uranium. The consequences of doing otherwise could be dramatic. Our country could find itself at the mercy of foreigners who do not have our best interests at heart. Energy independence, a laudable aspiration for oil, is even more essential for nuclear power. Domestically produced supplies of enriched uranium are already running short. The U.S. once produced most of the world’s enriched uranium. Now we’re down to about a quarter of the world’s supply. For reasons of national security, we shouldn’t dip further. That’s why the president should be praised for requesting $150 million in next year’s National Nuclear Security Administration budget to keep uranium enrichment alive on our soil. In the meantime, Chu has asked Congress for the authority to reallocate his current budget resources for that purpose until next year’s budget is enacted. Without this cash infusion, American technology at a major facility in rural Ohio will face an uncertain future. We can’t afford the uncertainty. Military considerations also play a role here. Nuclear weapons, while thankfully on the decline, still exist and must be maintained and updated. International treaties mandate that tritium, a rare, radioactive isotope that’s a byproduct of enriched uranium use in nuclear reactors and is critical to the proper, safe functioning of nuclear weapons, must be made with U.S. technology. Unless U.S. technology is available to make the enriched uranium needed to produce tritium, our national security will be at risk.

#### That’s key to the nuclear deterrent.

Gaffney 10 (Frank, founder and president of the Center for Security Policy, “There Goes the Nuclear Deterrent”, Breitbart, 10-14-2010, <http://www.breitbart.com/Big-Peace/2010/10/14/There-Goes-the-Nuclear-Deterrent>)

The House Armed Services Committee warned in 1993 that the deterrent was being subjected to “erosion by design” – and thanks to these sorts of deliberate actions – those chickens are coming home to roost today, with a vengeance. ¶ Now, we learn that the stockpile is literally running out of gas. ¶ A key ingredient used to boost the explosive power of thermonuclear devices is a gas called tritium. Unlike other radioactive materials used in such weapons (notably, plutonium and uranium), the usefulness of tritium degrades fairly quickly – its “half-life” is only about 12 years. As a result, the tritium reservoirs in our bombs and missile warheads must be regularly refueled in order for those weapons to remain operable.

#### Nuclear deterrence necessary to deter rogue states, CBW attacks, power challengers, and allied proliferation - impact is extinction.

Schneider 9 (Mark, Senior Analyst with the National Institute for Public Policy, May/April 2009 “The Future of the US Nuclear Deterrent” Comparative Strategy, p345-360)

According to the Pentagon’s Quadrennial Defense Review, the United States must maintain a “robust nuclear deterrent, which remains a keystone of U.S. national power.”98 The reason should be self evident—without a nuclear deterrent the United States could be destroyed as an industrial civilization and our conventional forces could be defeated by a state with grossly inferior conventional capability but powerful WMD. We cannot afford to ignore existing and growing threats to the very existence of the United States as a national entity. Missile defenses and conventional strike capabilities, while critically important elements of deterrence and national power, simply can’t substitute for nuclear deterrence. In light of the emerging “strategic partnership” between Russia and China and their emphasis on nuclear weapons it would be foolish indeed to size U.S. strategic nuclear forces as if the only threat we face is that of rogue states and discard the requirement that the U.S. nuclear deterrent be “second to none.” Ignoring the PRC nuclear threat because of Chinese “no first use” propaganda is just as irresponsible. Absent a nuclear deterrent to their WMD use, rogue states could defeat our forces by the combination of few nuclear EMP weapons and large chemical and biological attacks. The situation would be much worse if they build a more extensive nuclear strike capability as has been reported. Freezing U.S. nuclear forces at the technical level of the Reagan administration will assure that, within two decades, Russia, China, India, and probably others will be technically superior and U.S. deterrence ability against CBW attack will be reduced. United States nuclear forces must be modernized and tailored to enhance deterrence and damage limitation against the rogue WMD threat. WMD capabilities have given otherwise inconsequential states the ability to kill millions of people. The right combination of missile defense and conventional and nuclear strike capabilities provide the best deterrent and damage limiting capability against the rogue state threat. We must not ignore the requirement to provide extended deterrence to our allies. British and French nuclear forces are not large enough, and these nations are not perceived as tough enough, to provide a deterrent for NATO Europe against Russia. In the Far East, there is literally no nuclear deterrent capability against China other than that provided by the United States. Failure to provide a credible deterrent will result in a wave of nuclear proliferation with serious national security implications. When dealing with the rogue states, the issue is not the size of the U.S. nuclear deterrent but the credibility of its use in response to chemical or biological weapons use and its ability to conduct low collateral damage nuclear attacks against WMD capabilities and delivery systems including very hard underground facilities for purposes of damage limitation. We must also have the capability to respond promptly. The United States nuclear guarantee is a major deterrent to proliferation. If we do not honor that guarantee, or devalue it, many more nations will obtain nuclear weapons. If arms control really becomes a substitute for nuclear deterrence and defense, it may very well precipitate the most destructive war in history. Effective verification is essentially impossible, and verification is not a substitute for compliance. Today, arms control has become part of the problem rather than a solution to the problem. The abolition of the in-kind deterrent to CBW use—which deterred CBW use in World War II—is making the world more unsafe almost on a daily basis. The START and Intermediate-Range Nuclear Forces (INF) Treaties prevent or inhibit the development of conventional strike capabilities with enhanced ability to counter WMD. The demise of the ABM Treaty, while very useful, does not completely address the problem of legacy arms control and its constraints upon U.S. conventional capabilities.

#### Uranium scarcity causes Russia and China to compete for Kazakh uranium – hurts relations.

Muzalevsky 11 (Roman, International Affairs Expert, Global Struggle for Kazakh Uranium Resources, 15 April 2011, The Jamestown Foundation, http://www.jamestown.org/single/?no\_cache=1&tx\_ttnews%5Bswords%5D=8fd5893941d69d0be3f378576261ae3e&tx\_ttnews%5Bany\_of\_the\_words%5D=uranium&tx\_ttnews%5Btt\_news%5D=37802&tx\_ttnews%5BbackPid%5D=7&cHash=eff36581a33138a4b57613d1f285d205, da 9-13-12)

Kazakhstan is interested in profiting from its energy exports to diverse suppliers and strengthening its geopolitical position vis-à-vis its two large neighbors – Russia and China. A rapidly emerging China is a prospective partner for Kazakhstan, wary of Moscow’s economic interests and strategic imperatives to retain its great power status in the post-Soviet space.¶ Russia is the world’s third and fourth largest source and producer of uranium, respectively. However, it confronts major production difficulties due to geographic conditions, pushing it to seek uranium deals with countries such as Australia and Kazakhstan. Russia needs to produce about 20,000 tons of uranium annually to meet its nuclear power needs by 2025. In 2007, it produced 3,413 tons of uranium. After the launch of a joint Russian-Kazakh venture in Kazakhstan, Russia’s uranium production climbed to 3,527 tons. In 2006, the two countries agreed to launch three nuclear joint ventures worth $10 billion to develop, enrich, and build nuclear reactors, including with a view to construct nuclear power stations in Kazakhstan and other countries (www.newsru.com, June 26, 2008; www.thebulletin.org, April 28, 2008).¶ Kazakhstan relies on Russia, which enjoys 45 percent of the global uranium enrichment capacity, for uranium enrichment. However, Mukhtar Dzhakishev, the former executive of the Kazakh nuclear state company Kazatomprom, cautions against Kazakhstan’s overall cooperation with Russia (www.inosmi.ru, February 26, 2010).¶ Kazakhstan has tried to avoid this by collaborating with Japan and China. Technologically-strong Japan is expected to generate 41 percent of its electricity production from nuclear energy by 2017. It runs 55 nuclear power reactors, planning to construct 11 more in the future. This offers lucrative prospects for Kazakhstan as it wants to obtain a 40 percent share of Japan’s uranium market. Companies such as Marubeni, Tokyo Electric Power, Chubu Electric Power, and Tohoku Electric Power have already contracted with Kazatomprom to develop Kharasan-1 and Kharasan-2 uranium deposits in Kazakhstan, aiming to produce 160,000 tons of uranium by 2050. Kazatomprom and Japan’s Sumitomo Shoji and Kepko also develop the Zapadny Munkuduk uranium deposit in the country. Kazatomprom also has a 10 percent share of the Japanese-owned Westinghouse Electric, one of the world’s largest suppliers of nuclear power reactors. Astana and Tokyo are currently exploring the possibility of building a nuclear power station in Kazakhstan (EDM, August 2, 2010).¶ Kazakh-Chinese cooperation is especially notable. China, as a leading global nuclear power developer is already the largest buyer of Kazakh uranium (www.trend.az, November 11, 2010). In 2007, Kazatomprom and China Guangdong Nuclear Power Group agreed to produce nuclear fuel (www.thebulletin.org, April 28, 2008). In April 2009, China and Kazakhstan created the Semizbay-U enterprise at Irkol, planning to produce 750 tons of uranium annually (EDM, March 23). Deputy Head of State Energy Management of China, Tian Zhiming, commented on Beijing’s appetite for nuclear energy: “The PRC will become the world’s largest consumer of uranium by 2030, overtaking the US. It is a question of time.” In 2011, the two sides agreed on the supply of 55,000 tons of uranium over the next 10 years. “Nineteen nuclear complexes will be built in China and 25 more are being planned. This is a huge potential market. In the long term, Kazakhstan can supply up to 40 percent of nuclear fuel. This is tens of billions of dollars in profit,” stated Kazakh President Nursultan Nazarbayev (www.eurasia.org.ru, March 17). ¶ In this light, security risks associated with a struggle by major powers over access to Kazakh uranium resources are not inconceivable, making it imperative for Kazakhstan not to overplay its external balancing strategy as it seeks to consolidate its sovereignty and maintain an economic modernization drive. Kazakhstan must address domestic risks. Its ambitions to supply nuclear power and fuel at home and abroad already raise environmental, health, and proliferation concerns given the lack of a professional cadre and environmental and safety standards. Many people still suffer from more than 450 nuclear weapons tests conducted in the country during the Soviet era. Nuclear incidents in Japan after the recent tsunami and potential Russian-Kazakh plans to build a nuclear power plant in Aktau are already generating an anti-nuclear backlash in the country (EDM, March 23; www.thebulletin.org, April 28, 2008). Many fear that widespread corruption and the country’s location in an unstable region increases the risk that Kazakhstan might possibly become a major proliferator (www.newsland.ru, October 17, 2009; www.thebulletin.org, April 28, 2008).¶ ¶ Mitigating these risks is a major challenge for Kazakhstan and others as the world confronts the surge in nuclear energy demand and the struggle over the precious uranium resources.

#### That escalates to global nuclear war.

Blank 2k (Stephen J, Expert on the Soviet Bloc for the Strategic Studies Institute, “American Grand Strategy and the Transcaspian Region”, World Affairs. 9-22)

Thus many structural conditions for conventional war or protracted ethnic conflict where third parties intervene now exist in the Transcaucasus and Central Asia. The outbreak of violence by disaffected Islamic elements, the drug trade, the Chechen wars, and the unresolved ethnopolitical conflicts that dot the region, not to mention the undemocratic and unbalanced distribution of income across corrupt governments, provide plenty of tinder for future fires. Many Third World conflicts generated by local structural factors also have great potential for unintended escalation. Big powers often feel obliged to rescue their proxies and proteges. One or another big power may fail to grasp the stakes for the other side since interests here are not as clear as in Europe. Hence commitments involving the use of nuclear weapons or perhaps even conventional war to prevent defeat of a client are not well established or clear as in Europe. For instance, in 1993 Turkish noises about intervening on behalf of Azerbaijan induced Russian leaders to threaten a nuclear war in that case. Precisely because Turkey is a NATO ally but probably could not prevail in a long war against Russia, or if it could, would conceivably trigger a potential nuclear blow (not a small possibility given the erratic nature of Russia's declared nuclear strategies), the danger of major war is higher here than almost everywhere else in the CIS or the "arc of crisis" from the Balkans to China. As Richard Betts has observed, The greatest danger lies in areas where (1) the potential for serious instability is high; (2) both superpowers perceive vital interests; (3) neither recognizes that the other's perceived interest or commitment is as great as its own; (4) both have the capability to inject conventional forces; and (5) neither has willing proxies capable of settling the situation.(77)

#### And escalation’s guaranteed – it’s a geopolitical hub.

Saghal and Anand 10 (Arun (former Army officer who created the Office of Net Assessment in the Indian Joint Staff, Senior Fellow at the Institute for Defense Studies and Analyses and ‘Distinguished Fellow’ School of Geo-Politics at the Manipal Academy of Higher Education) and Vinod (postgraduate in defence and strategic studies and is an alumnus of Defence Services Staff College and College of Defence Management), “Strategic Environment in Central Asia and India”, <http://www.silkroadstudies.org/new/docs/publications/1004Joshi-V-Strategic.pdf>)

The geo-strategic salience of Central Asia today has been underscored by two main factors. First, Central Asia has become important because of the discovery of hydrocarbon reserves and second, it has become a major transportation hub for gas and oil pipelines and multi-modal communication corridors connecting China, Russia, Europe, the Caucasus region, the Trans-Caspian region and the Indian Ocean. Furthermore, whether it was Czarist Russia or the Soviet Union or even the present Central Asian regimes, there has always been a strategic ambition in the north to seek access to the warm waters of the Indian Ocean. Thus Afghanistan, which links Central Asia and South Asia, is a strategic bridge of great geopolitical significance. Central Asia and South Asia are intimately connected not only geographically but also strategically. The Central Asian republics of Turkmenistan, Uzbekistan and Tajikistan have borders with Afghanistan, Iran lies to its west and Pakistan to the east and south. Therefore, the geostrategic significance of Afghanistan is enhanced even though it may not be an oil- or gas-rich country. With the control of Afghanistan comes the control of the land routes between the Indian subcontinent and resource-rich Central Asia, as well as of a potential corridor to Iran and the Middle East. Thus, stability and peace in Afghanistan, and for that matter Pakistan, are a geostrategic imperative. Central Asia has never been a monolithic area and is undergoing a turbulent transitional process with a diverse range of ethnicities and fragmented societies throughout the region. These societal divisions and lack of political maturity compound the social, economic and political challenges. Security and economic issues are the two most important components of the Central Asian states’ engagement with outside powers. Among the states themselves there are elements of both cooperation and competition. Historical legacies, their geo-strategic locations, and above all their perceived national interests profoundly influence the political choices of Central Asian nations. The weaknesses of the new nations in Central Asia pave the way for outside powers to interfere in their internal affairs.

#### Adoption of reprocessing solves U.S. uranium needs

Sayre 11 (Edwin, engineering consultant, “Commercial Value of Used Nuclear Fuel Reprocessed with Elements Separated, Purified and Reduced to Metals”, NIST, 2011, <http://www.nist.gov/tip/wp/pswp/upload/164_commercial_value_used_nuclear_fuel_reprocessed.pdf>)

The commercial value of the elements in the used fuel as indicated in Table 1 is a big ¶ surprise for most people. The commercial value of over twenty million dollars a year each 1000 MW reactor is based on today’s value for the rare metals in the fission ¶ products and the fissile metals to be recycled in fuel. The accelerated use of these ¶ elements with future technology will probably make them worth more than double that ¶ commercial value in 2050.¶ The United States should be interested in determining the cost of reprocessing the used ¶ fuel and preparing the elements for commercial use. It is estimated roughly that there ¶ will be a considerable profit in the processing of the elements in the used fuel. DOE is ¶ supporting technical proposals for the Advanced Fuel Cycle Initiative (AFCI) for ¶ computing and simulating the operations required for processing the used fuel and ¶ separating out the commercial elements to determine the cost. There will be further ¶ programs to optimize the technology for the processing and establishing the required ¶ facilities. It would be economically ideal to start up the first reprocessing facilities by ¶ 2020 to start using the used fuel with over 50 years of aging. ¶ Many other countries are moving forward in the reprocessing and recycling the actinides ¶ in fast breeder reactors to make fuel from all low enriched fuel for the future use in the ¶ thermal reactor power plants. There is enough used nuclear fuel and the uranium 238 ¶ stored away to meet all of the US energy requirements for the next 500 years with the ¶ proper technical planning and program operation.

#### US nuclear reprocessing lead to a spillover of the technology internationally.

Acton 9 (James, J. associate in the Nonproliferation Program at the Carnegie Endowment for International Peace, Survival, Vol. 51, No. 4, “Nuclear Power, Disarmament and Technological Restraint”, RSR)

Thus, not only does reprocessing clearly not help with facilitating take back, but if advanced nuclear states adopt it as a tool for waste management, it will be virtually impossible for them to argue against others doing likewise. Today, waste management is probably the most important driver for reprocessing. Indeed, the Bush administration’s interest in this technology was born out of a desire to stretch the capacity of Yucca Mountain as far as possible. If the United States and others reprocess they will hand a powerful argument to lobbies within a state – typically the nuclear R&D community – that support the development of reprocessing.

#### Nuclear reprocessing solves peak uranium internationally.

Berry and Tolley 10 (R. Stephen and George S., Professors at the University of Chicago, Nuclear Fuel Reprocessing: Future Prospects and Viability, University of Chicago, 29 November 2010, http://humanities.uchicago.edu/orgs/institute/bigproblems/Team7-1210.pdf, da 8-29-12)

Uranium prices have also been rising due to increased demand, a trend that may¶ have long-term repercussions. Identified uranium deposits can fuel existing nuclear plants¶ for about 80 years without reprocessing. Reprocessing can extend the life of current¶ uranium resources for an additional 15 to 20 years.¶ 91¶ Total conventional uranium¶ resources, including undiscovered deposits that are estimated using indirect geological¶ evidence and extrapolated values, can fuel existing plants for around 200 years.¶ 92¶ In the¶ short-term, however, prices have risen sharply because of an announced increase in nuclear¶ plants that will require fuel: China is intending to increase nuclear power as a source of¶ national energy by 7% in the next ten years, and countries such as Russia, Pakistan, and¶ South Korea are all building new reactors.¶ 93¶ Another benefit of reprocessing is the¶ additional plutonium and uranium recovered per kilogram of spent fuel reprocessed; this¶ amount replaces a portion of the raw material that goes into the fuel cycle. The amount of¶ recovered uranium is .94 kg/kgHM, and the amount of recovered plutonium is .01014¶ kg/kgHM.¶ 94

### Plan Text

#### Thus the plan: The United States Federal Government should provide a twenty-percent investment tax credit for the deployment of domestic nuclear fuel recycling.

### Solvency

#### Observation Four: Solvency

#### Tax incentives would solve for reprocessing – makes it commercially more desirable

Lagus 5 (Todd, 2005 WISE Intern, University of Minnesota, WISE, “Reprocessing of Spent Nuclear Fuel: A Policy Analysis” <http://www.wise-intern.org/journal/2005/lagus.pdf>, RSR)

The economic analysis shows that the reprocessing or even the once through nuclear cycle is not yet economically desirable to investors. However, changes in government policies, including environmental regulations already mentioned and economic policies, could improve the competitiveness of both technologies. The University of Chicago nuclear power study analyzes the effects of government involvement in the future of the once through cycle using several different forms of support: loan guarantees, accelerated depreciation, and investment tax credits. Loan guarantees in this case refer to the obligation of the government to repay part of the loan should a utility company not be able to repay. The 2005 Energy Bill, which passed in July 2005, would make advanced nuclear power plants eligible for federal loan guarantees and provide a tax credit for nuclear power production. This would lessen the risks associated with capital costs for investors, and according to the Chicago study, reduce the LCOE for a nuclear reactor by 4 mills/kWh to 6 mills/kWh. The next financial subject, accelerated depreciation, refers to the ability of an investor to utilize the investment tax deductions early on in the lifetime of the payment rather than receive the same deduction each year in a linear fashion. Accelerated depreciation helps investors absorb capital costs, which for nuclear power generation are large. The University of Chicago study calculates a reduction in the LCOE for a 7 year depreciation policy of 3 mills/kWh to 4 mills/kWh. Tax incentives for nuclear power production are the final policies that could make nuclear power and reprocessing more desirable. An investment tax credit of 10 percent would create an LCOE reduction between 6 mills/kWh and 8 mills/kWh, while a 20 percent credit could create cost reductions between 9 mills/kWh and 13 mills/kWh. 39 Production tax credits on a per kWh basis may also be used. Since reprocessing and the once through cycle are not appreciably different for the price, it is sufficient to assume 12 that similar effects for all three of these government policies would occur with policies applied to reprocessing. While it is no secret that monetary incentives would help the nuclear reprocessing investments, there is still the question of whether or not the government should provide economic support to the industry. As with any government funding, it is politically important not to be viewed by other energy generation industries, i.e. gas and coal, as favoring nuclear power over other sources. Given the recent concerns for global warming, tax incentives and loan guarantees for nuclear technologies seem like a realistic option especially in the absence of emission regulations. Accelerated depreciation also is an unobtrusive option that could help the industry by easing capital costs.

#### Government investment key – necessary to mitigate risks from government regulations.

Selyukh 10 (Alina, Staff Writer, “Nuclear waste issue could be solved, if...”, 8-17-10, Reuters,

<http://www.reuters.com/article/2010/08/17/us-nuclear-waste-recycling-idUSTRE67G0NM20100817>, RSR)

Since the U.S. agency declared spent fuel reprocessing too costly, U.S. research into new technologies has slowed. President George W. Bush offered federal backing for nuclear waste management alternatives, but over the years the policy has meandered and had few incentives to lure companies, said Steven Kraft, senior director of used-fuel management at the Nuclear Energy Institute, the industry's trade organization. Being able to burn through rather inexpensive uranium to produce energy, companies are wary of investing millions into recycling technology that may go against the national policy. Still, industry support for the ideas is strong, if not for the procedure itself then for allowing the market -- not the government -- to determine its cost-effectiveness and fate. Duke Energy, which operates seven nuclear plants, would support nuclear recycling if there was a cost-effective national policy, spokeswoman Rita Sipe said. GE Hitachi has proposed a new generation of fast reactors that, they say, could return to the grid up to 99 percent of energy contained in the uranium, compared to recovering 2 or 3 percent from a common light water reactor. But they want federal support for more research and, ultimately, commercialization of the technology, said chief consulting engineer Erik Loewen. That support, in essence, would have to come in a form of subsidies such as cost sharing or loan guarantees, said Jack Spencer, nuclear energy policy research fellow at the Heritage Foundation think tank. "What the industry needs... is something to mitigate government-imposed risks," he said of the regulatory regime.

#### Government investment necessary – provides appropriate risk mitigation and shortens the timeframe for completion.

IAEA 8 (International Atomic Energy Agency, “Spent Fuel Reprocessing Options”, August 2008, RSR)

With the expected high costs and significant risks involved in constructing new nuclear facilities, e.g., reprocessing facilities, the impact of various ownership options need to be considered. These options include government funding, regulated funding, private funding, and combinations of public and private funding. These different funding approaches may significantly impact the costs of fuel cycle services. Given the very long time frames associated with building reprocessing facilities, there exist risks other than technological or economic, which need to be dealt with. These include evolving government policy, public and political acceptance, and licensing risks. As a result, private investors are unlikely to provide capital unless the initial high risks factors are mitigated through appropriate risk sharing agreements (e.g., loan guarantees, equity protection plans, tax credits, etc.) with government entities.

## 2AC

### Peak Uranium

#### No prolif concerns – new tech does not separate the plutonium preventing it from theft or usability.

Lagus, 2005 WISE Intern, ‘5

[Todd, University of Minnesota, WISE, “Reprocessing of Spent Nuclear Fuel: A Policy Analysis”

<http://www.wise-intern.org/journal/2005/lagus.pdf>, RSR]

In the case of the newer UREX+ technology, the long-lived fission products create more steps in weapons deployment. The new technologies for reprocessing including transmutation would not involve separating pure plutonium, but rather a plutonium/ actinide mixture that would increase the toxicity of the material and protect it from theft and handling. The International Atomic Energy Agency’s (IAEA) standard for self protection requires 1 Sievert/hr (100 rems/hr) at one meter. Five Sieverts is a median lethal dose. 45 This technology again has been demonstrated in laboratories, but a great deal of research is still underway. The actinides also contaminate the plutonium such that it would not be usable as a weapon without sophisticated chemical separation technologies, which few countries, if any, possess. 46 Some argue that there are many other weapons options which are cheaper and easier to fabricate should an enemy decide to strike. 47

### Solvency

#### Your evidence assumes status quo reprocessing techniques—newer techniques cut waste in half

Lee, 2010 Wise Intern at the American Nuclear Society, ‘10

[Nathan, WISE, “Sustainability Of U.S. Nuclear Energy: Waste Management And¶ The Question Of Reprocessing”, 2010,

<http://www.wise-intern.org/journal/2010/NathanLeeWISE2010.pdf>, RSR]

The near-term waste burden of the once-through cycle in the United States is considerable but effectively managed through contained pool and dry cask storage. There is consensus that this strategy is sustainable at least until midcentury. 29 On the other hand, there has been substantial criticism of the generation and management of low-level waste from PUREX reprocessing plants abroad. As Table 1 shows, the total waste volume increases for the conventional Pu recycle scheme used today. However, implementation of the full actinide recycle would cut total waste volume nearly in half. 30

#### Even massive economic decline has zero chance of war

Robert Jervis 11, Professor in the Department of Political Science and School of International and Public Affairs at Columbia University, December 2011, “Force in Our Times,” Survival, Vol. 25, No. 4, p. 403-425

Even if war is still seen as evil, the security community could be dissolved if severe conflicts of interest were to arise. Could the more peaceful world generate new interests that would bring the members of the community into sharp disputes? 45 A zero-sum sense of status would be one example, perhaps linked to a steep rise in nationalism. More likely would be a worsening of the current economic difficulties, which could itself produce greater nationalism, undermine democracy and bring back old-fashioned beggar-my-neighbor economic policies. While these dangers are real, it is hard to believe that the conflicts could be great enough to lead the members of the community to contemplate fighting each other. It is not so much that economic interdependence has proceeded to the point where it could not be reversed – states that were more internally interdependent than anything seen internationally have fought bloody civil wars. Rather it is that even if the more extreme versions of free trade and economic liberalism become discredited, it is hard to see how without building on a preexisting high level of political conflict leaders and mass opinion would come to believe that their countries could prosper by impoverishing or even attacking others. Is it possible that problems will not only become severe, but that people will entertain the thought that they have to be solved by war? While a pessimist could note that this argument does not appear as outlandish as it did before the financial crisis, an optimist could reply (correctly, in my view) that the very fact that we have seen such a sharp economic down-turn without anyone suggesting that force of arms is the solution shows that even if bad times bring about greater economic conflict, it will not make war thinkable.

## States

#### Perm do both. Solves GOP backlash because thirty republican governors would all back reprocessing.

#### Information distortion means the CP links to politics

**Kiely, ‘12** [2/17/12, Eugene Kiely, Washington assignment editor USA today, “Did Obama ‘Approve’ Bridge Work for Chinese Firms?” http://www.factcheck.org/2012/02/did-obama-approve-bridge-work-for-chinese-firms/]

Who’s to blame, if that’s the right word, if the project ends up using manufactured steel from China? The National Steel Bridge Alliance [blames](http://americanmanufacturing.org/blog/shameful-use-taxpayer-dollars-alaska) the state railroad agency. The Alliance for American Manufacturing [says](http://americanmanufacturing.org/blog/alaskan-manufacturers-outraged-potential-%E2%80%9Cmade-china%E2%80%9D-railroad-bridge) the federal Buy American laws have been “weakened with loopholes and various exemptions that make it easier for bureaucrats to purchase foreign-made goods instead of those made in American factories with American workers.” So, how did Obama get blamed for the decisions by state agencies and for state projects that, in at least one case, didn’t even use federal funds? The answer is a textbook lesson in how information gets distorted when emails go viral. We looked at the nearly 100 emails we received on this subject and found that Obama wasn’t mentioned at all in the first few emails. Typical of the emails we received shortly after the ABC News report aired was this one from Oct. 11, 2011: “I just got an email regarding Diane Sawyer on ABC TV stating that U. S. Bridges and roads are being built by Chinese firms when the jobs should have gone to Americans. Could this possible be true?” The answer: Yes, it’s true. End of story, right? Wrong. Days later, emails started to appear in our inbox that claimed ABC News reported that Chinese firm were receiving stimulus funds to build U.S. bridges — even though the broadcast news story didn’t mention stimulus funds at all. (The report did include a clip of Obama delivering a speech on the need to rebuild America’s bridges and put Americans to work, but said nothing about the president’s $830 billion stimulus bill.) Still, we received emails such as this one on Nov. 4, 2011, that included this erroneous claim language: “Stimulus money meant to create U.S. jobs went to Chinese firms. Unbelievable….” It didn’t take long for Obama to be blamed. That same day — Nov. 4, 2011 — we received an email that made this leap to Obama: “SOME CHINESE COMPANIES WHO ARE BUILDING ‘OUR’ BRIDGES. (3000 JOBS LOST TO THE CHINESE FIRM)…..AND NOW OBAMA WANTS ‘MORE STIMULUS MONEY’…..THIS IS NUTS ! ! ! If this doesn’t make you furious nothing will….” This year, Obama’s name started to surface in the subject line of such critical emails — raising the attack on the president to yet another level and perhaps ensuring the email will be even more widely circulated. Since Jan. 17, we have gotten more than a dozen emails with the subject line, “ABC News on Obama/USA Infrastructure,” often preceded with the word “SHOCKING” in all caps. The emails increasingly contain harsh language about the president. Since Jan. 11, 23 emails carried this added bit of Obama-bashing: “I pray all the unemployed see this and cast their votes accordingly in 2012!” One of those emails — a more recent one from Feb. 8 — contained this additional line: “Tell me again how Obama’s looking out for blue collar guys. He cancels pipelines, and lets Chinese contractors build our bridges…” And so it goes, on and on. All from a news report that blamed state officials — not Obama — for spending taxpayer money on Chinese firms to build U.S. bridges.

#### States CP are V/I. 1.) No comparative literature compares the action of 50 states simultaneously vs. the federal government. Kills education because it removes substantive clash about energy production. 2.) Fiat abuse – uniformity eliminates the only aff against state action, which is enforcement. Kills competitive equity.

#### CP can’t solve – federal investment is necessary to remove the perceptual ban on reprocessing.

Adams, ‘8

[Rod, “What Do You Do About the Waste? Recycle and Reuse”, Clean Technica, 5-29-2008,

<http://cleantechnica.com/2008/05/29/what-do-you-do-about-the-waste-recycle-and-reuse/>, RSR]

The US used to have a plan to recycle our fuel as well, but a great deal of marketing and pressure by people that do not like the idea of using plutonium as a source of commercial heat resulted in President Ford issuing a presidential order to temporarily halt nuclear fuel recycling in 1976. President Carter, a man who claimed to be a nuclear engineer, made that ban permanent in the hopes that forcing US companies to avoid fuel recycling would cause others to abandon the very logical idea. That effort did not work as planned, but the people who had invested large amounts of time and money into building three recycling plants in the US only to have them shut down with the stroke of a pen decided “once bitten, twice shy.” Though President Reagan removed the ban, President Clinton essentially reinstated it and no commercial company has been willing to build a facility and risk having it turn into a white elephant after an election.

#### Doesn’t solve the aff – absent the plan, companies will never believe that the federal government will allow reprocessing, so they won’t invest. That’s Selyukh 10.

#### Conditionality is a voting issue – being able to kick positions at will destroys argumentative responsibility, skews the 2AC, the focal point of all aff offense, because we have to spend more time answering things than they do kicking them, and justifies aff conditionality to be reciprocal. Counter interpretation is dispositionality. Allows us to stick them to positions. Solves all their offense.

#### CP can’t solve - federal preemption of the counterplan exists now

Ostrow, associate professor of law at Hofstra Law School, ’11

(Ashira Pelman Ostrow, “Process Preemption in Federal Siting Regimes, Harvard Journal of Law, July 2011, <http://www.harvardjol.com/wp-content/uploads/2011/07/Ostrow_Article.pdf>)

For national security reasons, the federal government has long asserted exclusive authority to manage high-level radioactive waste. 130 The Atomic Energy Act of 1954 131 and the Energy Reorganization Act of 1974 132 granted the Nuclear Regulatory Commission (“NRC”) exclusive regulatory authority over high-level nuclear waste facilities. 133 The statutes left no room for state participation, other than in an advisory capacity for certain transportation issues. 134 Nonetheless, by the late 1970s, the states began to actively regulate, restrict, and even ban the shipment of highly toxic nuclear waste and the establishment of radioactive waste facilities within their borders. 135 To resolve the jurisdictional conflict, Congress enacted the Nuclear Waste Policy Act of 1982 (“NWPA”). 136 The Act was intended to “establish a schedule for the siting, construction, and operation of repositories” to protect the public and the environment “from the hazards posed by high-level radioactive waste.” 137 The NWPA required the Secretary of Energy to nominate five sites for a high-level radioactive waste repository and to recommend three of them to the President for further study by January 1, 1985. 138 The Act further required the Secretary of Energy to develop guidelines by which to evaluate potential repository sites. 139

#### Congress is necessary – overcomes regulatory process.

Fertel, Senior Vice President and Chief Nuclear Officer at the Nuclear Energy Institute, ‘5

[Marvin, CQ Congressional Testimony, “NUCLEAR POWER'S PLACE IN A NATIONAL ENERGY POLICY,” 4/28, lexis]

Industry and government will be prepared to meet the demand for new emission-free baseload nuclear plants in the 2010 to 2020 time frame only through a sustained focus on the necessary programs and policies between now and then. As it has in the past, strong Congressional oversight will be necessary to ensure effective and efficient implementation of the federal government's nuclear energy programs, and to maintain America's leadership in nuclear technology development and its influence over important diplomatic initiatives like nonproliferation. Such efforts have provided a dramatic contribution to global security, as evidenced by the U.S.-Russian nonproliferation agreement to recycle weapons-grade material from Russia for use in American reactors. Currently, more than 50 percent of U.S. nuclear power plant fuel depends on converted Russian warhead material. Nowhere is continued congressional oversight more important than with DOE's program to manage the used nuclear fuel from our nuclear power plants. Continued progress toward a federal used nuclear fuel repository is necessary to support nuclear energy's vital role in a comprehensive national energy policy and to support the remediation of DOE defense sites. Since enactment of the 1982 Nuclear Waste Policy Act, DOE's federal repository program has repeatedly overcome challenges, and challenges remain before the Yucca Mountain facility can begin operation. But as we address these issues, it is important to keep the overall progress of the program in context. There is international scientific consensus that a deep geologic repository is the best solution for long-term disposition of used military and commercial nuclear power plant fuel and high-level radioactive byproducts. The Bush administration and Congress, with bipartisan support, affirmed the suitability of Yucca Mountain for a repository in 2002. Over the past three years, the Energy Department and its contractors have made considerable progress providing yet greater confirmation that this is the correct course of action and that Yucca Mountain is an appropriate site for a national repository. --During the past year, federal courts have rejected significant legal challenges by the state of Nevada and others to the Nuclear Waste Policy Act and the 2002 Yucca Mountain site suitability determination. These challenges questioned the constitutionality of the Yucca Mountain Development Act and DOE's repository system, which incorporates both natural and engineered barriers to contain radioactive material safely. In the coming year, Congress will play an essential role in keeping this program on schedule, by taking the steps necessary to provide increased funding for the project in fiscal 2006 and in future years. Meeting DOE's schedule for initial repository operation requires certainty in funding for the program. This is particularly critical in view of projected annual expenditures that will exceed $1 billion beginning in fiscal 2007. Meeting these budget requirements calls for a change in how Congress provides funds to the project from monies collected for the Nuclear Waste Fund. The history of Yucca Mountain funding is evidence that the current funding approach must be modified. Consumer fees (including interest) committed to the Nuclear Waste Fund since its f6rmation in 1983 total more than $24 billion. Consumers are projected to pay between $750 million to $800 million to the fund each year, based on electricity generated at the nation's 103 reactors. This is more than $2 million per day. Although about $8 billion has been used for the program, the balance in the fund is nearly $17 billion. In each of the past several years, there has been a gap between the annual fees paid by consumers of electricity from nuclear power plants and disbursements from the fund for use by DOE at Yucca Mountain. Since the fund was first established, billions of dollars paid by consumers of electricity from nuclear power plants to the Nuclear Waste Fund-intended solely for the federal government's used fuel program-in effect have been used to decrease budget deficits or increase surpluses. The industry believes that Congress should change the funding mechanism for Yucca Mountain so that payments to the Nuclear Waste Fund can be used only for the project and be excluded from traditional congressional budget caps. Although the program should remain subject to congressional oversight, Yucca Mountain appropriations should not compete each year for funding with unrelated programs when Congress directed a dedicated funding stream for the project. The industry also believes that it is appropriate and necessary to consider an alternative perspective on the Yucca Mountain project. This alternative would include an extended period for monitoring operation of the repository for up to 300 years after spent fuel is first placed underground. The industry believes that this approach would provide ongoing assurance and greater confidence that the repository is performing as designed, that public safety is assured, and that the environment is protected. It would also permit DOE to apply evolving innovative technologies at the repository. Through this approach, a scientific monitoring program would identify additional scientific information that can be used in repository performance models. The project then could update the models, and make modifications in design and operations as appropriate. Congressional committees like this one can help ensure that DOE does not lose sight of its responsibility for used nuclear fuel management and disposal, as stated by Congress in the Nuclear Waste Policy Act of 1982. The industry fully supports the fundamental need for a repository so that used nuclear fuel and the byproducts of the nation's nuclear weapons program are securely managed in an underground, specially designed facility. World-class science has demonstrated that Yucca Mountain is the best site for that facility. A public works project of this magnitude will inevitably face challenges. Yet, none is insurmountable. DOE and its contractors have made significant progress on the project and will continue to do so as the project enters the licensing phase. Congressional oversight also can play a key role in maintaining and encouraging the stability of the NRC's regulatory process. Such stability is essential for our 103 operating nuclear plants and equally critical in licensing new nuclear power plants. Congress played a key role several years ago in encouraging the NRC to move toward a new oversight process for the nation's nuclear plants, based on quantitative performance indicators and safety significance. Today's reactor oversight process is designed to focus industry and NRC resources on equipment, components and operational issues that have the greatest importance to, and impact on, safety. The NRC and the industry have worked hard to identify and implement realistic security requirements at nuclear power plants. In the three-and-a-half years since 9/11, the NRC has issued a series of requirements to increase security and enhance training for security programs. The industry complied-fully and rapidly. In the days and months following Sept. 11, quick action was required. Orders that implemented needed changes quickly were necessary. Now, we should return to the orderly process of regulating through regulations. The industry has spent more than $1 billion enhancing security since September 2001. We've identified and fixed vulnerabilities. Today, the industry is at the practical limit of what private industry can do to secure our facilities against the terrorist threat. NRC Chairman Nils Diaz and other commissioners have said that the industry has achieved just about everything that can be reasonably achieved by a civilian force. The industry now needs a transition period to stabilize the new security requirements. We need time to incorporate these dramatic changes into our operations and emergency planning programs and to train our employees to the high standards of our industry-and to the appropriately high expectations of the NRC. Both industry and the NRC need congressional oversight to support and encourage this kind of stability. CONCLUSION Electricity generated by America's nuclear power plants over the past half-century has played a key part in our nation's growth and prosperity. Nuclear power produces over 20 percent of the electricity used in the United States today without producing air pollution. As our energy demands continue to grow in years to come, nuclear power should play an even greater role in meeting our energy and environmental needs. The nuclear energy industry is operating its reactors safely and efficiently. The industry is striving to produce more electricity from existing plants. The industry is also developing more efficient, next-generation reactors and exploring ways to build them more cost-effectively. The public sector, including the oversight committees of the U.S. Congress, can help maintain the conditions that ensure Americans will continue to reap the benefits of our operating plants, and create the conditions that will spur investment in America's energy infrastructure, including new nuclear power plants. One important step is passage of comprehensive energy legislation that recognizes nuclear energy's contributions to meeting our growing energy demands, ensuring our nation's energy security and protecting our environment. Equally important, however, is the need to ensure effective and efficient implementation of existing laws, like the Nuclear Waste Policy Act, and to provide federal agencies with the resources and oversight necessary to discharge their statutory responsibilities in the most efficient way possible. The commercial nuclear power sector was born in the United States, and nations around the world continue to look to this nation for leadership in this technology and in the issues associated with nuclear power. Our ability to influence critical international policies in areas like nuclear nonproliferation, for example, depends on our ability to maintain a leadership role in prudent deployment, use and regulation of nuclear energy technologies here at home, in the United States, and on our ability to manage the technological and policy challenges-like waste management-that arise with all advanced technologies.

#### US stance against reprocessing hurts relations with South Korea and results in South Korean nuclearization.

Yurman, Staff Writer, ‘12

[Dan, “Revisiting Reprocessing in South Korea”, ANS Nuclear Café, 8-2-12,

<http://ansnuclearcafe.org/2012/08/02/revisiting-reprocessing-in-south-korea/>, RSR]

Comes now the request by the South Korean government, first aired in October 2010, to revise the bilateral cooperation treaty with the U.S. It has been in place for more than 40 years and it is a cornerstone of U.S./South Korean diplomatic relations. Many specialists in the field of nonproliferation see a “hard and fast” policy against any expansion of uranium enrichment and spent fuel reprocessing as a key to stopping states like North Korea from pursuing these activities. That strategy hasn’t worked and, as a result, South Korea wants relief from the restriction in the now-decades-old treaty. Negotiations over changes to the treaty have been going on since last December, but appear to be stalemated around a key set of issues. It is a delicate dance, as diplomats like to say, because if the U.S. leans too heavily on South Korea, it could sour relations between the two countries and spawn nationalist sentiment that might lead to a nuclear weapons program. Since the 1950s, South Korea has depended on the U.S. nuclear arsenal as a shield against aggression from its neighbor to the north.

#### US-SoKo relations k2 regional stability and global security

Clinton 10 [Hillary Rodham Clinton, “America’s Engagement in the Asia-Pacific”, October 28, 2010, http://www.state.gov/secretary/rm/2010/10/150141.htm]

This year also marked a milestone with another ally: the 60th anniversary of the start of the Korean War, which Secretary Gates and I commemorated in Seoul this past summer. And in two weeks, our presidents will meet in Seoul when President Obama travels there for the G-20 summit. Our two countries have stood together in the face of threats and provocative acts from North Korea, including the tragic sinking of the Cheonan by a North Korean torpedo. We will continue to coordinate closely with both Seoul and Tokyo in our efforts to make clear to North Korea there is only one path that promises the full benefits of engagement with the outside world – a full, verifiable, and irreversible denuclearization.The alliance between South Korea and the United States is a lynchpin of stability and security in the region and now even far beyond. We are working together in Afghanistan, where a South Korean reconstruction team is at work in Parwan Province; in the Gulf of Aden, where Korean and U.S. forces are coordinating anti-piracy missions. And of course, beyond our military cooperation, our countries enjoy a vibrant economic relationship, which is why our two Presidents have called for resolving the outstanding issues related to the U.S.-Korea Free Trade Agreement by the time of the G-20 meeting in Seoul.

#### East Asian instability leads to World War III

Knight Ridder 2k

(Jonathon S. Landay, “Top administration officials warn stakes for U.S. are high in Asian conflicts”, 3-11, L/N)

Few if any experts think China and Taiwan, North Korea and South Korea, or India and Pakistan are spoiling to fight. But **even a minor miscalculation by any of them could destabilize Asia, jolt the global economy and even start a nuclear war**. India, Pakistan and China all have nuclear weapons, and North Korea may have a few, too. **Asia lacks the kinds of organizations, negotiations and diplomatic relationships that helped keep an uneasy peace for five decades in Cold War Europe. "Nowhere else on Earth are the stakes as high and relationships so fragile**," said Bates Gill, director of northeast Asian policy studies at the Brookings Institution, a Washington think tank. "**We see the convergence of great power interest overlaid with lingering confrontations with no institutionalized security mechanism in place. There are elements for potential disaster**."

## Sequestration

#### Case controls the impact – deterrence.

#### Gun control thumps.

Madhani and Jackson, 1-16

[Aamer and David, “Analysis: With gun control, Obama takes political chance”, USA Today,

<http://www.usatoday.com/story/news/politics/2013/01/16/gun-control-legislation-obama-proposals/1837809/>, RSR]

Obama vowed to use "whatever weight this office holds" to make his gun-safety proposals a reality, but put the onus on Congress, who he said will have to act if there is to be meaningful action. To that end, he called on Americans to question lawmakers on where they stand on some of the most divisive issues, including a ban on assault weapons and establish universal background checks. "The only way we can change is if the American people demand it,"' Obama said. Obama also sought to put voter pressure on the powerful National Rifle Association and, particularly, its supporters in Congress: "Ask them what's more important: Doing whatever it takes to get an A grade from the gun lobby that funds their campaigns? Or giving parents some piece of mind when they drop their child off to first grade?"

#### No PC.

AP, 1-20

[“Analysis: Optimistic Obama faces tough to-do list”,

<http://www.usnews.com/news/politics/articles/2013/01/20/analysis-optimistic-obama-faces-tough-to-do-list>, RSR]

Obama's goal is to get through that trifecta and still have the political capital left for the things he'd rather focus on: reducing gun violence, overhauling immigration policy, revamping tax laws, addressing climate change and more. With Republicans in Congress approaching the new year with very different goals, "it's a formula for deadlock and difficulty for the president," says James Thurber, director of the Center for Congressional and Presidential Studies at American University. "I don't think this president has even a month of political capital." The president also will have to devote significant energy simply to safeguarding the achievements of his first term, by keeping the economic recovery alive, making sure his health care law is properly put in place in the face of persisting objections from businesses and individuals, and ensuring new financial regulations have teeth.

#### No PC loss from pushing nuclear.

Hinckley, adjunct professor of international energy policy at Georgetown University, ‘12

[Elias, partner with the law firm of Kilpatrick Townsend & Stockton,

“Hard Choices Ahead for US Energy”, <http://www.ourenergypolicy.org/wp-content/uploads/2012/03/EHinckley-policy-article.pdf>]

What remains unclear is how policymakers will react. Some amount of policymaking support has been lost, as there has been simply too much discourse devoted to the potential hazards of nuclear power. However, the downside to continuing to champion the role of nuclear energy as part of a secure US energy future appears limited at this stage. There is little nationalized resistance and, as a result, no clear political cost to support nuclear policies, and possibly the benefit of the impression of proactivity on broad energy policy initiatives, and the results may be politicians continuing to champion nuclear power with no real expectation of new facilities being developed over the near or midterm

#### Logical policymaker can do both.

#### Hagel pounds the disad---requires all Obama’s PC

Politico 1-6 – “Chuck Hagel takes fire from Capitol Hill,” 1/6/13, http://dyn.politico.com/printstory.cfm?uuid=F3C2EA30-9671-40B6-A668-0BDDCDC603FB

Senate Democrats and Republicans are far from sold on President Barack Obama’s expected nomination of Chuck Hagel as secretary of defense.¶ In fact, Obama’s decision to tap the Vietnam veteran and outspoken former Republican senator is likely to spark another nasty fight with Congress right on the heels of the fiscal cliff showdown and just before another likely battle royal over the debt ceiling.¶ Republicans on Sunday unleashed a fresh barrage of attacks amid reports Obama would nominate Hagel on Monday for the top job at the Pentagon. ¶ The new Senate minority whip, Texas Republican John Cornyn, said he’s firmly against Hagel’s nomination. Sen. Lindsey Graham (R-S.C.), an Air Force reservist who serves on the Armed Services Committee that will consider the nod, said Hagel would hold the “most antagonistic” views toward Israel of any defense secretary in U.S. history.¶ And despite heaping praise on Hagel when he retired from the Senate after the 2008 elections, Minority Leader Mitch McConnell (R-Ky.) on Sunday failed to extend an olive branch to the Nebraska Republican, instead suggesting there would be “tough questions” ahead. ¶ Even Senate Democrats are privately signaling they‘re not yet on board with the Hagel pick, and that the White House has a lot of work to do to get him across the finish line. ¶ The nomination comes at a tricky time for the administration — just as the fights over raising the debt ceiling and government appropriations are set to begin. And it could put a number of at-risk or pro-Israel Democrats in tough political spots — especially if the nomination fight grows even more contentious.¶ Democrats are also scratching their heads over why Obama appears willing to go to the mat for Hagel, while abandoning his push for a close friend and member of his inner circle, U.N. Ambassador Susan Rice, to become secretary of state. Rice, an unabashed Democrat, abandoned her bid after withering GOP criticism over the deadly attacks on the U.S. Consulate in Libya. ¶ Though different in substance, the controversy over Rice’s remarks is not unlike the current pushback over Hagel’s past foreign policy positions and controversial remarks. But Hagel lacks a natural constituency in the Senate, given that he’s grown alienated from the GOP, yet Democrats are suspicious of his record. ¶ “It is a strange signal for the White House to send that they are willing to fight for Hagel but not Rice,” one Senate Democratic aide said Sunday. “Democrats are not currently unified behind Hagel, and it will take some real work by the administration to get them there, if it’s even possible.” ¶ Senior Republicans agreed, noting that after Hagel infuriated Republicans and Democrats alike over the years, there isn’t a natural base for him. ¶ “I can’t imagine why [Obama] would choose to burn his political capital on this nomination. For what? There is no constituency for Chuck Hagel,” one senior GOP aide said. “Obama will expend every ounce of political capital he has to get him across the finish line. Dems will hate this.”

#### Fiat solves the link – won’t be perceived.

#### Debt ceiling and sequestration won’t pass – House Republicans aren’t onboard.

Politico, 1-24

[Jake Sherman and Carrie Brown, “Fiscal fights: Who will blink first?”, Politico,

<http://www.politico.com/story/2013/01/fiscal-fights-who-will-blink-first-86700.html>, RSR]

Congress’s next battle will be to keep the government open after March 27 while simultaneously stopping massive spending cuts to the Pentagon and other government programs that take hold March 1. And that fight shows how steep the hill is to climb. The GOP wants to replace automatic spending cuts with changes to mandatory programs like Social Security, Medicare and Medicaid without any additional tax increases. Obama and Democrats, meanwhile, are pushing for additional revenue — which the GOP refuses to countenance after the fiscal cliff deal — and are serious about protecting entitlement programs. But there’s almost no way for both sides to get what they want — setting the nation on a course to a possible government shutdown or deep cuts to government programs that no one wants, unless someone blinks. “We support comprehensive tax reform to eliminate loopholes, lower rates and create jobs, but in terms of additional revenue, that issue is closed,” a senior GOP leadership aide said Thursday. But just as important as the dates is how the key players — House Republicans and Obama (with congressional Democrats right behind him) — define success and their strategy in achieving their desired goals. Whether they can ultimately reach agreement will determine whether the nation regains sounder fiscal footing and avoid the threat of more inside-the-Beltway fiscal crises, shutdown scares and debt downgrades.

#### Cantor and House Republicans support nuclear power

Politico 11 (Cantor: nuclear power 'essential' for U.S. energy needs, http://www.politico.com/blogs/glennthrush/0311/Cantor\_nuclear\_power\_essential\_for\_US\_energy\_needs.html)

House Majority Leader Eric Cantor defended nuclear energy production Monday, after a series of explosions at a nuclear reactor in Japan, calling it “essential” to meeting American energy needs. The problems at the Fukushima plant 150 miles north of Tokyo have reignited the debate over the safety of nuclear energy production. Cantor told reporters Monday that the tsunami that ravaged Japan last week is to blame, not the reactor itself. “As far as we know, this is the result of a tsunami,” he said. “Nuclear power is an essential mix of the energy economy in this country.” The tsunami caused technical problems at the Japanese plant, which left nuclear rods exposed, raising the specter of Chernobyl-style meltdown. The timing couldn’t have been worse for House Republican leaders, who demanded last week that President Barack Obama speed up approval of new nuclear energy facilities.

#### Bottom of the docket – won’t be voted upon until after the debt ceiling and sequestration.

#### No sequestration impact---most qualified expert

Korb ’12

[Lawrence Korb is a former assistant secretary of defense in the Reagan administration and is a senior fellow at the Center for American Progress. “Cuts Would Not Affect Security,” 2012, NYT, http://www.nytimes.com/roomfordebate/2012/09/09/how-big-should-the-defense-budget-be/cuts-would-not-affect-security]

But the United States can afford defense cuts, without undermining national security, for four reasons:¶ First, the United States has just gone through an enormous defense buildup. The budget increased, in real terms, for an unprecedented 13 straight years between 1998 and 2012. Even during the Reagan buildup, defense spending grew for only four years before dropping back to more sustainable levels.¶ Second, the cuts being discussed are smaller than they seem. The first $500 billion come from projected growth, so the budget will fall by just $6 billion next year and then grow at about the same pace as inflation. Even with sequestration, defense spending would be brought back only to its 2006 level in real terms -- more than we spent on average under Presidents Ronald Reagan and George H. W. Bush.¶ Third, ending this indiscriminate growth will force the Pentagon to manage its funds more carefully. Over the past decade, the Pentagon squandered $46 billion on weapons it later canceled, and let half its procurement programs balloon beyond their original budgets.¶ Finally, we face a world with relatively few major threats. And even with sequestration-size cuts, we would still account for more than 40 percent of the world’s defense spending, and our allies would account for about half of the rest.

## Production K

#### Our interpretation is that debate should be a question of the aff plan versus a competitive policy option.

#### This is key to ground and predictability – infinite number of possible kritik alternatives or things the negative could reject explodes the research burden. That’s a voting issue.

#### Abandoning politics causes war, slavery, and authoritarianism – flips the K.

Boggs 2k (CAROL BOGGS, PF POLITICAL SCIENCE – SOUTHERN CALIFORNIA, 00, THE END OF POLITICS, 250-1)

But it is a very deceptive and misleading minimalism. While Oakeshott debunks political mechanisms and rational planning, as either useless or dangerous, the actually existing power structure-replete with its own centralized state apparatus, institutional hierarchies, conscious designs, and indeed, rational plans-remains fully intact, insulated from the minimalist critique. In other words, ideologies and plans are perfectly acceptable for elites who preside over established governing systems, but not for ordinary citizens or groups anxious to challenge the status quo. Such one-sided minimalism gives carte blanche to elites who naturally desire as much space to maneuver as possible. The flight from “abstract principles” rules out ethical attacks on injustices that may pervade the status quo (slavery or imperialist wars, for example) insofar as those injustices might be seen as too deeply embedded in the social and institutional matrix of the time to be the target of oppositional political action. If politics is reduced to nothing other than a process of everyday muddling-through, then people are condemned to accept the harsh realities of an exploitative and authoritarian system, with no choice but to yield to the dictates of “conventional wisdom”. Systematic attempts to ameliorate oppressive conditions would, in Oakeshott’s view, turn into a political nightmare. A belief that totalitarianism might results from extreme attempts to put society in order is one thing; to argue that all politicized efforts to change the world are necessary doomed either to impotence or totalitarianism requires a completely different (and indefensible) set of premises. Oakeshott’s minimalism poses yet another, but still related, range of problems: the shrinkage of politics hardly suggests that corporate colonization, social hierarchies, or centralized state and military institutions will magically disappear from people’s lives. Far from it: the public space vacated by ordinary citizens, well informed and ready to fight for their interests, simply gives elites more room to consolidate their own power and privilege. Beyond that, the fragmentation and chaos of a Hobbesian civil society, not too far removed from the excessive individualism, social Darwinism and urban violence of the American landscape could open the door to a modern Leviathan intent on restoring order and unity in the face of social disintegration. Viewed in this light, the contemporary drift towards antipolitics might set the stage for a reassertion of politics in more authoritarian and reactionary guise-or it could simply end up reinforcing the dominant state-corporate system. In either case, the state would probably become what Hobbes anticipated: the embodiment of those universal, collective interests that had vanished from civil society.16 And either outcome would run counter to the facile antirationalism of Oakeshott’s Burkean muddling-through theories.

#### Case outweighs: by failing to solve the impending waste crisis, they allow waste on-site and Yucca Mountain to eventually blow up, leading to extinction. Rejecting consumption focus paradigm does not resolve the issue of waste present in the status quo. Life is a prerequisite to value of life.

#### **Perm: do both—the plan’s approach to the current energy crisis presents a unique opportunity to reform overconsumption**

Peters 12 (Michael A Peters 2012, [Michael A. Peters is professor of education at the University of Waikato in New Zealand and professor emeritus at the University of Illinois at Urbana-Champaign. ]10 June 2012, “Greening the Knowledge Economy: A Critique of Neoliberalism,” Truthout, http://truth-out.org/news/item/9642-greening-the-knowledge-economy-a-critique-of-neoliberalism)

Ecopolitics must come to terms with the scramble for resources that increasingly dominates the competitive motivations and long-range resource planning of the major industrial world powers. There are a myriad of new threats to the environment that have been successfully spelled out by eco-philosophers and that have already begun to impact upon the world in all their facets. First, there is the depletion of non-renewable resources - in particular, oil, gas, timber and minerals. Second, and in related fashion, is the crisis of energy itself, upon which the rapidly industrializing countries and the developed world depend. Third, the rise of China and India, with their prodigious appetites, which will match the United States within a few decades in rapacious demand for more of everything that triggers resource scrambles and the heavy investment in resource-rich regions such as Africa. Fourth, global climate change will have the greatest impact upon the world's poorest countries, multiplying the risk of conflict and resource wars. With these trends and possible scenarios, only a better understanding of the environment can save us and the planet. A better understanding of the earth's environmental system is essential if scientists **working in concert with communities, ecology** groups **across the board, green politicians, policymakers and business leaders** are to promote green exchange and to ascertain whether green capitalism strategies that aim at long-term sustainability are possible. The energy crisis may be a blessing in disguise for the United States. Jeremy Rifkin (2002) envisions a new economy powered by hydrogen that will fundamentally change the nature of our market, political and social institutions as we approach the end of the fossil-fuel era, with inescapable consequences for industrial society. New hydrogen fuel-cells are now being pioneered - which, together with the design principles of smart information technologies, can provide new distributed forms of energy use. While Thomas Friedman (2008) has also argued the crisis can lead to reinvestment in infrastructure and alternative energy sources in the cause of nation-building, his work and intentions have been called into question.[2] Education has a fundamental role to play in the new energy economy, both in terms of changing worldviews and the promotion of a green economy, and also in terms of research and development's contribution to energy efficiency, battery storage and new forms of renewable energy

#### The plan is not an absolute growth in nuclear energy, rather it forwards a new paradigm to approach consumption. The status quo explicitly fails to deal with the excesses of consumption by allowing waste to pile up with no consequence. Plan reckons with this.

Rawles, Lecturer at the University of Edinburgh, 2k

[Richard, “Coyote Learns to Glow”, Part of “Learning to Glow: A Nuclear Reader”, RSR]

Humans, having gathered uranium from the New Mexican desert not all that far from Yucca Mountain, have harnessed the energy within the atom, for commercial and security purposes, in effect by “tricking" nature out of its secret power. We are aided in our industry by this supposedly "free” energy source. As Martin Heidegger observed, we regard the natural world as a “standing reserve:’ there for the plundering-the military metaphor is more than apt in this case. Having stolen from nature its hidden fire, we delude ourselves into believing that there’s no reckoning, no balancing of accounts, despite even the scientific evidence, which tells us there are no free meals in nature’s unforgiving cycles. We are burdened by the waste from this virtual cornucopia, much as the Greeks of the early classical period projected into Pandora's box of woes the burdens of civilizing fire—its destructive aspects, along with the rituals needed to maintain the fire.

#### Their description of the United States is the status quo. We’re a combination of security concerns and a realization of their limits helps on the ground and stops escalation.

**Newman**, Senior Lecturer IR at Birmingham University, ‘10

[Edward, “Peacebuilding as Security in ‘Failing’ and Conflict Prone States”, Journal of Intervention and Statebuilding 4:3, p. 318-320, RSR]

Twenty-first century peacebuilding activities reflect evolving perceptions\*/and constructions\*/of the nature of, and threats to, international and national security. Weak and conflict-prone states are widely regarded, especially in policy circles, as a\*/possibly even the\*/key security threat, and so international peacebuilding activities in part represent a response to this. Therefore, peacebuilding has as a core objective the stabilization of armed conflict and state failure in order to prevent or contain its international repercussions. There are clearly some negative consequences to this in terms of the nature and impact of peacebuilding activities. However, it may be necessary to accept the ‘reality’ of conservative visions of peacebuilding oriented around the promotion of stability, despite the limitations of this, in order to achieve the reduction of violent conflict. Critical challenges to contemporary peacebuilding from a normative perspective are valid, but they are based upon an inaccurate assumption about the true nature of peacebuilding. Debates and activities of contemporary peacebuilding reflect competing visions and interests and the securitization of peacebuilding exposes these internal inconsistencies and tensions within the concept (see for example Heathershaw and Lambach 2008). There are two broad and opposing approaches (Newman 2009c). Transformational peacebuilding emphasizes the resolution of conflict, which may include addressing underlying sources of violence. This approach is premised upon the assumption that durable peace and stability rest upon the achievement of positive peace and giving free expression to local voices, desires and forms of politics. Transformational peacebuilding is built upon bottom-up community initiatives and engages with local institutions, customs and norms. It also accommodates pressures for social change as a part of resolving the root causes of conflict and addressing human security needs. Transformational peacebuilding promotes social justice and accountability for past human rights abuses. For these reasons, in the academic world at least, transformational approaches come closest to advocating emancipation as an objective of peacebuilding and conflict resolution. This approach to peacebuilding in theory does not reflect a universalizing vision\*/in contrast to liberal approaches\*/and is more likely to be context-oriented and centred around community needs. It involves engagement with civil society actors and a more community-focused approach which cultivates moderate peace leaders. Kaldor (2006, p. 123) describes this as a ‘cosmopolitan’ approach: ‘a positive political vision, embracing tolerance, multiculturalism, civility and democracy’. According to this, peacebuilding processes must therefore seek opportunities to restore ‘legitimate political authority’ and the input of progressive, non-sectarian voices from below, to encourage the ‘islands of civility’ amongst reasonable people to talk and make compromises. Advocates of transformational peacebuilding are inevitably critical of top-down approaches, claiming that they merely perpetuate an unjust ‘negative’ peace. Balancing top-down and bottom-up approaches involves a balance between recognizing the realities of power and aspiring to cosmopolitan aspirations and a positive peace. In contrast, realist peacebuilding entails containing or repressing conflict in the interests of international peace and stability in general or particular hegemonic interests. Although it may use the language of peace, this approach is primarily concerned with international systemic stability and addressing the international threats to security inherent in civil war and state failure. It does not necessarily seek to resolve underlying sources of conflict; advocates of this approach are sceptical of international efforts to achieve societal change. Realist peacebuilding recognizes power as the ‘facts on the ground’ and therefore engages with local power-holders as the key to achieving peace and stability. In keeping with this, realist peacebuilding prioritizes the (re)construction of strong states\*/rather than open, participatory governance or social transformation\*/as the means of containing conflict and promoting stability. Justice, welfare and the resolution of the underlying sources of conflict (although usually desirable) are pursued only insofar as they are relevant to maintaining stability.

#### Perm: do the plan and all non-competitive parts of the alternative – including a focus on consumption solves all of the residual links to the Aff

#### The status quo is structurally improving, meaning the impact is empirically denied.

Golanky, Policy Analyst for the Department of the Interior, ‘10

[Indur, PhD from MSU, “Population, Consumption, Carbon Emissions, and Human Well-Being in the Age of Industrialization (Part III — Have Higher US Population, Consumption, and Newer Technologies Reduced Well-Being?)”, April 24,

<http://www.masterresource.org/2010/04/population-consumption-carbon-emissions-and-human-well-being-in-the-age-of-industrialization-part-iii-have-higher-us-population-consumption-and-newer-technologies-reduced-well-being/#more-9194>]

In my previous post I showed that, notwithstanding the Neo-Malthusian worldview, human well-being has advanced globally since the start of industrialization more than two centuries ago, despite massive increases in population, consumption, affluence, and carbon dioxide emissions. In this post, I will focus on long-term trends in the U.S. for these and other indicators. Figure 1 shows that despite several-fold increases in the use of metals and synthetic organic chemicals, and emissions of CO2 stoked by increasing populations and affluence, life expectancy, the single best measure of human well-being, increased from 1900 to 2006 for the US. Figure 1 reiterates this point with respect to materials use. These figures indicate that since 1900, U.S. population has quadrupled, affluence has septupled, their product (GDP) has increased 30-fold, synthetic organic chemical use has increased 85-fold, metals use 14-fold, material use 25-fold, and CO2 emissions 8-fold. Yet life expectancy advanced from 47 to 78 years. Figure 2 shows that during the same period, 1900–2006, emissions of air pollution, represented by sulfur dioxide, waxed and waned. Food and water got safer, as indicated by the virtual elimination of deaths from gastrointestinal (GI) diseases between 1900 and 1970. Cropland, a measure of habitat converted to human uses — the single most important pressure on species, ecosystems, and biodiversity — was more or less unchanged from 1910 onward despite the increase in food demand. For the most part, life expectancy grew more or less steadily for the U.S., except for a brief plunge at the end of the First World War accentuated by the 1918-20 Spanish flu epidemic. As in the rest of the world, today’s U.S. population not only lives longer, it is also healthier. The disability rate for seniors declined 28 percent between 1982 and 2004/2005 and, despite quantum improvements in diagnostic tools, major diseases (e.g., cancer, and heart and respiratory diseases) now occur 8–11 years later than a century ago. Consistent with this, data for New York City indicate that — despite a population increase from 80,000 in 1800 to 3.4 million in 1900 and 8.0 million in 2000 and any associated increases in economic product, and chemical, fossil fuel and material use that, no doubt, occurred —crude mortality rates have declined more or less steadily since the 1860s (again except for the flu epidemic). Figures 3 and 4 show, once again, that whatever health-related problems accompanied economic development, technological change, material, chemical and fossil fuel consumption, and population growth, they were overwhelmed by the health-related benefits associated with industrialization and modern economic growth. This does not mean that fossil fuel, chemical and material consumption have zero impact, but it means that overall benefits have markedly outweighed costs. The reductions in rates of deaths and diseases since at least 1900 in the US, despite increased population, energy, and material and chemical use, belie the Neo-Malthusian worldview. The improvements in the human condition can be ascribed to broad dissemination (through education, public health systems, trade and commerce) of numerous new and improved technologies in agriculture, health and medicine supplemented through various ingenious advances in communications, information technology and other energy powered technologies (see here for additional details). The continual increase in life expectancy accompanied by the decline in disease during this period (as shown by Figure 2) indicates that the new technologies reduced risks by a greater amount than any risks that they may have created or exacerbated due to pollutants associated with greater consumption of materials, chemicals and energy, And this is one reason why the Neo-Malthusian vision comes up short. It dwells on the increases in risk that new technologies may create or aggravate but overlooks the larger — and usually more certain — risks that they would also eliminate or reduce. In other words, it focuses on the pixels, but misses the larger picture, despite pretensions to a holistic worldview.

#### Short-term market mechanisms are the only solution to environmental destruction – alt fails.

Bryant 12 (Levi, professor of philosophy at Collin College, We’ll Never Do Better Than a Politician: Climate Change and Purity, 5/11/12, http://larvalsubjects.wordpress.com/2012/05/11/well-never-do-better-than-a-politician-climate-change-and-purity/)

Somewhere or other Latour makes the remark that we’ll never do better than a politician. Here it’s important to remember that for Latour– as for myself –every entity is a “politician”. Latour isn’t referring solely to those persons that we call “politicians”, but to all entities that exist. And if Latour claims that we’ll never do better than a politician, then this is because every entity must navigate a field of relations to other entities that play a role in what is and is not possible in that field. In the language of my ontology, this would be articulated as the thesis that the local manifestations of which an entity is capable are, in part, a function of the relations the entity entertains to other entities in a regime of attraction. The world about entities perpetually introduces resistances and frictions that play a key role in what comes to be actualized. ¶ It is this aphorism that occurred to me today after a disturbing discussion with a rather militant Marxist on Facebook. I had posted a very disturbing editorial on climate change by the world renowned climate scientist James Hansen. Not only did this person completely misread the editorial, denouncing Hansen for claiming that Canada is entirely responsible for climate change (clearly he had no familiarity with Hansen or his important work), but he derided Hansen for proposing market-based solutions to climate change on the grounds that “the market is the whole source of the problem!” It’s difficult to know how to respond in this situations.¶ read on! ¶ It is quite true that it is the system of global capitalism or the market that has created our climate problems (though, as Jared Diamond shows in Collapse, other systems of production have also produced devastating climate problems). In its insistence on profit and expansion in each economic quarter, markets as currently structured provide no brakes for environmental destructive actions. The system is itself pathological.¶ However, pointing this out and deriding market based solutions doesn’t get us very far. In fact, such a response to proposed market-based solutions is downright dangerous and irresponsible. The fact of the matter is that 1) we currently live in a market based world, 2) there is not, in the foreseeable future an alternative system on the horizon, and 3), above all, we need to do something now. We can’t afford to reject interventions simply because they don’t meet our ideal conceptions of how things should be. We have to work with the world that is here, not the one that we would like to be here. And here it’s crucial to note that pointing this out does not entail that we shouldn’t work for producing that other world. It just means that we have to grapple with the world that is actually there before us.¶ It pains me to write this post because I remember, with great bitterness, the diatribes hardcore Obama supporters leveled against legitimate leftist criticisms on the grounds that these critics were completely unrealistic idealists who, in their demand for “purity”, were asking for “ponies and unicorns”. This rejoinder always seemed to ignore that words have power and that Obama, through his profound power of rhetoric, had, at least the power to shift public debates and frames, opening a path to making new forms of policy and new priorities possible. The tragedy was that he didn’t use that power, though he has gotten better.¶ I do not wish to denounce others and dismiss their claims on these sorts of grounds. As a Marxist anarchists, I do believe that we should fight for the creation of an alternative hominid ecology or social world. I think that the call to commit and fight, to put alternatives on the table, has been one of the most powerful contributions of thinkers like Zizek and Badiou. If we don’t commit and fight for alternatives those alternatives will never appear in the world. Nonetheless, we still have to grapple with the world we find ourselves in. And it is here, in my encounters with some Militant Marxists, that I sometimes find it difficult to avoid the conclusion that they are unintentionally aiding and abetting the very things they claim to be fighting. In their refusal to become impure, to work with situations or assemblages as we find them, to sully their hands, they end up reproducing the very system they wish to topple and change. Narcissistically they get to sit there, smug in their superiority and purity, while everything continues as it did before because they’ve refused to become politicians or engage in the difficult concrete work of assembling human and nonhuman actors to render another world possible. As a consequence, they occupy the position of Hegel’s beautiful soul that denounces the horrors of the world, celebrate the beauty of their soul, while depending on those horrors of the world to sustain their own position. ¶ To engage in politics is to engage in networks or ecologies of relations between humans and nonhumans. To engage in ecologies is to descend into networks of causal relations and feedback loops that you cannot completely master and that will modify your own commitments and actions. But there’s no other way, there’s no way around this, and we do need to act now.

#### State focused nuclear power solutions are good.

Nordhaus 11, chairman – Breakthrough Instiute, and Shellenberger, president – Breakthrough Insitute, MA cultural anthropology – University of California, Santa Cruz, 2/25/‘11

(Ted and Michael, <http://thebreakthrough.org/archive/the_long_death_of_environmenta>)

Tenth, we are going to have to get over our suspicion of technology, especially nuclear power. There is no credible path to reducing global carbon emissions without an enormous expansion of nuclear power. It is the only low carbon technology we have today with the demonstrated capability to generate large quantities of centrally generated electrtic power. It is the low carbon of technology of choice for much of the rest of the world. Even uber-green nations, like Germany and Sweden, have reversed plans to phase out nuclear power as they have begun to reconcile their energy needs with their climate commitments. Eleventh, we will need to embrace again the role of the state as a direct provider of public goods. The modern environmental movement, borne of the new left rejection of social authority of all sorts, has embraced the notion of state regulation and even creation of private markets while largely rejecting the generative role of the state. In the modern environmental imagination, government promotion of technology –whether nuclear power, the green revolution, synfuels, or ethanol - almost always ends badly. Never mind that virtually the entire history of American industrialization and technological innovation is the story of government investments in the development and commercialization of new technologies. Think of a transformative technology over the last century - computers, the Internet, pharmaceutical drugs, jet turbines, cellular telephones, nuclear power - and what you will find is government investing in those technologies at a scale that private firms simply cannot replicate. Twelveth, big is beautiful. The rising economies of the developing world will continue to develop whether we want them to or not. The solution to the ecological crises wrought by modernity, technology, and progress will be more modernity, technology, and progress. The solutions to the ecological challenges faced by a planet of 6 billion going on 9 billion will not be decentralized energy technologies like solar panels, small scale organic agriculture, and a drawing of unenforceable boundaries around what remains of our ecological inheritance, be it the rainforests of the Amazon or the chemical composition of the atmosphere. Rather, these solutions will be: large central station power technologies that can meet the energy needs of billions of people increasingly living in the dense mega-cities of the global south without emitting carbon dioxide, further intensification of industrial scale agriculture to meet the nutritional needs of a population that is not only growing but eating higher up the food chain, and a whole suite of new agricultural, desalinization and other technologies for gardening planet Earth that might allow us not only to pull back from forests and other threatened ecosystems but also to create new ones. The New Ecological Politics The great ecological challenges that our generation faces demands an ecological politics that is generative, not restrictive. An ecological politics capable of addressing global warming will require us to reexamine virtually every prominent strand of post-war green ideology. From Paul Erlich's warnings of a population bomb to The Club of Rome's "Limits to Growth," contemporary ecological politics have consistently embraced green Malthusianism despite the fact that the Malthusian premise has persistently failed for the better part of three centuries. Indeed, the green revolution was exponentially increasing agricultural yields at the very moment that Erlich was predicting mass starvation and the serial predictions of peak oil and various others resource collapses that have followed have continue to fail. This does not mean that Malthusian outcomes are impossible, but neither are they inevitable. We do have a choice in the matter, but it is not the choice that greens have long imagined. The choice that humanity faces is not whether to constrain our growth, development, and aspirations or die. It is whether we will continue to innovate and accelerate technological progress in order to thrive. Human technology and ingenuity have repeatedly confounded Malthusian predictions yet green ideology continues to cast a suspect eye towards the very technologies that have allowed us to avoid resource and ecological catastrophes. But such solutions will require environmentalists to abandon the "small is beautiful" ethic that has also characterized environmental thought since the 1960's. We, the most secure, affluent, and thoroughly modern human beings to have ever lived upon the planet, must abandon both the dark, zero-sum Malthusian visions and the idealized and nostalgic fantasies for a simpler, more bucolic past in which humans lived in harmony with Nature.

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#### Public policy role playing in Academia is key to political agency and participation

Larson 4 [Larson, Associate Professor of Political Science at Dickinson College, ‘04]

(“Stephanie Greco, ‘We the People': Diversifying Role Playing in Undergraduate American Politics Courses”

 American Political Science Association, PS: Political Science and Politics, Vol. 37, No. 2 (Apr., 2004), pg. 303, JKY)

Students are not asked to be members of the American public. The assignment described here brings "the people" back into politics through role playing by focusing specifically on people who tend to be left out of the political process. The public is an essential part of a democracy and arguably the one whose challenges and processes are the most immediately relevant for students in an American Government class. While some students might go on to hold elective or appointed offices in government, most will not. This is particularly true of those in introductory classes who might take only one class in political science. Yet, most students are, and will continue to be, members of the American public after they graduate. They need to see how this role can, and arguably, should be an active one. While our textbooks and lectures might make this point, a simulation can effectively illustrate it through active learning. A role-playing experience can be instructive preparation for "real (political) life" when it focuses on the activities of those outside of officialdom. Playing the roles of citizens, or prospective citizens, can also address diversity issues that elite role-playing assignments do not. By focusing on elite roles, most assignments do not fully utilize the potential of role playing for social attitude change. Studies show that after role playing students "become more aware of their own roles and understand more clearly other people's points of view" (Van Ments 1989, 30). Therefore, they are ideal for sensitizing students to the perspectives of people different from themselves. By having students role play other members of the mass public, an American government class can help students understand and empathize with people of different races, classes, genders, sexual orienta-tions, occupations, ages, and from various geographic locations. For many years, I have been using such a public role-playing assignment in my "Introduction to American Government" course to challenge students and satisfy course goals. The assignment utilizes active learning through the use of role playing, interviewing, and a myriad of web resources. It teaches students about American government, diversity, and the challenges confronted by "outside" groups in their attempts to get representation. Ultimately, the paper addresses the fundamental question underlying the debate between elitists and pluralists: "Does the public matter?" It does this by ask-ing students to explore a political prob-lem relevant to a fictional member of the public whom they are randomly as-signed. By looking at a problem, gov-ernment action and debate on the issues relevant to it, and ways that the person could try to get government to address the problem, students see the interconnectedness of the various topics in the course (policy, public opinion, elections, interest groups, the three branches, and federalism). Students ex-plore different types of information and sources in order to understand someone else's political problem and its history, proposed solutions, and the obstacles to enacting these solutions.