## Case

### Solvency – Component Bottlenecks

#### Japan Steel Works capacity will double by 2013

Masumi Suga and Yasumasa Song, journalists, 6-1-2010, “Japan Steel Works Plans to Sell Components for 26 Nuclear Reactors by 2013” Bloomberg, http://www.bloomberg.com/news/2010-06-01/japan-steel-works-plans-to-sell-components-for-26-nuclear-reactors-by-2013.html

Japan Steel Works Ltd., maker of nuclear reactor parts for customers including Areva SA and Toshiba Corp., plans to sell components for 26 reactors in the next three years as demand expands from China and the U.S.¶ Component sales will almost double to 11 units annually for the year ending March 2013, from an expected 6 for this fiscal year with an expansion, President Ikuo Sato said in an interview in Tokyo. Japan Steel Works is spending 80 billion yen ($879 million) on its Muroran factory, Sato said May 21.

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### Gas

#### Wrong – equal to wind

Lisbeth Gronlund et al, co-director of the Global Security Program at the Union for Concerned Scientists, December 2007, “Nuclear power in a warming world,” UCS, http://www.ucsusa.org/assets/documents/nuclear\_power/nuclear-power-in-a-warming-world.pdf

Nuclear power plants do not produce global warming emissions when they operate. However, producing nuclear power requires mining and processing uranium ore, enriching uranium to create reactor fuel, manufacturing and transporting fuel, and building plants—all of which consume energy. Today much of that energy is provided by fossil fuels (although that may change if the United States takes steps to address global warming). However, the global warming emissions associated with nuclear power even now are relatively modest. Indeed, its life cycle emissions are comparable to those of wind power and hydropower. While estimates of life cycle greenhouse gas emissions vary with different assumptions and methodologies, the basic conclusions of most analyses are consistent: for each unit of electricity generated, natural gas combustion results in roughly half the global warming emissions of coal combustion, while wind power, hydropower, and nuclear power produce only a few percent of emissions from coal combustion. The life cycle emissions of photovoltaics (PVs) are generally somewhat higher than those for wind power, hydropower, and nuclear power, because manufacture of PVs entails greater global warming emissions.5

#### Not methane

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#### Small leakages are sufficient – methane is overwhelming greenhouse gas

Abrahm Lustgarten, MA in journalism from Columbia, received a grant from the John D. and Catherine T. MacArthur Foundation, 1-25-2011, “Climate Benefits of Natural Gas May Be Overstated,” Pro Publica, http://www.propublica.org/article/natural-gas-and-coal-pollution-gap-in-doubt

Robert Howarth, an environmental biology professor at Cornell University, used research from the United Nations to calculate that if methane’s potency were considered over 20 years rather than 100 years, it would be 72 times as powerful as carbon dioxide in terms of its warming potential.¶ Figured that way, the climate effect of methane from natural gas would quickly outpace the climate effect of carbon dioxide from burning coal. Howarth’s research is incomplete and has been criticized because at first he failed to figure in methane emissions from coal mining. But he said that after correcting his error, the emissions from coal barely changed, and the data still showed that the intensity of methane could erase the advantages of using natural gas.¶ “Even small leakages of natural gas to the atmosphere have very large consequences,” Howarth wrote in a March memorandum, which he says is a precursor to a more thorough study that could begin to scientifically answer these questions. “When the total emissions of greenhouse gases are considered … natural gas and coal from mountaintop removal probably have similar releases, and in fact natural gas may be worse in terms of consequences on global warming.”

#### Transmission contributes to a huge amount of emissions even with industry regulations

Renee Santoro, research aide, Howarth/Marino Lab at Cornell, 1-31-2012, “Methane makes shale gas a current climate danger,” The Conversation, http://theconversation.edu.au/methane-makes-shale-gas-a-current-climate-danger-5020

Fugitive methane losses from downstream activity (such as gas storage, compression, transmission and distribution pipelines) make up an equally large portion of the estimated life-cycle methane emissions from the natural gas industry.¶ Fixing these leaks may be extremely costly. Half of the transmission pipelines in the US are more than 50 years old, and in many cities, the local distribution pipes are older yet. In cities such as Boston and Philadelphia, these local systems often pre-date the Great Depression of the 1930s, and are based on unwelded cast iron pipe placed end-to-end with sealant that probably gave out before World War II.

## Add-ons

### 2AC Nuclear Expertise – Nuclear Terror

#### New nukes boosts nuclear expertise

APS (American Physical Society), Report from the APS Panel on Public Affairs Committee on Energy and Environment, June 2008, Readiness of the U.S. Nuclear Workforce for 21st Century Challenges, http://www.aps.org/policy/reports/popa-reports/upload/Nuclear-Readiness-Report-FINAL-2.pdf

The 21st century has brought a growing realization that it is time to reexamine the adequacy of the U.S. nuclear workforce and its ability to deal with many old and new challenges our nation faces. This report draws attention to critical shortages in the U.S. nuclear workforce and to problems in maintaining relevant educational modalities and facilities for training new people. This workforce comprises nuclear engineers, nuclear chemists, radiochemists, health physicists, nuclear physicists, nuclear technicians, and those from related disciplines. As a group they play critical roles in the nation’s nuclear power industry, in its nuclear weapons complex, in its defense against nuclear and other forms of terrorism, and in several aspects of healthcare, industrial processing, and occupational health and safety. Each of these areas presents significantly more dramatic challenges than it did not very many years ago. Each is an important aspect of our national security. Nuclear Power: Past and Present Workforce shortages in the arena of commercial nuclear power, and the problem of maintaining modernized training facilities, mainly stem from the 30-year stasis in U.S. demand for new civilian nuclear power plants1. The number of operating civilian nuclear reactors in the U.S. has remained at about 100 during this time. Thus, U.S. vendors have been forced to look abroad for sales. Some have either ceased construction of new reactors entirely or else significantly scaled back business in this area. Their continuing, largely static, nuclear engineering workforce needs have been met through a combination of hiring those trained in university nuclear engineering programs and retraining others whose original expertise was in some other field (usually mechanical engineering). Retirees from the nuclear Navy also have played an important role. A natural result of this stasis was for many years a greatly reduced interest among undergraduates in nuclear science and engineering programs2. In turn, this put great pressure on U.S. universities to scale back in these areas. Recently, however, the Federal government, through the Department of Energy (DOE), dramatically increased funding for these educational efforts. This played a major role in increasing undergraduate student enrollments in nuclear engineering from a low point of 480 in 1999 to 1,933 in 2007. Declaring the problem to be solved, DOE called for the termination of its university nuclear science and engineering programs for FY 2007. Congress in turn provided reduced funding for FY 2007 and transferred all the programs except reactor fuel services to the Nuclear Regulatory Commission (NRC) for FY 2008. These “feast or famine” gyrations have led to significant instabilities: the number of university nuclear engineering departments has decreased from 66 in the early 1980s to 30 today, and the number of university reactors has dwindled from 63 to 25 during essentially the same period.

#### Key to nuclear forensics

Dr. Mtingwa, Chair of the POPA study on the Readiness of the U.S. Nuclear Workforce for 21st Century Challenges. He is an accelerator physicist and Senior Lecturer at MIT, January 2009 “Readiness of the U.S. Nuclear Workforce for 21st Century Challenges,” January, http://www.aps.org/units/fps/newsletters/200901/mtingwa.cfm)

On another front, the tragedy of September 11, 2001, has brought an intense focus on the issue of national preparedness against terrorism. For emergencies involving a terrorist action or an accident at a nuclear reactor, experts must be ready to respond. Thus it is important to attend to the nuclear workforce needs of the Department of Homeland Security, the Department of Defense, the NRC, and specialized areas of the Department of Energy. An important example of the latter is the Nuclear Emergency Support Team from DOE’s National Nuclear Security Administration that travels to the site of a suspected nuclear or radiological weapon to mitigate the situation. Thus, the nation will need to expand its nuclear workforce to initiate new efforts in nuclear forensics and other parts of the Homeland Security portfolio, and to replace many retiring members of the weapons workforce. For many years, funding for U.S. university nuclear science and engineering research and education has been heavily dependent upon a single source: previously DOE and now the NRC. Therefore, it is no accident that the vitality of the nation’s university nuclear science and engineering education and infrastructure program closely tracked funding support provided by DOE over the last 15 years. As shown in Fig. 1, as DOE’s funding increased in the decade 1997 through 2007, undergraduate student enrollment in nuclear engineering increased – from a low of 480 students in 1999 to a high of 1,933 in 2007. For nuclear engineering students at minority-serving institutions, DOE support created new opportunities. While other factors also contributed to the dramatic increase in undergraduate enrollments, university administrators indicate that increases in Federal funding were indeed an important factor. In the aftermath of the accidents at Three Mile Island in 1979 and Chernobyl in 1986, DOE support for nuclear science and engineering education declined precipitously as industry construction of new plants ceased and student interest and career opportunities declined. In 1997, the President’s Committee of Advisors on Science and Technology issued a report that urged President Clinton to reinvest in university nuclear science and engineering research and education . PCAST also urged him to establish the Nuclear Energy Research Advisory Committee to provide advice to DOE on this reinvestment. In the mid-1990s, the Clinton Administration recognized the potential for a resurgence in nuclear technology, and constituted NERAC in 1998 to advise DOE as it began reinvesting both funds and management attention to rebuilding the educational infrastructure for nuclear science and engineering. This support was implemented by creating a suite of eleven targeted programs, among which perhaps the most influential was the Innovations in Nuclear Infrastructure and Education (INIE) program, which encouraged the development of strategic consortia among universities, DOE national laboratories, and industry. When DOE released its FY2007 budget request, it announced that it had completed its mission in the area of nuclear science and engineering education and made plans to terminate the program. DOE proposed essentially zero funding for nuclear science and engineering education for both FY2007 and FY2008. This signaled a significant reversal of fortune not seen since the early 1990s. DOE proposed to return to the practice of those years by providing only basic fuel services for university research reactors under a new infrastructure program. In FY2007, Congress rejected DOE’s proposal to terminate the program and instead provided $16.5 million – far less than the $27 million the program received in FY2006. In FY2008, Congress again rejected ending the program and allocated $17.9 million in the FY2008 Consolidated Appropriations Act. Of this amount, $2.9 million remained at DOE for university reactor fuel services, and Congress transferred to the NRC $15 million for the rest of the programs. While these funds would defer to some extent the erosion of nuclear science and engineering education in the U.S., they are not sufficient to maintain vital elements of the nation’s programs, particularly the highly successful INIE program. It was last funded in FY2006. As for nuclear chemistry and radiochemistry, these are two fields that overlap in many ways. Simply put, radiochemistry is the study of radioactive elements using chemical techniques, focusing on their radioactive characteristics. Nuclear chemistry is the study of the fundamental properties of nuclei, both radioactive and non-radioactive, using chemical techniques. It is quite close to the field of nuclear physics. There has been a continuing dramatic decrease in the number of Ph.D.s earned annually in nuclear chemistry, as shown in Fig. 2. It reflects the fact that only a handful of U.S. university chemistry departments currently have professors with active research programs in nuclear chemistry. Thus, advanced education in nuclear chemistry education is all but extinct in the United States. If nuclear chemistry and radiochemistry education programs are not reinvigorated, the U.S. will lack the expertise required to pursue promising advanced R&D in a myriad of disciplines. In addition to processing both fresh and spent fuel for nuclear reactors, including basic research on spent fuel separations and transmutation technologies, nuclear chemistry and radiochemistry are also extremely important to the nation’s security and health in the following cross-cutting roles: (1) **nuclear weapons stockpile stewardship**, (2) **nuclear forensics and surveillance of clandestine nuclear activities**, (3) monitoring of radioactive elements in the environment, (4) production of radioisotopes, and (5) **preparation of radiopharmaceuticals for therapeutic and diagnostic medical applications.** When considering the nuclear enterprise, the status of the health physics workforce and its training facilities must be considered. For occupational safety and the protection of the public, health physics professionals are employed in many sectors, including the commercial nuclear power industry, DOE’s national laboratories, homeland security, the NRC, the military and medical facilities. The nation’s health physics capabilities will be impacted negatively over the next decade due to the number of expected retirements, coupled with inadequate numbers of graduates entering the field. Fig. 3 provides data on health physics graduates. Considering that the retirement rate of health physicists in the U.S. is roughly 200 per year , the number of health physics graduates does not allow for much increase in the demand for their services. Turning to university research and training reactors, their number has decreased from 63 in the late 1970’s to 25 today. Recently a number of them have been decommissioned, including those at Cornell University and the University of Michigan. During FY2006, DOE’s INIE Program provided $9.41 million to six consortia consisting of both the higher power (usually 1 MW and above) research reactors as well as the lower power (usually less than 1 MW) training reactors. Research reactors mainly perform state-of-the-art experiments and provide irradiation services for private industry and other researchers. Training reactors mainly provide hands-on experiences for students. The INIE program had numerous significant successes, including helping to increase the number of students studying nuclear science and engineering, stimulating the hiring of new tenure-track faculty, providing seed money for a number of major infrastructure and instrumentation purchases and upgrades, fostering collaborations among members of each consortium and with national laboratories, freeing a number of university reactors from threats of decommissioning, assisting with the establishment of a nuclear technology Associate’s degree program at Linn State Technical College in Missouri, and helping to establish a new undergraduate nuclear engineering program at South Carolina State University, one of the Historically Black Colleges and Universities . That program is the first to be created in over a quarter-century at any U.S. university and is the only undergraduate nuclear engineering program located at an HBCU . Nuclear physicists are an indispensable part of the workforce, since a wealth of high precision actinide fission and neutron capture cross section data is needed to support the design of future nuclear reactors, including advanced light water reactors and Generation IV systems . Without such data, simulation studies would not be accurate enough to lead to reliable designs and conclusions . From their systems analyses, DOE researchers have identified the cross sections of particular importance. The U.S. has neutron source facilities, such as the Los Alamos Neutron Science Center, that can be used for many of the cross section measurements, and capabilities not present in the U.S. usually can be found elsewhere . Many of the cross section measurements are extremely challenging and entirely new techniques need to be developed. Moreover, much more fundamental work is needed to understand the basic physics of nuclear isotopes and their various cross sections. A better theoretical understanding would reduce the uncertainties in many applications. All of these issues are fertile ground for Ph.D. research. Next, to evaluate the supply of nuclear engineers with at least a Bachelor’s degree that is needed for nuclear power generation between now and 2050, it is useful to consider three scenarios: (1) maintaining the current number of nuclear reactors (about 100) without reprocessing, (2) doubling the number of reactors without reprocessing fuel, and (3) doubling the number of reactors while closing the fuel cycle by reprocessing and recycling spent fuel. Due to the shortage of nuclear engineers over recent decades, reactor vendors have resorted to hiring far more mechanical engineers than nuclear engineers and providing them with nuclear-related training. With approximately 35% of nuclear workers reaching retirement age in the next five years , industry will likely see some increase in engineering hiring across the board. This will heighten demands for nuclear engineering education, whether supplied by university programs or by the employers themselves. Scenario 1 has a chance of being sustainable. On the other hand, **doubling the number of nuclear reactors to about 200 by 2050 will require a significant augmentation of the nuclear workforce**. Vendors, utilities, and the NRC will need to increase their ranks by about 300 engineers with some nuclear training per year, plus replace retirees. This **growth in manpower is a direct result of what would be an increasing demand for significantly improved reactor designs, increased reactor operations at the utilities**, and a much greater oversight burden at the NRC. On the other hand, the number of new nuclear engineering graduates at all degree levels entering nuclear employment is about 160. Hence, assuming that the supply of nuclear engineers coming from university training programs follows recent trends, employers will need to train significantly more non-nuclear engineers to do nuclear engineering tasks than they do now. It is doubtful that the massive reactor building campaigns necessary to double the number of reactors by 2050 could thrive under such a burden. The clear message is that **our capability for university-based training of nuclear scientists and engineers cannot be allowed to diminish further.** Scenario 3 is the most problematic. This scenario has all the workforce challenges of Scenario 2, plus the need for highly trained nuclear chemists and radiochemists who are indispensable for reprocessing. Unlike France, the U.S. has no governmental agency charged with educating nuclear chemists and radiochemists. Those wanting to pursue these fields are educated under faculty mentors at universities. The growing scarcity of such mentors has thus led to a crisis in the U.S. In the long haul, **the U.S. will lose ground in its R&D on many fronts,** including devising more efficient and safer methods of processing both fresh and spent fuels for all future nuclear energy scenarios. Nuclear chemists and radiochemists with Ph.D.s would be needed to train the large cadre of radiochemical technicians who would carry out most of this work, and they would be needed at universities and national laboratories to spearhead the research that leads to breakthrough radiochemical technologies. Thus, any venture into spent fuel reprocessing, and fulfilling nuclear chemists’ and radiochemists’ many other cross-cutting roles in such areas as homeland security and public health, **will not be possible unless expertise is imported from abroad**. This modality is made much more difficult by the requirement that **many of these workers must be U.S. citizens**. In the U.S., market-driven forces will not be able to produce additional domestically trained nuclear chemists and radiochemists if the educational infrastructure continues to disappear.Aside from nuclear power, the nation will continue to need a significant number of talented, well-trained nuclear scientists and engineers to maintain the strength of its homeland security and nuclear weapons programs. These complexes must be safeguarded, and this is a clear responsibility of the Federal government. To satisfy these and nuclear power’s demands on the nuclear workforce, the Federal government should stabilize the long-term funding and management of nuclear science and engineering education programs, in particular for the university research and training reactor facilities. The number of nuclear engineering departments and university reactors should not be allowed to diminish further. Also, existing reactors could be utilized more optimally by expanding distance-learning opportunities. As for nuclear chemistry and radiochemistry, there is a huge need for the Federal government to establish a cross-cutting workforce initiative that includes fellowships and scholarships for students, support for postdoctoral researchers, incentives that stimulate industrial support of faculty positions, effective means of outreach to the general public, and increased support for summer schools in these disciplines. For health physics, the Federal government should ensure that there is a sufficient number of faculty with nuclear reactor-related experience to train the necessary numbers of health physicists for the nuclear power and other industries. Finally, the Federal government should increase support for research on the fundamental physics and chemistry of actinide fission and neutron capture. There is also an educational role for private industry. Nuclear vendors and utilities should expand undergraduate student internships, graduate student traineeships, cooperative education opportunities, and training on reactor simulators at their facilities. To conclude, creating new reactor designs, revolutionary medical applications of radiation, and many other nuclear endeavors present exciting challenges. As such, the nuclear science and engineering community should develop programs to **encourage the general public to view these fields as exciting areas of research** that present intellectually and financially rewarding career paths.

#### Effective nuclear forensics deters terrorism

Talmadge, IR & Government Prof-George Washington, PhD-MIT, Spring 2007, “Deterring a Nuclear 9/11,” www.twq.com/07spring/docs/07spring\_talmadge.pdf

Because terrorists lack return addresses, analysts have dismissed even more firmly the possibility of deterrence by punishment, or the threat to impose un­bearable costs on those who would do the United States harm. This disheart­ening conclusion stems from a failure to appreciate the many steps terrorists must take before committing an actual attack. Many of these steps depend on assistance from people and organizations that may not be as impervious to deterrence by punishment as individual terrorists are. If the United States can broaden the range of actors it seeks to deter and convince these other actors that cooperating with terrorists is not in their interests, it may be able to re­duce the likelihood of a terrorist attack substantially.13 Nowhere is this approach more plausible than in the case of nuclear terror­ism.14 Unlike other forms of terrorism in which terrorists are more or less self-sufficient, it is virtually impossible for terrorists to create their own nuclear material, regardless of which ingredient they use. Producing plutonium requires sophisticated, expensive reactors, as well as reprocessing facili­ties. Enriching uranium to a weapons-grade lev­el can be done through several techniques; all require relatively large buildings and advanced technologies.15 Both paths to nuclear material require a sizable and scientifically knowledge­able labor force, significant industrial resources, and time. Weapons design and delivery pose additional obstacles. States such as Argentina, Iran, Iraq, and Libya have tried to produce nuclear weapons and failed. Aum Shinrikyo, one of the best-funded terrorists groups in history and instigator of the 1995 sarin gas attacks in Tokyo, was also unable to create its own nuclear material and had to attempt to buy it from Russia.16 As such, it is extremely likely that states or substate military organizations would have to be involved in the tacit or overt provision of nuclear material to terrorists. A state could directly and deliberately transfer a weapon or materi­als to terrorists. It could refuse to halt or punish those in the military or sci­entific community who sell material or weapons to terrorists. It could willfully neglect nuclear security or choose not to alert the international community to suspected thefts of material or weapons. It could turn a blind eye to terrorist activities occurring on its territory. In all of these cases, the United States does have a target against which it can direct threats of retaliation: the governments or military and scientific establishments that actively or passively assist aspiring nuclear terrorists. Even if the United States cannot deter individual terrorists, it can create strong incentives for these other actors to block terrorist acquisition of the ingredi­ents required for a nuclear attack. They have addresses, lives, and property that the United States can hold hostage to their wholehearted cooperation. As Paul Davis and Brian Jenkins of RAND have argued, “The United States could announce credibly that … it would punish not only active supporters, but even those states and factions that merely tolerate the terrorists or indi­rectly facilitate their acquisition of [weapons of mass destruction (WMD)]. The purpose would be to so alarm heads of state and heads of substate organi zations that they would work actively to get rid of elements that might bring destruction down upon them.”17 Bush threatened as much after the North Korean test, warning that the Unit­ed States would hold the regime “fully accountable” if it passed nuclear materi­als or weapons to terrorists.18 The 2006 version of the U.S. National Security Strategy reflects a similar logic, suggesting a subtle shift from the 2002 docu­ment. In describing “a new deterrence calculus,” the current strategy declares, “States that harbor and assist terrorists are as guilty as the terrorists, and they will be held to account.” That document, along with analysts such as Gallucci who argue that a form of “expanded deterrence” against nuclear terrorism is possible, points to the crucial importance of being able to “define the nature and source of a terrorist-employed WMD. Should a WMD terrorist attack occur, the rapid identification of the source and perpetrator of an attack will enable our response efforts and may be critical in disrupting follow-on attacks.”19 In other words, nuclear forensics is the linchpin of any attempt at a deter­rence-by-punishment strategy against governments, militaries, or other orga­nizations that might actively or passively assist terrorists in a nuclear attack on the United States.20

### Deterrence Addon

#### Key to credible nuclear deterrence

John C. Browne et al, Los Alamos National Laboratory (retired), Clark Murdock, Center for Strategic and International Studies, Francis Slakey, American Physical Society, Benn Tannenbaum, American Association for the Advancement of Science, Jessica Yeats, Center for Strategic and International Studies, December 2008, Nuclear Weapons in 21st Century U.S. National Security, http://csis.org/files/media/csis/pubs/081208\_nuclear\_weapons\_report.pdf

To maintain a credible nuclear deterrent, the United States should sustain the necessary human capital: as much of the existing workforce ages, experience, expertise and competence will likely decline across the nuclear enterprise including the Department of Defense (DOD), Department of Energy (DOE), and the military services. A broader mission for the nuclear weapons labs that addresses energy security as well as nuclear security interests can help recruit, retain, and sustain highly skilled and motivated scientists and engineers.

#### Loss of U.S. nuclear primacy causes global nuclear war

John P Caves, Senior Research Fellow in the Center for the Study of Weapons of Mass Destruction at the National Defense University, January 2010, Strategic Forum, No. 252, “Avoiding a Crisis of Confidence in the U.S. Nuclear Deterrent,”

Perceptions of a compromised U.S. nuclear deterrent as described above would have profound policy implications, particularly if they emerge at a time when a nuclear-armed great power is pursuing a more aggressive strategy toward U.S. allies and partners in its region in a bid to enhance its regional and global clout. A dangerous period of vulnerability would open for the United States and those nations that depend on U.S. protection while the United States attempted to rectify the problems with its nuclear forces. As it would take more than a decade for the United States to produce new nuclear weapons, ensuing events could preclude a return to anything like the status quo ante. The assertive, nuclear-armed great power, and other major adversaries, could be willing to challenge U.S. interests more directly in the expectation that the United States would be less prepared to threaten or deliver a military response that could lead to direct conflict. They will want to keep the United States from reclaiming its earlier power position. Allies and partners who have relied upon explicit or implicit assurances of U.S. nuclear protection as a foundation of their security could lose faith in those assurances. They could compensate by accommodating U.S. rivals, especially in the short term, or acquiring their own nuclear deterrents, which in most cases could be accomplished only over the mid- to long term. A more nuclear world would likely ensue over a period of years. Important U.S. interests could be compromised or abandoned, or a major war could occur as adversaries and/or the United States miscalculate new boundaries of deterrence and provocation. At worst, war could lead to state-on-state employment of weapons of mass destruction (WMD) on a scale far more catastrophic than what nuclear-armed terrorists alone could inflict.

### 2AC China Grid Add On

#### Nuclear expansion key to grid stability

Margaret Harding, president of 4Factor Consulting. She has worked in the nuclear industry for more than 30 years and advises clients on quality, regulatory, technical, and business issues within the nuclear industry, 2-8-2012, “Role of nuclear energy in creating smarter US grid networks,” Nuclear Energy Insider, http://analysis.nuclearenergyinsider.com/operations-maintenance/role-nuclear-energy-creating-smarter-us-grid-networks

Nuclear consultant, Margaret Harding, offers her insights into how smart grid technologies can boost storage capacity on the already constrained US grid network. She also looks at how nuclear's demand response record could actually help solar projects and overall power stability across the US. By Margaret Harding The concept that smart grids are separate from, and conflict with, traditional grids has been discussed in recent times. A key fact that has to be understood is that the current electricity grid in the US is a demand system. That is, electricity is generated as it is demanded. Very little storage capacity is available on the grid today. This makes electricity generation, transmission and distribution among the most complex systems in the world. This relative inelasticity of the industry is at the heart of the issues of intermittent power supplies and demand response. In the past, electricity supply was generated through means that were fairly well controlled. Baseload was provided by coal, hydro, and nuclear with some natural gas and other sources. Natural gas and some of the older less efficient oil units were used to manage demand with highly responsive systems coming on line as demand increased. Stressed out grid However, with the advent of intermittent power suppliers like wind and solar, and changing load curves due to increasing electricity usage (electric cars, more electrical appliances and equipment), the traditional methods of managing the grid are being significantly stressed. In addition, there are significant losses of electricity occurring in the current US transmission and distribution (T&D) system as well as inflexibility for transmission of electricity across long distances required to use intermittent sources that are generally more available in the west at major population and industrial centers in the east. Voltage events, even minor reductions in voltage, have increasingly significant effects on society. With the increased use of computers and sensitive electronics both as stand- alone devices and as a part of equipment used both in industrial and residential applications, we need to find ways to assure the reliability of the grid is as high as possible. What is ‘smart grid’? Smart grid is really about improving the reliability of the overall electricity supply. This entails managing supply as well as demand, but most importantly, the T&D of electricity. By better sensing and prediction of potential issues, including intermittent sources like wind and solar, faults such as transformer failures, or voltage irregularities, and increasing demand, a “smarter grid” will allow various energy sources to work together more effectively with fewer issues reaching the industrial, commercial, and residential consumers of electricity. Where does nuclear fit in? How do nuclear energy facilities contribute to the overall reliability of energy supply? And how can they support some of the other initiatives on the grid? In the US, generation and T&D have been separated in many markets. This separation means that nuclear generators don’t have direct ability to improve the reliability and detection of grid events in the T&D. However, it does not mean that nuclear utilities do not contribute to grid reliability. Nuclear energy tends to be used as base load supply. The reasons for this are primarily economic, though technology does play a role. The economic reasons center around the fact that nuclear is a capital intensive energy source. Because the majority of costs are in the design and construction of the facility, the owners of these plants need to operate them as much as possible to maximize the return on their investments. Nuclear power plants can load follow, but at an efficiency cost in fuel use. Such load-following operation has to be planned for well in advance to assure safe operation of the plant at varying power conditions. Since most utilities want to maximize investment, they are reluctant to plan in advance of intentional operation at other than 100 per cent power. This drive to be base load makes current nuclear energy facilities less an ideal match with wind energy for daily interaction where intermittency is less predictable and peak availability tends to occur in early morning hours when demand is low. In a more seasonal evaluation, most nuclear plants target outages for spring and fall, both periods when wind is more reliably available and seasonal demand tends to be lower. Nuclear solar combo Nuclear and solar, however, can work together in some interesting and more optimal ways. Because solar is tied to hours of daylight and tends to peak at midday when demand is starting to rise to peak as well, nuclear and solar can work as baseload and peak demand response very effectively. In addition, nuclear load-following is best used when a predictable pattern of reduced power and increased power can be used. As solar tends to be more predictable in its cyclical availability, nuclear energy fuel planning can be designed to work in concert with these arrays, should the amount of solar power being generated exceed demand. Solid base of reliable power Aside from nuclear’s direct interaction with intermittent sources, nuclear power plants can have their own impact on grid reliability. Responding to a loss of 1000 MW or more of electricity during peak demand periods can risk cascading failures if unexpected plant trips occur during operation. Nuclear utilities have worked to continue to improve the reliability of these machines, with capacity factors moving into the 90% range and providing a solid base of reliable power. Unplanned reactor outages have become increasingly rare and allow grid operators to rely on nuclear energy for base load demand. In addition, nuclear utilities have increased the robustness of their facilities to withstand loss of power events. By ensuring that the facilities will be available even during severe weather events, or that they can get back online quickly in the event of grid damage, nuclear energy facilities serve as anchor points in regional grid structures that can keep power delivery to consumers.

#### Grid vulnerability allow China to launch cyberattacks and invade Taiwan

Derene 9

(Glenn – Defense Analyst @ Popular Mechanics, “How Vulnerable is U.S. Infrastructure to a Major Cyber Attack?” October 1, 2009, http://www.popularmechanics.com/technology/military/4307521)

The next world war might not start with a bang, but with a blackout. An enemy could send a few lines of code to control computers at key power plants, causing equipment to overheat and melt down, plunging sectors of the U.S. and Canadian grid into darkness. Trains could roll to a stop on their tracks, while airport landing lights wink out and the few traffic lights that remain active blink at random. In the silence and darkness, citizens may panic, or they may just sit tight and wait for it all to reboot. Either way, much of the country would be blind and unresponsive to outside events. And that might be the enemy's objective: Divert America's attention while mounting an offensive against another country. Pentagon planners have long understood the danger of cyber attacks on U.S. military networks. Indeed, the Defense Department's Global Information Grid is one of the most frequently targeted computer networks on Earth. But the cat-and-mouse game of information espionage on military networks is not the only digital threat that keeps national-security experts up at night. There is a growing concern over the vulnerability of far more tangible assets essential to the economy and well-being of American citizens. Much of the critical infrastructure that keeps the country humming--water-treatment facilities, refineries, pipelines, dams, the electrical grid--is operated using a hodgepodge of technologies known as industrial control systems. Like banks and telecommunications networks, which are also generally considered critical infrastructure, these industrial facilities and utilities are owned by private companies that are responsible for maintaining their own security. But many of the control systems in the industrial world were installed years ago with few or no cyber-security features. That wasn't a big problem when these systems were self-contained. But in the past two decades, many of these controls have been patched into company computer networks, which are themselves linked to the Internet. And when it comes to computer security, a good rule of thumb is that any device that is computer-controlled and networked is vulnerable to hacking. Bad-guy hackers pulling the plug on public utilities is a common theme of Hollywood films, including 2007's Live Free or Die Hard, but such scenarios present more than a mere fictional scare to U.S. intelligence officials. According to Melissa Hathaway, cyber-coordination executive for the Office of the Director of National Intelligence, the list of potential adversaries in a cyber attack is long, ranging from disgruntled employees to criminals to hostile nations. Most experts agree that China and Russia routinely probe our industrial networks, looking for information and vulnerabilities to use as leverage in any potential dispute. James Lewis, a cyber-security expert for the policy think tank Center for Strategic and International Studies (CSIS), says that although cyber warfare couldn't cripple the U.S., it could serve as an effective military tactic. "If I were China, and I were going to invade Taiwan," he says, "and I needed to complete the conquest in seven days, then it's an attractive option to turn off all the electricity, screw up the banks and so on." Could the entire U.S. grid be taken down in such an attack? "The honest answer is that we don't know," Lewis says. "And I don't like that answer."

#### Extinction

Straits Times (Singapore), June 25, 2000, No one gains in war over Taiwan

THE high-intensity scenario postulates a cross-strait war escalating into a full-scale war between the US and China. If Washington were to conclude that splitting China would better serve its national interests, then a full-scale war becomes unavoidable.Conflict on such a scale would embroil other countries far and near and -horror of horrors -raise the possibility of a nuclear war. Beijing has already told the US and Japan privately that it considers any country providing bases and logistics support to any US forces attacking China as belligerent parties open to its retaliation. In the region, this means South Korea, Japan, the Philippines and, to a lesser extent, Singapore. If China were to retaliate, east Asia will be set on fire. And the conflagration may not end there as opportunistic powers elsewhere may try to overturn the existing world order. With the US distracted, Russia may seek to redefine Europe's political landscape. The balance of power in the Middle East may be similarly upset by the likes of Iraq. In south Asia, hostilities between India and Pakistan, each armed with its own nuclear arsenal, could enter a new and dangerous phase. Will a full-scale Sino-US war lead to a nuclear war? According to General Matthew Ridgeway, commander of the US Eighth Army which fought against the Chinese in the Korean War, the US had at the time thought of using nuclear weapons against China to save the US from military defeat. In his book The Korean War, a personal account of the military and political aspects of the conflict and its implications on future US foreign policy, Gen Ridgeway said that US was confronted with two choices in Korea -truce or a broadened war, which could have led to the use of nuclear weapons. If the US had to resort to nuclear weaponry to defeat China long before the latter acquired a similar capability, there is little hope of winning a war against China 50 years later, short of using nuclear weapons. The US estimates that China possesses about 20 nuclear warheads that can destroy major American cities. Beijing also seems prepared to go for the nuclear option. A Chinese military officer disclosed recently that Beijing was considering a review of its "non first use" principle regarding nuclear weapons. Major-General Pan Zhangqiang, president of the military-funded Institute for Strategic Studies, told a gathering at the Woodrow Wilson International Centre for Scholars in Washington that although the government still abided by that principle, there were strong pressures from the military to drop it. He said military leaders considered the use of nuclear weapons mandatory if the country risked dismemberment as a result of foreign intervention. Gen Ridgeway said that should that come to pass, we would see the destruction of civilisation.

## 2AC K

### Framework

#### Our interpretation is that plan focus is good

#### Aff choice – other frameworks moot the 1AC

#### Topic education – only focusing on the resolution ensures different ground from year to year

#### Reject non-policy alts and links not based on the plan text

#### Perm do both – double bind – either the alt can’t overcome the status quo or it can overcome residual link to the plan

#### Perm do the plan and all non-mutually exclusive parts of the alternative

### 2AC AT: Method

#### Method focus causes scholarly paralysis

Patrick Thadeus Jackson, associate professor of IR – School of International Service @ American University, 2011, The Conduct of Inquiry in International Relations, p. 57-59

Perhaps the greatest irony of this instrumental, decontextualized importation of “falsification” and its critics into IR is the way that an entire line of thought that privileged disconfirmation and refutation—no matter how complicated that disconfirmation and refutation was in practice—has been transformed into a license to worry endlessly about foundational assumptions. At the very beginning of the effort to bring terms such as “paradigm” to bear on the study of politics, Albert O. Hirschman (1970b, 338) noted this very danger, suggesting that without “a little more ‘reverence for life’ and a little less straightjacketing of the future,” the focus on producing internally consistent packages of assumptions instead of actually examining complex empirical situations would result in scholarly paralysis. Here as elsewhere, Hirschman appears to have been quite prescient, inasmuch as the major effect of paradigm and research programme language in IR seems to have been a series of debates and discussions about whether the fundamentals of a given school of thought were sufficiently “scientific” in their construction. Thus we have debates about how to evaluate scientific progress, and attempts to propose one or another set of research design principles as uniquely scientific, and inventive, “reconstructions” of IR schools, such as Patrick James’ “elaborated structural realism,” supposedly for the purpose of placing them on a firmer scientific footing by making sure that they have all of the required elements of a basically Lakatosian19 model of science (James 2002, 67, 98–103). The bet with all of this scholarly activity seems to be that if we can just get the fundamentals right, then scientific progress will inevitably ensue . . . even though this is the precise opposite of what Popper and Kuhn and Lakatos argued! In fact, all of this obsessive interest in foundations and starting-points is, in form if not in content, a lot closer to logical positivism than it is to the concerns of the falsificationist philosophers, despite the prominence of language about “hypothesis testing” and the concern to formulate testable hypotheses among IR scholars engaged in these endeavors. That, above all, is why I have labeled this methodology of scholarship neopositivist. While it takes much of its self justification as a science from criticisms of logical positivism, in overall sensibility it still operates in a visibly positivist way, attempting to construct knowledge from the ground up by getting its foundations in logical order before concentrating on how claims encounter the world in terms of their theoretical implications. This is by no means to say that neopositivism is not interested in hypothesis testing; on the contrary, neopositivists are extremely concerned with testing hypotheses, but only after the fundamentals have been soundly established. Certainty, not conjectural provisionality, seems to be the goal—a goal that, ironically, Popper and Kuhn and Lakatos would all reject.

#### Ethical frameworks are not a-priori – evaluate the goodness of their advocacy through experimentation and practice, not theoretical criteria

Joel Mintz, Professor of Law, Nova Southeastern University Law Center; Scholar, Center for Progressive Regulation, 2004, “Some Thoughts on the Merits of Pragmatism as a Guide to Environmental Protection,” 31 B.C. Envtl. Aff. L. Rev. 1, Lexis.

Philosophical **pragmatism**, as initially articulated by William James and other early twentieth century academics, is, in one sense, an attitude or method of thought. n4 It **emphasizes a focus on facts and consequences, as opposed to theories and principles**. n5 As James explained it, pragmatism stands for no particular results. It has no dogmas, and no doctrines save for its method. . . . It lies in the midst of our theories, like a corridor in a hotel. Innumerable chambers open out of it. In one you may find a man writing an atheistic volume; in the next some one on his knees praying for faith and strength; in a third a chemist investigating a body's properties. In a fourth a system of idealistic metaphysics is being excogitated; in a fifth the impossibility of metaphysics is being shown. But they all own the corridor, and all must pass through it if they want a practicable way of getting into or out of their respective rooms. n6 In addition to being a method of thought--with sufficient flexibility to appeal to individuals who have divergent views in many respects, as noted above--**philosophical pragmatism is** also **distinguished by its experiential, provisional, and pluralistic notion of truth**. n7 In William James's words: Pragmatism . . . asks its usual question. "**Grant an idea** or belief **to be true**," it says, "**what concrete difference will its being true make in any one's actual life? How will the truth be realized?** What experiences will be different from those which would obtain if the belief were false? What, in short, is the truth's cash-value in experiential terms?" The moment pragmatism asks this question, it sees the answer: **True ideas are those that we can assimilate, validate, corroborate, and verify**. False ideas are those that we can not. That is the practical difference it makes to us to have true ideas; that, therefore, is the meaning of truth, for it is all that truth is known as. n8 [\*4] Richard Rorty takes a relatively similar view. n9 In his introduction to Consequences of Pragmatism, Rorty states that "a pragmatist theory about truth . . . says that truth is not the sort of thing one should expect to have a philosophically interesting theory about. For pragmatists, 'truth' is just the name of a property which all true statements share." n10 Rorty believes that there is little of significance to be said about this common property of true statements. n11 He thus feels that the Platonic tradition, with its **emphasis on fixed, a priori notions of Truth and Goodness, has "outlived its usefulness."** n12 John Dewey, another highly influential pragmatist, expressed his theory of truth in like fashion. n13 Dewey wrote, "Truth is a collection of truths; and these constituent truths are in the keeping and testing as to matters-of-fact." n14 For Dewey as well, knowledge was to be grasped from the concrete particulars of experience, rather than logically deduced by abstract reasoning or transcendentally revealed. n15 **A**nother **closely related common feature of** philosophical **pragmatism is** its firm **rejection of rigid canons and dogmatic beliefs**. n16 As James put it, as an intellectual approach **pragmatism is "a mediator and a reconciler**. . . . She has, in fact, no prejudices whatever, no obstructive dogmas, no rigid canons of what shall count as proof. She is completely genial. She will entertain any hypothesis, she will consider any evidence." n17 In keeping with this doctrinal flexibility, philosophical pragmatism puts considerable emphasis upon indeterminacy and the limitations of human understanding. n18 As Kelly A. Parker has noted, for the pragmatist "there is an irreducible pluralism in the world we encounter. There is [also] the idea (supported by contemporary physics) that indeterminacy and chance are real features of the world. Change, development and novelty are everywhere the rule." n19 [\*5] Pragmatic notions of ethics also emphasize change, development, and pluralism. n20 Pragmatists generally reject universally valid ethical theories. n21 Pragmatists believe that as the world evolves, and human societies grow and change, new kinds of ethical dilemmas emerge. n22 To solve them, people need to develop new methods of understanding what is right and wrong. n23 As Kelly Parker has written: **Pragmatism maintains that no set of ethical concepts can be the absolute foundation for evaluating the rightness of our actions**. . . . [Instead,] **the aim of ethics is not perfect rightness . . . but rather creative mediation of conflicting claims to value, aimed at making life on the planet relatively better than it is.** n24 Pragmatic ideas regarding ethics are further manifested in the area of social and political thought. n25 For John Dewey and other pragmatists, social and political institutions exist (or should exist) to provide for the needs of individuals. n26 The worth of projects is to be judged by the extent of their conformity to social needs. n27 Moreover, since human needs and social circumstances are frequently in flux, social institutions need frequent reform. n28 This can be best accomplished where diverse individuals participate actively and regularly in public affairs, so that society as a whole may take advantage of their diverse experience and intelligence. n29 Finally, in its social outlook and elsewhere, philosophical **pragmatism places an especially high value on experimentation**. n30 For pragmatists, "**because the public consists of a vast plurality of people and things valued, and because the world is changing** at every moment, **the ways and means of best providing for the individual and common good have to be experimentally determined**." n31 **Rather than being measured** [\*6] **against some objective, impersonal set of abstract criteria, social projects are to be tested by their human consequences and their fulfillment of practical social needs**. n32 What works is what benefits people; **what benefits people can often be determined by thoughtful experimentation with new and untried social institutions and arrangements**. n33

#### Capitalism is sustainable due to tech

William J Baumol, professor of economics at NYU, Robert E. Litan, Senior Fellow of Economic Studies at the Brookings Institute, and Carl J. Schramm, President and chief executive officer of the Kauffman Foundation,” 2007, Good Capitalism, Bad Capitalism, and the Economics of Growth and Prosperity

One line of skepticism about growth arises from individuals and groups who worry that as the world’s population increases and economic growth continues, societies will use up scarce resources and, at the same time, degrade the environment. In the early 1970s, a group called the “Club of Rome” expressed such worries, fearing that eventually (and rather soon) the world would run out of energy and some commodities, so that growth couldn’t continue at anything like the existing pace. Today, there are those who believe, for similar reasons, that growth shouldn’t continue. The doomsayers who projected that economic growth would come to a standstill were wrong. Since 1975, total world economic output has increased more than sevenfold.2 On a per capita basis, world output is more than five times higher than it was thirty years ago. Growth in output, and therefore income, per person throughout the world advanced at a far more rapid pace (nearly ninefold) in the twentieth century than in any other century during the previous one thousand years (to the extent these things can be measured).3 Per capita output continues to increase because firms around the world continue to make more use of machines and information technology that enable workers to be more productive and because technology itself continues to advance, making it possible for consumers to use new products and services. There is good reason to hope that this process can and will continue, § Marked 17:25 § though there are some lurking dangers, including foolish actions by governments. But should growth continue? What about the supplies of energy that will be depleted in the process or the pollution that will be generated as ever more things are produced and used? Curiously, economists who tend to be quite rational in their lives urge the worriers to have faith—faith that continued technological progress powered by market incentives will ease these concerns. As it turns out, however, economists’ faith has roots in historical fact. In the early 1800s, Thomas R. Malthus famously predicted that the world’s population would eventually starve or, at the least, live at a minimal level of subsistence because food production could not keep pace with the growth of population. Technological advances since that time have proved him wrong. Through better farming techniques, the invention of new farming equipment, and continuing advances in agricultural science (especially the recent “green revolution” led by genetic engineering), food production has increased much more rapidly than population, so much so that in “real terms” (after adjusting for inflation), the price of food is much lower today than it was two hundred years ago, or for that matter, even fifty years ago. Farmers, who once accounted for more than 0 percent of the population at the dawn of the twentieth century in the United States, now comprise less than a percent of population—and are able to grow far more food at the same time.

#### “Invisible people” is a terrible arg – Zizek has no way of proving these people exist or how we should vote on them

### 2AC Alt Vagueness

#### The alt is vague – it’s a voting issue

#### Spikes our offense – no way for aff to win

#### Skews 2AC time

#### Damage is done – 2NC clarification rewards them because 1AR will always be behind

#### Lack of a mechanism means they can’t convert theory into practice.

Richard Wyn Jones, 1999, “Security, Strategy, and Critical Theory,” ciao

Because emancipatory political practice is central to the claims of critical theory, one might expect that proponents of a critical approach to the study of international relations would be reflexive about the relationship between theory and practice. Yet their thinking on this issue thus far does not seem to have progressed much beyond grandiose statements of intent. There have been no systematic considerations of how critical international theory can help generate, support, or sustain emancipatory politics beyond the seminar room or conference hotel. Robert Cox, for example, has described the task of critical theorists as providing “a guide to strategic action for bringing about an alternative order” (R. Cox 1981: 130). Although he has also gone on to identify possible agents for change and has outlined the nature and structure of some feasible alternative orders, he has not explicitly indicated whom he regards as the addressee of critical theory (i.e., who is being guided) and thus how the theory can hope to become a part of the political process (see R. Cox 1981, 1983, 1996). Similarly, Andrew Linklater has argued that “a critical theory of international relations must regard the practical project of extending community beyond the nation–state as its most important problem” (Linklater 1990b: 171). However, he has little to say about the role of theory in the realization of this “practical project.” Indeed, his main point is to suggest that the role of critical theory “is not to offer instructions on how to act but to reveal the existence of unrealised possibilities” (Linklater 1990b: 172). But the question still remains, reveal to whom? Is the audience enlightened politicians? Particular social classes? Particular social movements? Or particular (and presumably particularized) communities? In light of Linklater’s primary concern with emancipation, one might expect more guidance as to whom he believes might do the emancipating and how critical theory can impinge upon the emancipatory process. There is, likewise, little enlightenment to be gleaned from Mark Hoffman’s otherwise important contribution. He argues that critical international theory seeks not simply to reproduce society via description, but to understand society and change it. It is both descriptive and constructive in its theoretical intent: it is both an intellectual and a social act. It is not merely an expression of the concrete realities of the historical situation, but also a force for change within those conditions. (M. Hoffman 1987: 233) Despite this very ambitious declaration, once again, Hoffman gives no suggestion as to how this “force for change” should be operationalized and what concrete role critical theorizing might play in changing society. Thus, although the critical international theorists’ critique of the role that more conventional approaches to the study of world politics play in reproducing the contemporary world order may be persuasive, their account of the relationship between their own work and emancipatory political practice is unconvincing. Given the centrality of practice to the claims of critical theory, this is a very significant weakness. Without some plausible account of the mechanisms by which they hope to aid in the achievement of their emancipatory goals, proponents of critical international theory are hardly in a position to justify the assertion that “it represents the next stage in the development of International Relations theory” (M. Hoffman 1987: 244). Indeed, without a more convincing conceptualization of the theory–practice nexus, one can argue that critical international theory, by its own terms, has no way of redeeming some of its central epistemological and methodological claims and thus that it is a fatally flawed enterprise.

#### Cap is resilient – crises retrench the system

Libcom, 10-12-2006, “Primitivism, anarcho-primitivism and anti-civilisationism – criticism,” http://libcom.org/thought/approaches/primitivism

When looked at in any detail this argument evaporates and it becomes clear that neither capitalism nor civilisation face a final crisis because of the oil running out. This is not because oil supplies are inexhaustible, indeed we may be reaching or have reached the peak of oil production today. But far from being the end of capitalism or civilisation this is an opportunity for profit and restructuring. Capital however reluctantly, is gearing up to make profits out of developing alternative energy sources on the one hand and on the other of accessing plentiful but more destructive ways to extract fossil fuel supplies. The second path of course makes global warming and other forms of pollution a lot worse but that's not likely to stop the global capitalist class. It is not just primitivists who have become mesmerised by the oil crisis, but in summary, while oil will become more expensive over the decades the process to develop substitutes for it is already underway. Denmark for instance intends to produce 50% of its energy needs from wind farms by 2030 and Danish companies are already making vast amounts of money because they are the leading producers of wind turbines. The switch over from oil is likely to provide an opportunity to make profits for capitalism rather then representing some form of final crisis. There may well be an energy crisis as oil starts to rise in price and alternative technologies are not yet capable of filling the 40% of energy generation filled by oil. This will cause oil and therefore energy prices to soar but this will be a crisis for the poor of the world and not for the wealthy some of whom will even profit from it. A severe energy crisis could trigger a global economic downturn but again it is the world's workers that suffer the most in such times. There is a good argument that the world's elite are already preparing for such a situation, many of the recent US wars make sense in terms of securing future oil supplies for US corporations. Capitalism is quite capable of surviving very destructive crisis. World War II saw many of the major cities of Europe destroyed and most of the industry of central Europe flattened. (By bombers, by war, by retreating Germans and then torn up and shipped east by advancing Russians). Millions of European workers died as a result both in the war years and in the years that followed. But capitalism not only survived, it flourished as starvation allowed wages to be driven down and profits soared.

#### No structural oppression

Johnny Munkhammar, Masters Degree from Uppsala University in political science and economics, senior adviser at the Confederation of Swedish Enterprise, 2007, “Big Government: How to Create Poverty” Economic Affair, Volume 27, Issue 3, p 39-40), Wiley InterScience

The economic development of the Western world during the roughly 150 years since that time has proven the basic Marxist analysis of usurption of the majority to be wrong. The average income for ordinary people has increased at least ten-fold in the Western world during the last century. And since this is the average income, this increase is not the result of government redistribution of resources. It is the result of more resources being created and the wealth from that being spread to both owners and workers. Our societies have become vastly more wealthy during the last 150 years. And this is not just a matter of figures and money. Life expectancy has more than doubled; previously incurable diseases are cured; housing, food and clothes are of a totally different quality; freedom to choose the life we want is greater; only a tiny share of income is needed to pay for basic necessities; and technological progress has opened up the world. And this is not just for a few in the rich countries. The resources of the Western world have grown enormously, wealth has spread to ordinary people and the developing countries are now growing strongly. Improvements for the world’s poor The global development of today provides a number of facts of relevance for an analysis of economic and social progress. Most people agree that capitalism has spread to larger parts of the world than ever before, under the name of globalisation. What has happened to poverty in the world during that time? It has decreased sharply. In 1950, 60% of the world’s population lived in extreme poverty; in 2000, the share was 20%, according to statistics from the World Bank. Those who believe that capitalism creates poverty will have a hard time explaining how poverty can decrease faster than ever in the globalised world. During the last 20 years, growth has on average been substantially higher in developing economies than in developed ones, roughly twice the rate (IMF). The rich get richer, but the poor also get richer – and this is much more rapidly than when today’s rich countries left poverty. Not least has this been a fact in China and India, where hundreds of millions of people have been lifted out of poverty. This development obviously started after China opened to capitalism and India reduced socialism and protectionism. The globalised developing countries have grown by, on average, 5% a year during the 1990s while the economies of nonglobalised ‘developing’ countries shrank by 1% a year (World Bank). Growth matters for the basics of life – the higher the GDP per capita, the higher the share of children that survive their first year (see World Health Organization, World Health Chart ). The connection is very strong for all countries. But – and this should be a wake-up call for those who believe in the state as the solution – there is no connection between the degree of public healthcare spending and the share of children that survive their first year. In 1900, average life expectancy in the world was a mere 31 years; today it is 67 years and rising. Life expectancy in poorer countries has improved even faster. In China it has surged from 41 years in the 1950s to 71 years today; in India it is up from 39 years to 63 years (Goklany, 2006).

#### No root cause– prefer proximate causes

John Norton, Professor of Law at the University of Virginia He formerly served as the first Chairman of the Board of the United States Institute of Peace and as the Counselor on International Law to the Department of State, Winter, 2004, “Beyond the Democratic Peace: Solving the War Puzzle”, 44 Va. J. Int'l L. 341, Lexis Law

If major interstate war is predominantly a product of a synergy between a potential nondemocratic aggressor and an absence of effective deterrence, what is the role of the many traditional "causes" of war? Past, and many contemporary, theories of war have focused on the role of specific disputes between nations, ethnic and religious differences, arms races, poverty and social injustice, competition for resources, incidents and accidents, greed, fear, perceptions of "honor," and many other factors. Such factors may well play a role in motivating aggression or generating fear and manipulating public opinion. The reality, however, is that while some of these factors may have more potential to contribute to war than others, there may well be an infinite set of motivating factors, or human wants, motivating aggression. It is not the independent existence of such motivating factors for war but rather the circumstances permitting or encouraging high-risk decisions leading to war that is the key to more effectively controlling armed conflict. And the same may also be true of democide. The early focus in the Rwanda slaughter on "ethnic conflict," as though Hutus and Tutsis had begun to slaughter each other through spontaneous combustion, distracted our attention from the reality that a nondemocratic Hutu regime had carefully planned and orchestrated a genocide against Rwandan Tutsis as well as its Hutu opponents. [n158](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1329520437445&returnToKey=20_T13973620735&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.647208.6119287203#n158) Certainly if we were able to press a button and end poverty, racism, religious intolerance, injustice, and endless disputes, we would want to do so. Indeed, democratic governments must remain committed to policies that will produce a better world by all measures of human progress. The broader achievement of democracy and the rule of law will itself assist in this progress. No one, however, has yet been able to demonstrate the kind of robust correlation with any of these "traditional" causes of war that is reflected in the "democratic peace." Further, given the difficulties in overcoming many of these social problems, an approach to war exclusively dependent on their solution may doom us to war for generations to come.

#### Root cause approach to warming fails – using the existing system is the only shot we have to avoid short term tipping points – we can shift the system later.

George Monbiot, climate socialist, 8-22-2008, “Identity Politics in Climate Change Hell,” http://www.monbiot.com/2008/08/22/identity-politics-in-climate-change-hell/

But in seeking to extrapolate from this experience to a wider social plan, she makes two grave errors. The first is to confuse ends and means. She claims to want to stop global warming, but she makes that task 100 times harder by rejecting all state and corporate solutions. It seems to me that what she really wants to do is to create an anarchist utopia, and use climate change as an excuse to engineer it. Stopping runaway climate change must take precedence over every other aim. Everyone in this movement knows that there is very little time: the window of opportunity in which we can prevent two degrees of warming is closing fast. We have to use all the resources we can lay hands on, and these must include both governments and corporations. Or perhaps she intends to build the installations required to turn the energy economy around – wind farms, wave machines, solar thermal plants in the Sahara, new grid connections and public transport systems – herself? Her article is a terryifying example of the ability some people have to put politics first and facts second when confronting the greatest challenge humanity now faces. The facts are as follows. Runaway climate change is bearing down on us fast. We require a massive political and economic response to prevent it. Governments and corporations, whether we like it or not, currently control both money and power. Unless we manage to mobilise them, we stand a snowball’s chance in climate hell of stopping the collapse of the biosphere. Jasiewicz would ignore all these inconvenient truths because they conflict with her politics. “Changing our sources of energy without changing our sources of economic and political power”, she asserts, “will not make a difference. Neither coal nor nuclear are the “solution”, we need a revolution.” So before we are allowed to begin cutting greenhouse gas emissions, we must first overthrow all political structures and replace them with autonomous communities of happy campers. All this must take place within a couple of months, as there is so little time in which we could prevent two degrees of warming. This is magical thinking of the most desperate kind. If I were an executive of E.On or Exxon, I would be delighted by this political posturing, as it provides a marvellous distraction from our real aims. To support her argument, Jasiewicz misrepresents what I said at climate camp. She claims that I “confessed not knowing where to turn next to solve the issues of how to generate the changes necessary to shift our sources of energy, production and consumption”. I confessed nothing of the kind. In my book Heat I spell out what is required to bring about a 90% cut in emissions by 2030. Instead I confessed that I don’t know how to solve the problem of capitalism without resorting to totalitarianism. The issue is that capitalism involves lending money at interest. If you lend at 5%, then one of two things must happen. Either the money supply must increase by 5% or the velocity of circulation must increase by 5%. In either case, if this growth is not met by a concomitant increase in the supply of goods and services, it becomes inflationary and the system collapses. But a perpetual increase in the supply of goods and services will eventually destroy the biosphere. So how do we stall this process? Even when usurers were put to death and condemned to perpetual damnation, the practice couldn’t be stamped out. Only the communist states managed it, through the extreme use of the state control Ewa professes to hate. I don’t yet have an answer to this conundrum. Does she? Yes, let us fight both corporate power and the undemocratic tendencies of the state. Yes, let us try to crack the problem of capitalism and then fight for a different system. But let us not confuse this task with the immediate need to stop two degrees of warming, or allow it to interfere with the carbon cuts that have to begin now.

###  2AC Cap Good – Space

#### Free market key to space

Robert Garmong, professor of philosophy at philosophy at Texas A&M University, 7-22-2005, “

Privatize Space Exploration,” Capitalism Magazine, http://capmag.com/article.asp?ID=4327

There is a contradiction at the heart of the space program: space exploration, as the grandest of man's technological advancements, requires the kind of bold innovation possible only to minds left free to pursue the best of their creative thinking and judgment. Yet, by funding the space program through taxation, we necessarily place it at the mercy of bureaucratic whim. The results are written all over the past twenty years of NASA's history: the space program is a political animal, marked by shifting, inconsistent, and ill-defined goals. The space shuttle was built and maintained to please clashing special interest groups, not to do a clearly defined job for which there was an economic and technical need. The shuttle was to launch satellites for the Department of Defense and private contractors--which could be done more cheaply by lightweight, disposable rockets. It was to carry scientific experiments--which could be done more efficiently by unmanned vehicles. But one "need" came before all technical issues: NASA's political need for showy manned vehicles. The result, as great a technical achievement as it is, was an over-sized, over-complicated, over-budget, overly dangerous vehicle that does everything poorly and nothing well. Indeed, the space shuttle program was supposed to be phased out years ago, but the search for its replacement has been halted, largely because space contractors enjoy collecting on the overpriced shuttle without the expense and bother of researching cheaper alternatives. A private industry could have fired them--but not so in a government project, with home-district congressmen to lobby on their behalf. There is reason to believe that the political nature of the space program may have even been directly responsible for the Columbia disaster. Fox News reported that NASA chose to stick with non-Freon-based foam insulation on the booster rockets, despite evidence that this type of foam causes up to eleven times as much damage to thermal tiles as the older, Freon-based foam. Although NASA was exempted from the restrictions on Freon use, which environmentalists believe causes ozone depletion, and despite the fact that the amount of Freon released by NASA's rockets would have been trivial, the space agency elected to stick with the politically correct foam. It is impossible to integrate the contradictory. To whatever extent an engineer is forced to base his decisions, not on the realities of science but on the arbitrary, unpredictable, and often impossible demands of a politicized system, he is stymied. Yet this politicizing is an unavoidable consequence of governmental control over scientific research and development. Nor would it be difficult to spur the private exploration of space--it's been happening, quietly, for years. The free market works to produce whatever there is demand for, just as it now does with traditional aircraft. Commercial satellite launches are now routine, and could easily be fully privatized. The X Prize, which SpaceShipOne won, offered incentives for private groups to break out of the Earth's atmosphere. But all this private exploration is hobbled by the crucial absence of a system of property rights in space. Imagine the incentive to a profit-minded business if, for instance, it were granted the right to any stellar body it reached and exploited. We often hear that the most ambitious projects can only be undertaken by government, but in fact the opposite is true. The more ambitious a project is, the more it demands to be broken into achievable, profit-making steps--and freed from the unavoidable politicizing of government-controlled science. If space development is to be transformed from an expensive national bauble whose central purpose is to assert national pride to a practical industry, it will only be by unleashing the creative force of free and rational minds. The creative minds that allowed SpaceShipOne to soar to triumph have made the first private steps toward the stars. Before them are enormous technical difficulties, the solution of which will require even more heroic determination than that which tamed the seas and the continents. To solve them, America must unleash its best minds, as only the free market can do.

#### Space is key to preventing extinction

James Oberg, space writer and a former space flight engineer based in Houston, 1999, Space Power Theory, http://www.jamesoberg.com/books/spt/new-CHAPTERSw\_figs.pdf

We have the great gift of yet another period when our nation is not threatened; and our world is free from opposing coalitions with great global capabilities. We can use this period to take our nation and our fellow men into the greatest adventure that our species has ever embarked upon. The United States can lead, protect, and help the rest of [hu]mankind to move into space. It is particularly fitting that a country comprised of people from all over the globe assumes that role. This is a manifest destiny worthy of dreamers and poets, warriors and conquerors. In his last book, Pale Blue Dot, Carl Sagan presents an emotional argument that our species must venture into the vast realm of space to establish a spacefaring civilization. While acknowledging the very high costs that are involved in manned spaceflight, Sagan states that our very survival as a species depends on colonizing outer space. Astronomers have already identified dozens of asteroids that might someday smash into Earth. Undoubtedly, many more remain undetected. In Sagan’s opinion, the only way to avert inevitable catastrophe is for mankind to establish a permanent human presence in space. He compares humans to the planets that roam the night sky, as he says that humans will too wander through space. We will wander space because we possess a compulsion to explore, and space provides a truly infinite prospect of new directions to explore. Sagan’s vision is part science and part emotion. He hoped that the exploration of space would unify humankind. We propose that mankind follow the United States and our allies into this new sea, set with jeweled stars. If we lead, we can be both strong and caring. If we step back, it may be to the detriment of more than our country.

### 2AC Cap Good – Prevents War

#### Cap solves all wars

Carl J. Schramm, president and CEO of the Ewing Marion Kauffman Foundation, USA Today, June 28, 2006, Capitalism spreads freedom even as democracy falters

More than the export of democracy, it is the export of entrepreneurial capitalism that can produce a new birth of peace and freedom around our globe. Entrepreneurial capitalism is based on individual invention, and because wealth comes from one's own initiative, it advances human dignity. And here is the good news. Virtually every country, whatever its political system, wants to embrace it. They have seen the success of the American economy. It has been said that when goods cross borders, armies don't. Today, China and India are the world's two largest countries racing toward entrepreneurial capitalism. They are the example and test of that thesis. Several decades ago, their armies clashed. Now no one talks of war, only of their economic emergence. Capitalism has promoted peace and, in China, better -- though still inadequate -- respect for rights. If, with our assistance, Adam Smith's entrepreneurial capitalism were to become ubiquitous, the cross-border investment in the success of our brothers and sisters around the world, and theirs in us, would cause people everywhere to see the futility of ancient struggles, whether based on plunder, conquest or theocratic fervor. In the insight of our invisible founder is the secret for achieving a future of global peace.

## 2AC Obama Good

### 2AC Elections – Obama Good

#### Romney surging now – electoral math

John Whitesides, writer for Reuters, 10-21-2012, “Mitt Romney Gaining, But Obama Still Leads” http://www.huffingtonpost.com/2012/10/21/mitt-romney-obama-election-2012\_n\_1996271.html

But Romney's recent surge in the polls after his strong performance in his first debate with Obama on Oct. 3 has propelled the Republican into the lead or within striking distance in enough states to give him a reasonable chance of beating Obama to the finish line.¶ Ohio, long seen as the key to unlocking the White House, looms large in every victory scenario for either candidate - particularly Romney. Until the last two weeks, polls did not show Romney with enough support in other crucial states to give him a clear path even if he won Ohio.¶ But he has that now, as the campaign enters its final two weeks with eight states in play as toss-ups.¶ "Before the first debate the electoral math looked like a real reach for Romney. Today, it looks quite possible," said Peter Brown, a pollster at Quinnipiac University.

#### Wisconsin key – Romney’s surging

William Galston, election editor for TNR, 10-15-2012, “Why Wisconsin Could Be the Key to a Romney Victory,” The New Republic, Why Wisconsin Could Be the Key to a Romney Victory, http://www.tnr.com/blog/plank/108578/why-wisconsin-could-be-the-key-romney-victory

Which brings us to Wisconsin, the only state that Romney’s surge has truly moved into the swing category. Not only have the post-debate surveys shown Obama’s margin down to 2 points, but also, the same survey that gave Obama a 52 percent approval rating in Virginia put him at 47 in Wisconsin. History suggests that if vice-presidential candidates matter anywhere, it’s in their home states. If I were Romney’s campaign manager, I would tell Ryan to spend most of the next three weeks—morning, noon, and night—visiting every city, town, and hamlet in Wisconsin. And if my internal polls had Obama’s margin down to (say) one point with three or four days until the election, I would schedule one or two big Romney rallies to maximize enthusiasm and turnout. Wisconsin matters because it could reduce the pressure on Romney to draw to an inside straight. Carrying Wisconsin wouldn’t fully compensate for losing Ohio, of course. But added to Romney’s base of 235 electoral votes, Wisconsin plus Virginia would bring him to 258, at which point Colorado plus any one of the three smallest swing states--New Hampshire, Iowa, Nevada-- would put him over the top. So would winning Iowa and Nevada, even without Colorado. By the same token, while carrying Wisconsin wouldn’t quite compensate for losing Virginia, winning Ohio plus Wisconsin would give Romney 263 electoral votes, at which point either Colorado or any two of the remaining smaller states would yield victory.

### 2AC Thumpers

#### Debates and Jobs report thump

Charles Babington, staff writer, 9-20-2012, “Tactics set, Obama, Romney hurtle toward finish,” AP, http://www.sltrib.com/sltrib/world/55117851-68/romney-obama-debate-campaign.html.csp

Interviews with top strategists indicate that neither campaign feels it needs to make a significant shift in strategy in the closing days. Obama may hold a slight edge in battleground states, some Republicans grudgingly say, but Romney has the time, money and message to erase it. “Republicans are coalescing around a candidate who has bridged the credibility gap, and now the question is, can we make our closing arguments and win on the ground,” said veteran GOP strategist Terry Holt. “We’re not there yet. But that’s where we’re getting to.” Two scheduled events before Nov. 6 could wrinkle the race’s fabric, although millions of Americans have already voted or firmly made up their minds. Obama and Romney meet Monday for their final debate, focused on foreign policy. It’s a topic that generally favors an incumbent president. But the forum comes as Obama faces growing heat over the administration’s handling of a deadly confrontation at a U.S. consulate in Libya. Romney stumbled last week when he tried to press that point. He will be under pressure to deliver a sharper, more precise indictment Monday. The economy remains the top issue, but to make his closing pitch to voters, Romney “needs to look strong and presidential in a national security setting,” said Steve Schmidt, who managed Republican John McCain’s 2008 campaign. And on Nov. 2 — less than 100 hours before Election Day — the government will release its monthly unemployment report, for October. It’s doubtful that anything short of a huge rise or fall in the rate would change many votes’ minds. But in a neck-and-neck election, almost any event might be viewed as crucial.

#### The election can’t shift and inevitable Romney gaffs thump him

 James Downie, staff writer, 10-4-2012, “Obama lost the first debate, but he will still win the election,” Washington Post, http://www.washingtonpost.com/blogs/post-partisan/post/obama-lost-the-first-debate-but-he-will-still-win-the-election/2012/10/04/9c3b7eb8-0deb-11e2-bd1a-b868e65d57eb\_blog.html

If Romney would have to pull off a miracle to close the gap in national polling, he has no shot at matching the president in the electoral college. As mentioned above, forecasters commonly predict that Obama already has a big lead of safe and leaning states. If we assume Romney will improve in the polls, there would be around nine “swing states”: Colorado, Florida, Iowa, North Carolina, New Hampshire, Nevada, Ohio, Virginia and Wisconsin. There’s one problem here for Romney: He is trailing, and has been consistently trailing, in all but two — North Carolina, where he’s held a small lead, and Florida, this election’s closest thing to a 50-50 state. Romney doesn’t need to win two out of those nine; in almost every scenario, he will need six or seven out of those nine to win, including at least two or three states where he is behind by several points more than he is nationally. All of which brings me to the final point: Given the state of the race before last night’s debate, even most Romney backers would agree that a Romney victory would require a flawless campaign the rest of the way from Romney and a blunder or two from Obama. After six years of both these men running for and/or being president of the United States, is there really anyone out there who thinks Mitt Romney can go a month without making a single mistake? Who thinks Barack Obama, who has been playing it safe for at least several months now, will suddenly make a reckless error, as opposed to a merely lackluster performance? (Or, if you’re Sean Hannity and co., do you believe the lamestream media will suddenly forget their liberal bias and stop protecting the president while assaulting Mitt Romney?) Seriously, does anyone believe that? The fact is that, come October, presidential elections cannot permanently change course over a few days or hours (unlike, say, media narratives). The majority of voters have already made their decision, and the debates won’t provide enough of a boost to alter the contest’s trajectory. Sadly for Romney, the path the race is stuck on ends with his defeat.

### Russia

#### Not key to prolif – D+M says just need to control supply of programs – if our tech is good enough Russia can’t influence

#### Terrorism – no impact – we’ll read new D in the 1AR if it’s a thing

#### Romney wont tank relations – will shift to reconciliation

Eugene Ivanov, political commentator, 10-19-2011, “Mitt Romney: The no-apology candidate,” Russia Beyond the Headline, http://rbth.ru/articles/2011/10/19/mitt\_romney\_the\_no-apology\_candidate\_13598.html

It would be premature, however, to conclude that Romney’s current position vis-à-vis Russia, hostile as it may appear, will necessarily translate into explicit anti-Russian policies of his prospective presidency. Romney’s self-proclaimed status as the major Republican opponent to President Obama forces him to use every opportunity to criticize the Obama Administration. While criticizing the White House’s economic policies is easy given the status of U.S. economy, it’s much trickier to challenge Obama’s foreign policy. The fact is that in many respects, the Obama Administration’s current foreign policy discourse isn’t much different from that of his predecessor. And this poses a problem for Romney because his new “American Century” proposal is a slightly disguised version of the George W. Bush Administration’s “us-vs.-them” approach. Obama’s policy of “reset” in U.S.-Russia relations is perhaps the only area where Romney can see a clear deviation from the policies of the Bush era. Romney therefore attacks the “reset” because there is not much else to attack. It remains to be seen whether the newly acquired aggressive streak in Romney’s foreign policy views will eventually prevail, or if he will instead gradually return to the more pragmatic approach he adhered to in 2007. It remains to be seen, too, which effect Romney’s choice of Leon Aron – a prominent Russia expert from the American Enterprise Institute – as his Russia advisor will have on his presidential campaign. It may well happen that at certain point of his presidency, should it materialize, Romney will realize that having Russia as a partner serves American national interests better than having it as a foe. And who knows: Romney may decide to meet with Putin and look into his soul? And make no apology for that.

#### Relations resilient and no risk of war – cold war proves

Richard **Weitz**, staff writer, **9-27**-2011, “Global Insights: Putin not a Game-Changer for U.S.-Russia Ties,” World Politics Review, <http://www.worldpoliticsreview.com/articles/10140/global-insights-putin-not-a-game-changer-for-u-s-russia-ties>

Fifth, **there will inevitably be areas of conflict between Russia and the** **U**nited **S**tates regardless of who is in the Kremlin. **Putin** and his entourage **can never be happy with having NATO be Europe's most powerful security institution**, since Moscow is not a member and cannot become one. Similarly, **the Russians will always object to NATO's missile defense** efforts since they can neither match them nor join them in any meaningful way. In the case of Iran, Russian officials genuinely perceive less of a threat from Tehran than do most Americans, and Russia has more to lose from a cessation of economic ties with Iran -- as well as from an Iranian-Western reconciliation. On the other hand, **these conflicts can be managed**, since **they will likely remain limited and compartmentalized. Russia and the West do not have fundamentally conflicting vital interests of the kind countries would go to war over**. And **as the Cold War demonstrated, nuclear weapons are a great pacifier under such conditions.** Another novel development is that **Russia is much more integrated into the international economy and global society than the Soviet Union was, and Putin's popularity depend s heavily on his economic track record**. Beyond that, **there are objective criteria, such as the smaller size of the Russian population and economy as well as the difficulty of controlling modern means of social communication, that will constrain whoever is in charge of Russia.**

#### Russia relations are resilient-crises are fueled by domestic politics but never cause long term damage

Daragh **McDowell**, Oxford IR doctoral candidate, 8-22-**2011**, “Don't Sweat the Russia 'Reset'”, <http://www.worldpoliticsreview.com/articles/9837/dont-sweat-the-russia-reset>

In recent weeks, pundits, diplomats and assorted **foreign policy wonks** have **started raising the alarm on U.S.-Russia relations,** with the Obama administration's much-trumpeted "reset" seeming to be increasingly under threat. A recent travel ban by the U.S. State Department on certain Russian officials believed to be involved in the death of lawyer Sergei Magnitsky elicited an angry response from Moscow threatening cooperation in areas ranging from Afghanistan to North Korea. Russia's ambassador to NATO, Dmitry Rogozin, has started grousing about U.S. missile defense plans again. And all of this comes against a backdrop of increasing criticism from Prime Minister Vladimir Putin and his factional supporters in the Russian government about U.S. policy in Libya and Syria. Predictably, this has resulted in a stream of op-eds in the Western press raising the specter of a "new Cold War." So is the concern justified? In a word, no. **There has been no** major **break in U.S.-Russian relations, nor is one likely.** What we are seeing is yet another one of Russia's periodic succession crises in the run-up to next year's presidential election. As Russia is in functional terms a nondemocratic state, there is no effective and broadly accepted mechanism for ensuring an orderly transfer of power, and arguably there hasn't been one since the days of the tsar. The selection and installation of a new ruler tends to be a perilous affair for everyone involved. It also tends to make Russian foreign policy highly reactive and aggressive until the crisis passes. To understand why this is, we first need to examine how the Russian regime actually operates. Though the idea has taken hold in much of the Western press that the Russian state can be reduced to Putin, Russia's leadership is actually a collection of various elite interest groups, often referred to as "clans." The role of the national leader is to ensure a rough balance of power among the clans and to keep open conflict from breaking out. This presents an obvious problem when the time comes to change the national leader. Since the new leader must come from within the current elite, he or she will already be a member of an established clan. That raises the risk that the new boss will use his position to benefit his own clan rather than to maintain the balance of power among them all. As the stakes rise, nerves fray and intra-elite conflict becomes more likely. This leads to a more confrontational foreign policy for two key reasons. First, during a domestic crisis, the regime is at its weakest, and as a result it seeks to keep the influence of external actors to an absolute minimum by scaring them away. Think of a cat giving birth: It screeches and howls and spits to scare off other predators, all in an effort to hide the fact that it is momentarily powerless to defend itself. Similarly, during a succession crisis, the Russian Foreign Ministry makes alarming noises in order to put the West on the defensive while the Kremlin sorts out its internal affairs. But there is another and admittedly more worrying reason for this phenomenon. When the clans start to fight one another, there are few restrictions on either the site of battle or the weapons employed. For the siloviki clans -- members and former members of the security services -- in particular, political struggles are often a matter of life and death. Interfering with foreign policy can be a potent weapon: By creating a tense and even hostile international environment, clan members can tilt the scales in favor of conservatism, a hard-line leadership and preservation of the status quo. The last such crisis occurred in 2007, as Putin prepared to make way for President Dmitry Medvedev. At that time, a siloviki war broke out in Russia, leading to several mysterious deaths. Furthermore, the succession crisis is the most plausible explanation for the assassination of Alexander Litvinenko. By this argument, elements in the regime wanted to either display their capabilities for mischief-making to the various leadership contenders or else create a crisis that forced Putin to stay in a position of power. Why else would the Russian security services use polonium to kill Litvinenko, thereby leaving a radioactive trail leading right back to the Kremlin, when they have access to an array of lethal and nearly untraceable poisons? Luckily, the current impasse is more of a mini-crisis. The ruling tandem of Putin and Medvedev has managed to keep a fairly tight rein on power, and the smart money remains on Medvedev remaining as president with Putin continuing as prime minister. There is still an element of uncertainty though. The caricature of Medvedev as "Putin's puppet" has always been inaccurate, and as president Medvedev has gained leverage to push both a foreign and domestic agenda that has discomfited his political opponents. Many hardliners would dearly love to see Medvedev out and Putin back in as unrivaled leader of the Russian political elite. **The next few months will** therefore **be rough** ones **for Russia's relations with the West**. But **when the dust settles** and the official candidate -- and therefore winner -- of the 2012 presidential election becomes clear, **things should settle down** just as quickly as they have recently flared up. In the meantime, Europe and **the U.S. should** try to **react as little as possible** and avoid doing any lasting damage that can't be easily repaired

### Link

#### Winners win

Robert Creamer, political strategist for over four decades, 12-23-2011, "Why GOP Collapse on the Payroll Tax Could be a Turning Point Moment," Huffington Post, www.huffingtonpost.com/robert-creamer/why-gop-collapse-on-the-p\_b\_1167491.html

2). Strength and victory are enormous political assets. Going into the New Year, they now belong to the President and the Democrats. One of the reasons why the debt ceiling battle inflicted political damage on President Obama is that it made him appear ineffectual - a powerful figure who had been ensnared and held hostage by the Lilliputian pettiness of hundreds of swarming Tea Party ideological zealots. In the last few months -- as he campaigned for the American Jobs Act -- he has shaken free of those bonds. Now voters have just watched James Bond or Indiana Jones escape and turn the tables on his adversary. Great stories are about a protagonist who meets and overcomes a challenge and is victorious. The capitulation of the House Tea Party Republicans is so important because it feels like the beginning of that kind of heroic narrative. Even today most Americans believe that George Bush and the big Wall Street Banks - not by President Obama -- caused the economic crisis. Swing voters have never lost their fondness for the President and don't doubt his sincerity. But they had begun to doubt his effectiveness. They have had increasing doubts that Obama was up to the challenge of leading them back to economic prosperity. The narrative set in motion by the events of the last several weeks could be a turning point in voter perception. It could well begin to convince skeptical voters that Obama is precisely the kind of leader they thought he was back in 2008 - a guy with the ability to lead them out of adversity - a leader with the strength, patience, skill, will and resoluteness to lead them to victory. That now contrasts with the sheer political incompetence of the House Republican Leadership that allowed themselves to be cornered and now find themselves in political disarray. And it certainly contrasts with the political circus we have been watching in the Republican Presidential primary campaign. 3). This victory will inspire the dispirited Democratic base. Inspiration is the feeling of empowerment - the feeling that you are part of something larger than yourself and can personally play a significant role in achieving that goal. It comes from feeling that together you can overcome challenges and win. Nothing will do more to inspire committed Democrats than the sight of their leader -- President Obama - out maneuvering the § Marked 09:47 § House Republicans and forcing them into complete capitulation. The events of the last several weeks will send a jolt of electricity through the Progressive community. The right is counting on Progressives to be demoralized and dispirited in the coming election. The President's victory on the payroll tax and unemployment will make it ever more likely that they will be wrong. 4). When you have them on the run, that's the time to chase them. The most important thing about the outcome of the battle over the payroll tax and unemployment is that it shifts the political momentum at a critical time. Momentum is an independent variable in any competitive activity - including politics. In a football or basketball game you can feel the momentum shift. The tide of battle is all about momentum. The same is true in politics. And in politics it is even more important because the "spectators" are also the players - the voters. People follow - and vote -- for winners. The bandwagon effect is enormously important in political decision-making. Human beings like to travel in packs. They like to be at the center of the mainstream. Momentum shifts affect their perceptions of the mainstream. For the last two years, the right wing has been on the offensive. Its Tea Party shock troops took the battle to Democratic Members of Congress. In the Mid-Terms Democrats were routed in district after district. Now the tide has turned. And when the tide turns -when you have them on the run - that's the time to chase them.

#### Public loves nukes

WNA, World Nuclear Association, August 2012, “US Nuclear Power Policy,” http://www.world-nuclear.org/info/inf41\_US\_nuclear\_power\_policy.html

Public opinion regarding nuclear power has generally been fairly positive, and has grown more so as people have had to think about security of energy supplies. Different polls show continuing increase in public opinion favourable to nuclear power in the USA. More than three times as many strongly support nuclear energy than strongly oppose it. Two-thirds of self-described environmentalists favour it. A May 2008 survey (N=2925) by Zogby International showed 67% of Americans favoured building new nuclear power plants, with 46% registering strong support; 23% were opposed10. Asked which kind of power plant they would prefer if it were sited in their community, 43% said nuclear, 26% gas, 8% coal. Men (60%) were more than twice as likely as women (28%) to be supportive of a nuclear power plant. A March 2010 Bisconti-GfK Roper survey showed that strong public support for nuclear energy was being sustained, with 74% in favour of it11. In particular, 87% think nuclear will be important in meeting electricity needs in the years ahead, 87% support licence renewal for nuclear plants, 84% believe utilities should prepare to build more nuclear plants, 72% supported an active federal role in encouraging investment § Marked 09:47 § in "energy technology that reduces greenhouse gases", 82% agree that US nuclear plants are safe and secure, 77% would support adding a new reactor at the nearest nuclear plant, and 70% say that USA should definitely build more plants in the future. Only 10% of people said they strongly opposed the use of nuclear energy. In relation to recycling used nuclear fuel, 79% supported this (contra past US policy), and the figure rose to 85% if "a panel of independent experts" recommended it. Although 59% were confident that used reactor fuel could be stored safely at nuclear power plant sites, 81% expressed a strong desire for the federal government to move used nuclear fuel to centralised, secure storage facilities away from the plant sites until a permanent disposal facility is ready. Half of those surveyed considered themselves to be environmentalists. A February 2011 Bisconti-GfK Roper survey showed similar figures, and that 89% of Americans agree that all low-carbon energy sources – including nuclear, hydro and renewable energy – should be taken advantage of to generate electricity while limiting greenhouse gas emissions. Just 10% disagreed. Also some 84% of respondents said that they associate nuclear energy "a lot" or "a little" with reliable electricity; 79% associate nuclear energy with affordable electricity; 79% associate nuclear energy with economic growth and job creation; and 77% associate nuclear energy and clean air.

#### No link uniqueness—greens are already mad at Obama but they are voting for him anyway

Politico 6-18-2012, by Darren Samuelsohn, “Greens give Obama wilting enthusiasm,”

http://dyn.politico.com/printstory.cfm?uuid=A89E603A-7C5C-4E57-9DB8-FB3AE331776F

Environmentalists are furious at President Barack Obama — he failed on cap and trade, his energy message has turned into the more GOP-friendly “all of the above” and he’s all but done talking about global warming.¶ But he’s racking up the endorsements anyway.¶ This is life for Democratic-aligned interest groups in the 2012 presidential campaign — Obama’s term has been full of disappointments, but it’s a tight election and there’s fear of just how opposed to their agendas Mitt Romney would be. So the message is simple: Shut up and fall in line.¶ The latest gripe comes via the administration’s approach to the Earth Summit that starts Wednesday in Rio de Janeiro.¶ Secretary of State Hillary Clinton is going, but with 130 countries sending their presidents and prime ministers, greens see her presence as the perfect metaphor of Obama’s interest and commitment falling short.¶ And it’s a fresh reminder of just how little they’ve got to show for the first 3½ years of the Obama presidency — other leaders are coming with plans and records but Clinton is coming with promises and talk.¶ Obama aides insist the United States is making strides as the biggest development donor in the world. Obama’s decision not to go to Rio, they add, shouldn’t be seen as a snub.¶ “Look, I am not able to speak to the president’s schedule, but we are coming at a level which is quite comparable to a great many other countries,” Todd Stern, the top U.S. climate envoy, told reporters last week.¶ All that history explains Obama’s less-than-gushing endorsements from the Sierra Club, League of Conservation Voters, Environment America and Clean Water Action.¶ “Elections are about choices, and this choice was clear and simple both because President Obama understands why we need to take action and just as important, a President Romney would be the first climate denier president in our nation’s history,” said LCV President Gene Karpinski.¶ Karpinski pointed to upcoming Environmental Protection Agency moves to finalize standards for new power plants and fuel economy, identifying them as key accomplishments of Obama’s global warming agenda. “Those are the real decisions that cut carbon pollution,” he said.¶ Sierra Club Executive Director Michael Brune said his group “is proud to endorse President Obama” and would “work hard to give the president a mandate to continue to protect our air and water and accelerate the transition to clean energy in a second term.”¶ “We see stark differences between Romney and the president on climate and nearly every environmental issue, and we hope the president will accentuate those differences as the campaign progresses,” Brune added.

#### NRC will issue licenses for large reactors before the election

Mark Peters, deputy laboratory director for programs at Argonne National Laboratory, "The Future of Nuclear Energy," 6-25-2012, http://www.fas.org/blog/pir/2012/06/25/the-future-of-nuclear-energy/

NUCLEAR ENERGY SINCE THE LATE 1970s¶ Although the power of the “peaceful atom” was initially welcomed as a generation source that would provide electricity “too cheap to meter,” the economics of the industry were upended after the oil crisis of 1973-74. With the national economy stagnant and interest rates as high as 20 percent, the cost of building new nuclear capacity spiked from an average of $161/kW in 1968-1971 to $1,373/kW in 1979-84.[1] During the same period, U.S. environmentalists and other opponents of nuclear energy were galvanized by the highly publicized partial core meltdown at the Three Mile Island plant in Pennsylvania, which caused the release of small amounts of radioactive gases. The combination of extraordinary costs and public opposition brought U.S. nuclear power plant construction to a halt. After 1978, no new units were ordered for more than 30 years,[2] although power uprates and license extensions for many existing plants have been granted since then. (Work began recently on preparation for new reactors at the Vogtle nuclear plant site in Georgia; the Nuclear Regulatory Commission (NRC) is expected to issue the combined construction and operating license for the new reactors by the end of this year.)

#### No link – plan doesn’t happen till after the election

David Lightman and William Douglas 9-21-2012, “Unproductive Congress breaks until after November election”, http://www.adn.com/2012/09/20/2633147/unproductive-congress-breaks-until.html\_

Lawmakers spent Thursday pointing fingers and charging opponents with cynical political posturing. Among Congress' last decisions was a characteristic 2012 judgment: Punt action until later. It will let the farm bill, a broad measure that sets the nation's agriculture and food and nutrition assistance policies, expire Sept. 30.¶ Congress also exits without any serious effort to edge away from the "fiscal cliff," the prospect of economy-damaging budget chaos if it doesn't act by year's end. Bush-era tax cuts are due to expire, and automatic spending cuts will take effect unless alternatives are passed.¶ The public is noticing, as the legislative failures stir uncertainty and further roil an already-weak economy. This Congress' approval ratings were stuck at 13 percent in a Gallup survey Sept. 6-9, the lowest the pollster has ever logged this late in an election year since such measurements began in 1974.¶ Yet lawmakers are slinking out of town, after a September session that was on and off for less than two weeks, following a summer recess that ran from Aug. 3 to Sept. 10. Congress is expected to return Nov. 13.

#### Other factors cancel each other out – only the economy matters

Mano Singham, PHD, theoretical physicist and director of UCITE, at U Cleveland, 3-8-2012, “What really matters in predicting presidential election outcomes,” Free Thoughts Blog, http://freethoughtblogs.com/singham/2012/03/08/what-really-matters-in-predicting-presidential-election-outcomes/

A political scientist colleague of mine who tracks these things closely says that what they look at are markers of the state of the economy. The best predictor of presidential elections is the change in real disposable income and the GDP. Since there is usually a six-month lag in these numbers filtering down to voters, the figures that come in starting around May will give us a good indication of which way the election will go in November, largely irrespective of the candidates and the issues. Figures like unemployment do not matter so much because most people are employed and so it does not affect them directly. This seems counterintuitive. Surely the GRAGGS (guns, race, abortion, gays, god, sex) issues that occupy so much time and space and arouse so much passion must influence the way people vote? But apparently they are not very good as predictors. I am guessing here but suspect that it is because most people’s views on these are fixed and thus the debates have little chance of changing the way people vote and merely serve to stoke the intensity of their feelings. And for those who can be swayed, the effects are random and largely cancel each other out, in that for every undecided voter who decides to vote for the Democrat because he or she is disturbed by the contraception uproar, there is likely another who it drives to the Republican camp.

## 2AC REE

#### No REE shortage – high supply and low China demand

Eric Onstad, staff writer, 9-19-2012, “Analysis: Rare earth prices to erode on fresh supply, China,” Reuters, http://www.reuters.com/article/2012/09/19/us-rareearths-outlook-idUSBRE88I0O020120919

(Reuters) - Prices of rare earth elements, which tumbled after a speculative bubble burst last year, are likely to erode further as new supplies hit the market and exports edge higher from dominant producer China due to weak demand at home. Prices of the 17 elements used in technologies such as smartphones and hybrid cars soared last year by hundreds of percent after China clamped down on exports. Hot money flowed into an illiquid sector but later departed, causing a crash. Lanthanum, used in rechargeable batteries for hybrid autos and in night-vision goggles, rocketed 26-fold from $5.15 a kg in January 2010 to a peak of $140 in June 2011. Although it has slid to $20.50, the price is still well above earlier lows. The market has steadied in recent months, but new output from U.S. Molycorp (MCP.N) and Australia's Lynas Corp (LYC.AX) is likely to pressure prices, especially those of "light" rare earths which are not as scarce as their "heavy" cousins. Weaker economic growth in China is also weighing on the market since the world's second largest economy not only produces over 90 percent of global rare earths, but is the biggest consumer of the materials. "Prices will continue to drop so long as Chinese GDP continues to face downward pressures on the manufacturing side," said Michael Silver, chief executive of American Elements, which buys rare earths from China. China's slowdown - rather than a trade complaint filed by Western nations - is expected to prompt some relaxation of Beijing's tough export controls, Silver added. In August, China announced new export quotas on rare earth elements (REE), which increased the yearly figure by 2.7 percent. "This is the first time in five years that the REE quota has increased and is the highest in three years, which is seen as a slight negative as excess supply would put pressure on prices," analyst Carolyn Dennis of Toronto-based Dundee Capital Markets said in a note to clients.

#### Double-bind either

#### No link to the aff since they haven’t read a card about nuclear or

#### All the clean tech investment their card is talking about thumps the plan

#### Multiple alt causes and supply is sufficient

Marc Humphries, specialist in Energy Policies for Congressional Research Service, 6-8-2012, “Rare Earth Elements: The Global Supply Chain,” CRS, http://www.fas.org/sgp/crs/natsec/R41347.pdf

Some of the major end uses for rare earth elements include use in automotive catalytic converters, fluid cracking catalysts in petroleum refining, phosphors in color television and flat panel displays (cell phones, portable DVDs, and laptops), permanent magnets and rechargeable batteries for hybrid and electric vehicles, and generators for wind turbines, and numerous medical devices. There are important defense applications, such as jet fighter engines, missile guidance systems, antimissile defense, and space-based satellites and communication systems. World demand for rare earth elements is estimated at 136,000 tons per year, with global production around 133,600 tons in 2010. The difference is covered by previously mined aboveground stocks. World demand is projected to rise to at least 185,000 tons annually by 2015. Additional mine capacity at Mt. Weld Australia is expected to come onstream in 2012, to help close the raw materials gap in the short term. Other new mining projects could easily take 10 years to reach production. In the long run, however, the USGS expects that global reserves and undiscovered resources are large enough to meet demand.

#### Surplus soon

Amar Toor, journalist, 5-5-2011, “Global Rare Earth Supply Deficit Should Turn Into a Surplus by 2013, Goldman Sachs Says” WSJ, http://www.engadget.com/2011/05/05/global-rare-earth-supply-deficit-should-turn-into-a-surplus-by-2/

It looks like rare earth elements are getting slightly less rare. According to a research note released by Goldman Sachs today, the world's rare earth supply deficit will probably reach its apex this year, before converting into a surplus by 2013. Goldman's analysts constructed their projections based on evidence that many Western companies have begun building their own mines, in response to China's overwhelming market dominance. Today, the People's Republic produces about 90-percent of the world's rare earth minerals -- a group of 17 elements that are used to manufacture many of the flat screen TVs, hybrids and cellphones we've come to know and love. Over the course of the past few years, China has only consolidated its hold on the industry, thanks to economic policies aimed at nationalizing private mines and implementing restrictive export quotas. As a result, global rare earth prices have skyrocketed, forcing mining companies in the US and elsewhere to look inward and harvest their own deposits. The only downside, however, is that even if global supply spills into a surplus within the next two years, prices probably won't cool down until 2015. But at least the horizon looks brighter than it has in recent months.

#### The SIA evidence is terrible – it’s talking about helium

#### Oversupply of hafnium – nuclear increases supply and doesn’t rely on it

Mineral Commodity Summaries, Jan. 1996, “ZIRCONIUM AND HAFNIUM” http://minerals.usgs.gov/minerals/pubs/commodity/zirconium/zircomcs96.pdf

Availability of hafnium continued to exceed supply. Surpluses were stockpiled in the form of hafnium oxide. The¶ demand for nuclear-grade zirconium metal, the production of which necessitates hafnium’s removal, produces more¶ hafnium than can be consumed by the metal’s uses….Silver-cadmium-indium control rods are used in lieu of hafnium at numerous nuclear power plants. Zirconium can be¶ used interchangeably with hafnium in certain superalloys; in others, only hafnium produces the desired or required¶ grain boundary refinement.

#### High taxes doom US semi conductor industry

Dewey & LeBoeuf, leading global law firm providing clients with both local and cross-border solutions, more than 1,100 lawyers in 26 offices in 15 countries, March 2009, “MAINTAINING AMERICA’S COMPETITIVE EDGE: GOVERNMENT POLICIES AFFECTING SEMICONDUCTOR INDUSTRY R&D AND MANUFACTURING ACTIVITY,” Report prepared for the Semiconductor Industry Association, March, <http://www.choosetocompete.org/downloads/Competitiveness_White_Paper.pdf>

Further tax reductions abroad make U.S. burden heavier. U.S. competitiveness as an investment location for semiconductor firms is further undermined by substantial tax and financial incentives widely available to semiconductor companies locating abroad. Investment location decisions are not made solely based on the availability of tax and related investment incentives. Proximity to the customer and market size tied to purchasing power of the domestic population, fit with the multinational’s global supply chain, and certain other factors critical to semiconductor companies, such as intellectual property protection and the ability to influence global-standards-setting activities, all factor into the decision-making process§ Marked 17:29 § . However, when other factors in the decisionmaking process are roughly equal and when a firm has already fully exploited its domestic market, tax and other financial incentives are critical determinants in the decision whether and where to locate overseas. As ties binding U.S. semiconductor manufacturers to the United States are frayed and attenuated, these government incentives overseas gain in importance and accelerate the push to locate overseas.

#### Manufacturing is a larger internal to the economy – need manu to build the superconductors anyway

#### No impact – they aren’t rare and China doesn’t control supply

Stephen Robert Morse, writer, multimedia journalist, producer, digital strategist, and entrepreneur, 9-27-2012, “China's Monopoly on Rare Earth Mining and Exports Erodes,” The Atlantic, http://www.theatlantic.com/sponsored/bank-of-america/archive/2012/09/chinas-monopoly-on-rare-earth-mining-and-exports-erodes/262938

What do your iPhone, your flat-screen TV, and your Toyota Prius have in common? None of these objects could be built without rare earth materials--also known as rare earth metals or rare earths. They are a collection of seventeen elements on the periodic table that you had to memorize in high school chemistry class, and they are required components of many everyday technologies that we can't live without. But these elements are not rare, and are in fact found all over the world. China possesses approximately 23% of the world's rare earth deposits, and because mining these elements in China became efficient and cheap during the 1990s and 2000s, China dominated the world's rare earth production and distribution, gaining a market share upward of 95%. China made a series of policy decisions in 2009 and 2010 that had far-reaching geopolitical and economic effects. It decided to significantly reduce its export quotas of these metals. China would use more rare earths in its own markets, while significantly driving up the prices of these metals globally due to the lack of supply. This shift sparked the creation of companies all over the world--in the United States, India, Malaysia, Australia, Vietnam, and more--that are mining for these metals to eliminate a reliance on the Chinese monopoly. However, the decline in Chinese export prices increase was short-lived. As mines have been constructed and production has started around the world, it became clear that the rare earths boom was a bubble, in part because the word "rare" is a misnomer, and the materials can be found with relative ease.