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### 1AC SMR Markets adv

#### Domestic and international SMRs inevitable- Manufacturing leadership key to market share

Tucker 2011 (William Tucker, nuclear energy researcher and author of Terrestrial Energy: How Nuclear Power Will Lead the Green Revolution and End America's Energy Odyssey, March 2011, “America's Last Nuclear Hope,” American Spectator, http://spectator.org/archives/2011/03/21/americas-last-nuclear-hope/print)

That America is going to miss the revival of nuclear power that is reaching into the remotest corners of the globe is now almost a foregone conclusion. While the rest of the world is discovering what will undoubtedly be the principal source of power by the end of the 21st century, Americans are preoccupied with how many picocuries of tritium are leaking out of Vermont Yankee or whether we'll ever get around to deciding what to do with Yucca Mountain. There are 60 new reactors under construction around the world in countries as diverse as Brazil, Argentina, Lithuania, India, and Sri Lanka. Twenty are being built in China alone. Kenya, Indonesia, Morocco, Bangladesh -- all have entered into agreements with one provider nation or another to begin plans on their own nuclear program.¶ Thirty years ago, the big three American companies -- General Electric, Westinghouse, and Babcock & Wilcox -- dominated the international market, building reactors in Europe and Asia. Today the field is completely dominated by foreign giants. Areva, 80 percent owned by the French government, is building in China, India, and Finland. Westinghouse, bought by Toshiba in 2008, has projects all around the globe. General Electric, still in the field but running in last place, recently partnered with Hitachi in the hope of reviving its fortunes. Russia's Rosatom has deals with Vietnam, India, Egypt, Brazil, and Venezuela. The biggest shock came when the United Arab Emirates put out bids to build four reactors in the oil-rich Persian Gulf. Areva and Westinghouse figured to be the contenders but both were upended by Korea, which only started building its own reactors five years ago. The Koreans won a $20 billion contract in late 2009, the largest international construction job in history. Yet all this will change once again when China enters the international market with its own design (reverse-engineered from Westinghouse) somewhere around 2013. France, which prides itself on being 80 percent nuclear, is already fearful that it will be closed out of the market by the rising Asian competition. So how can America possibly fit into the highly competitive race to provide what is surely going to be the dominant energy source of the 21st century? Believe it or not, we still have a chance -- with small reactors.¶ LAST MARCH, in an op-ed for the Wall Street Journal in which he praised small modular reactors (SMRs) as "America's New Nuclear Option," Secretary of Energy Steven Chu acknowledged that America is in danger of falling behind other countries. "Our choice is clear," he wrote. "Develop these technologies today or import them tomorrow." In fact, America is the only major nuclear country that does not even have the capacity to forge the three-story steel vessel heads at the heart of large reactors and will have to import them as well. But Chu saw an opportunity in the new small designs. "If we can develop this technology in the U.S. and build these reactors with American workers, we will have a key competitive edge."

**DOD key first mover- Guarantees market leadership**

**Loudermilk 2011** (Micah J. Loudermilk is a Research Associate for the Energy & Environmental Security Policy program with the Institute for National Strategic Studies at National Defense University, May 31, 2011, “Small Nuclear Reactors and US Energy Security: Concepts, Capabilities, and Costs,” Journal of Energy Security, http://www.ensec.org/index.php?option=com\_content&view=article&id=314:small-nuclear-reactors-and-us-energy-security-concepts-capabilities-and-costs&catid=116:content0411&Itemid=375)

Path forward: Department of Defense as first-mover¶ Problematically, despite the immense energy security benefits that would accompany the wide-scale adoption of small modular reactors in the US, with a difficult regulatory environment, anti-nuclear lobbying groups, skeptical public opinion, and of course the recent Fukushima accident, the nuclear industry faces a tough road in the battle for new reactors. While President Obama and Energy Secretary Chu have demonstrated support for nuclear advancement on the SMR front, progress will prove difficult. However, a potential route exists by which small reactors may more easily become a reality: the US military.¶ The US Navy has successfully managed, without accident, over 500 small reactors on-board its ships and submarines throughout 50 years of nuclear operations. At the same time, serious concern exists, highlighted by the Defense Science Board Task Force in 2008, that US military bases are tied to, and almost entirely dependent upon, the fragile civilian electrical grid for 99% of its electricity consumption. To protect military bases’ power supplies and the nation’s military assets housed on these domestic installations, the Board recommended a strategy of “islanding” the energy supplies for military installations, thus ensuring their security and availability in a crisis or conflict that disrupts the nation’s grid or energy supplies.¶ DOD has sought to achieve this through decreased energy consumption and renewable technologies placed on bases, but these endeavors will not go nearly far enough in achieving the department’s objectives. However, by placing small reactors on domestic US military bases, DOD could solve its own energy security quandary—providing assured supplies of secure and constant energy both to bases and possibly the surrounding civilian areas as well. Concerns over reactor safety and security are alleviated by the security already present on installations and the military’s long history of successfully operating nuclear reactors without incident.¶ Unlike reactors on-board ships, small reactors housed on domestic bases would undoubtedly be subject to Nuclear Regulatory Commission (NRC) regulation and certification, however, with strong military backing, adoption of the reactors may prove significantly easier than would otherwise be possible. Additionally, as the reactors become integrated on military facilities, general fears over the use and expansion of nuclear power will ease, creating inroads for widespread adoption of the technology at the private utility level. Finally, and perhaps most importantly, action by DOD as a “first mover” on small reactor technology will preserve America’s badly struggling and nearly extinct nuclear energy industry. The US possesses a wealth of knowledge and technological expertise on SMRs and has an opportunity to take a leading role in its adoption worldwide. With the domestic nuclear industry largely dormant for three decades, the US is at risk of losing its position as the global leader in the international nuclear energy market. If the current trend continues, the US will reach a point in the future where it is forced to import nuclear technologies from other countries—a point echoed by Secretary Chu in his push for nuclear power expansion. Action by the military to install reactors on domestic bases will guarantee the short-term survival of the US nuclear industry and will work to solidify long-term support for nuclear energy.¶ Conclusions¶ In the end, small modular reactors present a viable path forward for both the expansion of nuclear power in the US and also for enhanced US energy security. Offering highly safe, secure, and proliferation-resistant designs, SMRs have the potential to bring carbon-free baseload distributed power across the United States. Small reactors measure up with, and even exceed, large nuclear reactors on questions of safety and possibly on the financial (cost) front as well. SMRs carry many of the benefits of both large-scale nuclear energy generation and renewable energy technologies. At the same time, they can reduce US dependence on fossil fuels for electricity production—moving the US ahead on carbon dioxide and GHG reduction goals and setting a global example. While domestic hurdles within the nuclear regulatory environment domestically have proven nearly impossible to overcome since Three Mile Island, military adoption of small reactors on its bases would provide energy security for the nation’s military forces and may create the inroads necessary to advance the technology broadly and eventually lead to their wide-scale adoption.

#### China and Russia will spread dangerous SMRs globally- Causes prolif- US tech solves and is modeled

Ferguson 2010 (Dr. Charles D. Ferguson, President of the Federation of American Scientists, Adjunct Professor in the Security Studies Program at Georgetown University and Adjunct Lecturer in the National Security Studies Program at the Johns Hopkins University, May 19, 2010, Statement before the House Committee on Science and Technology for the hearing on Charting the Course for American Nuclear Technology: Evaluating the Department of Energy’s Nuclear Energy Research and Development Roadmap, http://www.fas.org/press/\_docs/05192010\_Testimony\_HouseScienceCommHearing%20.pdf)

The United States and several other countries have considerable experience in building and operating small and medium power reactors. The U.S. Navy, for example, has used small power reactors since the 1950s to provide propulsion and electrical power for submarines, aircraft carriers, and some other surface warships. China, France, Russia, and the United Kingdom have also developed nuclear powered naval vessels that use small reactors. Notably, Russia has deployed its KLT-40S and similarly designed small power reactors on icebreakers and has in recent years proposed building and selling barges that would carry these types of reactors for use in sea-side communities throughout the world. China has already exported small and medium power reactors. In 1991, China began building a reactor in Pakistan and started constructing a second reactor there in 2005. In the wake of the U.S.-India nuclear deal, Beijing has recently reached agreement with Islamabad to build two additional reactors rated at 650 MWe.2¶ One of the unintended consequences of more than 30 years of sanctions on India’s nuclear program is that India had concentrated its domestic nuclear industry on building small and medium power reactors based on Canadian pressurized heavy water technology, or Candu-type reactors. Pressurized heavy water reactors (PHWRs) pose proliferation concerns because they can be readily operated in a mode optimal for producing weapons-grade plutonium and can be refueled during power operations. Online refueling makes it exceedingly difficult to determine when refueling is occurring based solely on outside observations, for example, through satellite monitoring of the plant’s operations. Thus, the chances for potential diversion of fissile material increase. This scenario for misuse underscores the need for more frequent inspections of these facilities. But the limited resources of the International Atomic Energy Agency have resulted in a rate of inspections that are too infrequent to detect a diversion of a weapon’s worth of material.3 The opening of the international nuclear market to India may lead to further spread of PHWR technologies to more states. For example, last year, the Nuclear Power Corporation of India, Ltd. (NPCIL) expressed interest in selling PHWRs to Malaysia.4 NPCIL is the only global manufacturer of 220 MWe PHWRs. New Delhi favors South-to-South cooperation; consequently developing states in Southeast Asia, sub-Saharan Africa, and South America could become recipients of these technologies in the coming years to next few decades. Many of these countries would opt for small and medium power reactors because their electrical grids do not presently have the capacity to support large power reactors and they would likely not have the financial ability to purchase large reactors.¶ What are the implications for the United States of Chinese and Indian efforts to sell small and medium power reactors? Because China and India already have the manufacturing and marketing capability for these reactors, the United States faces an economically competitive disadvantage. Because the United States has yet to license such reactors for domestic use, it has placed itself at an additional market disadvantage. By the time the United States has licensed such reactors, China and India as well as other competitors may have established a strong hold on this emerging market.¶ The U.S. Nuclear Regulatory Commission cautioned on December 15, 2008 that the “licensing of new, small modular reactors is not just around the corner. The NRC’s attention and resources now are focused on the large-scale reactors being proposed to serve millions of Americans, rather than smaller devices with both limited power production and possible industrial process applications.” The NRC’s statement further underscored that “examining proposals for radically different technology will likely require an exhaustive review” ... before “such time as there is a formal proposal, the NRC will, as directed by Congress, continue to devote the majority of its resources to addressing the current technology base.”6 Earlier this year, the NRC devoted consideration to presentations on small modular reactors from the Nuclear Energy Institute, the Department of Energy, and the Rural Electric Cooperative Association among other stakeholders.7 At least seven vendors have proposed that their designs receive attention from the NRC.8¶ Given the differences in design philosophy among these vendors and the fact that none of these designs have penetrated the commercial market, it is too soon to tell which, if any, will emerge as market champions. Nonetheless, because of the early stage in development, the United States has an opportunity to state clearly the criteria for successful use of SMRs. But because of the head start of China and India, the United States should not procrastinate and should take a leadership role in setting the standards for safe, secure, and proliferation-resistant SMRs that can compete in the market. Several years ago, the United States sponsored assessments to determine these criteria.9 While the Platonic ideal for small modular reactors will likely not be realized, it is worth specifying what such an SMR would be. N. W. Brown and J. A. Hasberger of the Lawrence Livermore National Laboratory assessed that reactors in developing countries must:¶ • “achieve reliably safe operation with a minimum of maintenance and supporting infrastructure;¶ • offer economic competitiveness with alternative energy sources available to the candidate sites;¶ • demonstrate significant improvements in proliferation resistance relative to existing reactor systems.”10¶ Pointing to the available technologies at that time from Argentina, China, and Russia, they determined that “these countries tend to focus on the development of the reactor without integrated considerations of the overall fuel cycle, proliferation, or waste issues.” They emphasized that what is required for successful development of an SMR is “a comprehensive systems approach that considers all aspects of manufacturing, transportation, operation, and ultimate disposal.”¶

**Prevents fast prolif**

Cook 2011 (David Cook, Analyst at National Nuclear Security Administration, MPA from The Ohio State University at the John Glenn School of Public Affairs, “Slowing Atomic Arms Acquisition: More Small Modular Reactors Needed to Combat Nuclear Proliferation,” online)

Reports of Iran seeking to acquire a nuclear weapon are¶ becoming more and more prevalent. Numerous countries are seeking nuclear power and¶ it is vital that the world not export¶ nuclear power to countries that would use¶ that nuclear technology for nefarious ends. The production of nuclear energy, clearly presents inherent security challenges because nuclear material may be used to make nuclear weapons. Countries often defy international norms and pressures that attempt to stop their nuclear proliferation efforts. It is vitally important that these countries not nuclear proliferate. Legislators can take a realistic precaution to ensure that nuclear power used is used for safe purposes. Small modular reactors or SMRs can provide a level of security against nuclear proliferation. Small modular reactors are smaller versions of nuclear plants. These plants can be manufactured in a country that has been traditionally trusted with nuclear power like the United States and sent to other countries that are not traditionally trusted with nuclear power. Legislators need to ensure that more SMR are financed and that the United States takes the lead in the manufacturing process of SMRS to guarantee that the nuclear material needed to produce nuclear energy is safe and secure. Problem? More¶ Countries Are Seeking Nuclear Power¶ More than 80 countries receive technological assistance from the **I**nternational¶ **A**tomic **E**nergy **A**gency. 1 This number is likely to increase as the world turns to nuclear power to meet rising energy needs. While¶ the stalled in¶ America, other countries are turning to nuclear power. As of 2011, there are over 60 nuclear reactors under construction in 14 countries. 2¶ The problem with all of the sudden interest in nuclear power is that all nuclear technology and materials are in inherently “dual use.” Nuclear technology and materials¶ can be used to either to produce energy or enhance a country’s ability to produce nuclear weapons. 3Policy Alternatives¶ The current system that utilizes international inspectors and holding nations to a nuclear non-proliferation treaty is working for a majority of countries, however, this system does not guarantee that countries will not nuclear proliferate. The UN has brought sanctions against Iran for violating the NPT, but these sanctions are not as effective as international leaders hope. A variety of options are available to governments to ensure that countries do not nuclear proliferate.¶ One option is to build more Small Modular Reactors in countries that are newer to the production of nuclear energy. Small Modular Reactors are much smaller than traditional nuclear reactors. The nuclear material is secured safely within these plants and cannot be accessed by anyone once the plant has been manufactured. However, these units may not be made quickly enough and might not provide enough energy to meet the world energy needs.4 Another option is for the IAEA to provide more oversight and inspectors at the nuclear facilities in countries. On the other hand, the IAEA inspectors may not be welcomed in the offending countries and this policy option may not be feasible.¶ Recommendation Finance and Build Small¶ Modular Reactors¶ Legislators can help to ensure the safety of the United States by passing legislation that provides for the financing and building of small modular reactors. These units can be manufactured in countries that have been traditionally trusted with nuclear power and sent to other countries that are not traditionally trusted with nuclear power.¶ SMRs Contain Numerous Safety Features: The reactors contain less nuclear material than traditional power plants, inherently reducing the overall nuclear proliferation risk.¶ SMRS can be built at a factory and the construction of these plants can be overseen safely in a country with a trusted nuclear power background.¶ Light-water SMRs could cool the reactor core in the event of a meltdown even if the power goes out.¶ Nuclear proliferation continues to be a concern to the United States as more countries are acquiring nuclear energy technologies to meet rising energy demands. Numerous countries are seeking nuclear power and it is vital that world not export nuclear power to countries that would¶ use that nuclear technology for nefarious ends. Countries often defy international norms and pressures that attempt to stop their nuclear proliferation efforts.¶ The production and implementation of SMRs to the world nuclear security environment can help to ensure the safety of the United States and the world. Countries all over the globe are turning to nuclear power to meet energy needs in their respective countries and SMRs can help to ensure that nuclear energy is being used for the betterment of the world. It is imperative that the United States takes the lead in ensuring that more SMRs are built and built safely.

#### Ensures global war

Heisbourg 2012 (Francois Heisbourg, chairman of the council of the Geneva Centre for Security Policy and of the International Institute for Strategic Studies, March 4, 2012, “Nuclear Proliferation- Looking Back, Thinking Ahead: How Bad would the Further Spread of Nuclear Weapons Be?,” http://www.npolicy.org/article\_file/Nuclear\_Proliferation\_-\_Looking\_Back\_Thinking\_Ahead\_How\_Bad\_Would\_the\_Further\_Spread\_of\_Nuclear\_Weapons\_Be.pdf)

The problem with this reassuring reading of the past is that it is not entirely true. Yes, the NPT had a major material effect by gradually making non nuclear the new normal. Yes again, defense guarantees by the US weaned Germany, Italy (13), South Korea, Taiwan and even neutral Sweden away from the nuclear road, followed by the US-French-British assurances to post-Soviet Ukraine. Yes too, various levels of coercion worked in Iraq, Libya and Syria. But no, the practice of even the most ‘classical’ bilateral deterrence was not nearly as reassuring as the mainstream narrative inherited from the Cold War would have it. Nor can we consider that our elements for empirical judgment as methodologically satisfactory in terms of their breadth and depth. These two negatives will be examined in turn.¶ Nuclear archives, as other sensitive governmental archives, open up usually after an interval of decades and even then with varying levels of culling and redaction. Even oral histories tend to follow this pattern, as ageing witnesses feel freer to speak up. Hence a paradox: when the Soviet- American nuclear confrontation was central to our lives and policies during the Cold War, we didn’t how bad things really where; now that we are beginning to know, there is little public interest given the disappearance of the East-West contest. Yet there are lessons of general interest which can be summarized as follows: 1) the Cuban missile crisis brought us much closer to the brink than the acute sense of danger which prevailed at the time, for reasons which are germane to the current situation: massive failures of intelligence on Soviet nuclear preparations and dispositions in Cuba, notably on tactical nukes and on the operational readiness of a number of IRBMs and their warheads; dysfunctional or imperfect command and control arrangements (notably vis à vis Soviet submarines), unintentionally mixed signals on each antagonist’s actions). These are effectively laid out in Michael Dobb’s book, “One Minute to Midnight”(14). 2) the safety and security of nuclear forces are subject to potentially calamitous procedural, technical or operational mishaps and miscalculations, somewhat along the lines of what applies to related endeavors (nuclear power and aerospace). Scott Sagan in his “Limits of Safety”(15) provides compelling research on the American Cold War experience. It would be interesting to have a similar treatment on the Soviet experience…Although it can be argued that today’s nuclear arsenals are much smaller and easier to manage reliable, and that the technology for their control has been vastly improved, several facts remain:¶ the US has continued to witness serious procedural lapses in the military nuclear arena (16); the de-emphasis of the importance of nuclear weapons in the US force structure is not conducive to treating them with the respect which is due to their destructive power; other nuclear powers do not necessarily benefit from the same technology and learning curves as the older nuclear states, and notably the US; cheek-to-jowl nuclear postures, which prevailed in the Cuban missile crisis and which help explain why World War III nearly occurred, and which characterize India and Pakistan today.¶ Despite the dearth of detail on Indian and Pakistani nuclear crisis management, we know that the stability of nuclear deterrence between India and Pakistan is by no means a given, with serious risks occurring on several occasions since the mid-1980s(17).¶ At another level of analysis, we have to recognize the limits of the database on which we ground our policies on nonproliferation. The nuclear age, in terms of operationally usable devices, began in 1945, less than seventy years, less than the age of an old man. The fact that there has been no accidental or deliberate nuclear use during that length of time is nearly twice as reassuring as the fact that it took more than thirty years (18) for a nuclear electricity generating plant to blow up, in the form of the Chernobyl disaster of 1986. But given the destructive potential of nuclear weapons, twice as much reassurance (in the form of no use of nuclear weapons for close to seventy years) is probably not good enough. Furthermore, the Chernobyl disaster involved the same sort of errors of judgment, procedural insufficiencies and crisis-mismanagement visible in Scott Sagan’s book, not only or even mainly, flawed design choices: inadvertence at work, in other words of the sort which could prevail in a time-sensitive, geographically constrained Indo- Pakistani or Middle Eastern conflict. Give it another seventy years to pass judgment?¶ The same empirical limits apply to the number of actors at play: we have simple bipolar (US-USSR/Russia or India/Pakistan) and complex bipolar (US/France/UK/NATO-Soviet Union/Russia) experience; we’ve had US-Soviet-Chinese or Sino- Indian-Pakistani tripolarity; and we’ve had a number of unipolar moments (one nuclear state vis à vis non-nuclear antagonists). But we mercifully have not had to deal with more complex strategic geometries –yet- in the Middle East or East Asia. We only know what we know, we don’t know what we don’t know.¶ A historical narrative which is not reassuring and an empirical record that is less than compelling need to inform the manner in which we approach further proliferation.¶ PROLIFERATION PUSH AND PULL¶ Ongoing proliferation differs from that of the first halfcentury of the nuclear era in three essential ways: on the demand side, the set of putative nuclear actors is largely focused in the most strategically stressed regions of the world; on the supply side, the actual or potential purveyors of proliferation are no longer principally the first, industrialized, generation of nuclear powers; the technology involved in proliferation is somewhat less demanding than it was during the first nuclear age. Taken together, these changes entail growing risks of nuclear use.¶ Demand is currently focusing on two regions, the Middle East and East Asia (broadly defined) and involves states and, potentially, non-state actors. In the Middle East, Iran’s nuclear program is the focus of the most intense concerns. A potential consequence in proliferation terms would be to lead regional rivals of Iran to acquire nuclear weapons in term: this concern was vividly in 2007 by the then President of France, Jacques Chirac (19) who specifically mentioned Egypt and Saudi Arabia. The likelihood of such a “proliferation chain-reaction” may have been increased by President Obama’s recent repudiation of containment as an option (20): short of Iran being persuaded or forced to abandon its nuclear ambitions, the neighboring states would presumably have to contemplate security options other than a Cold War style US defense guarantee. Given prior attempts by Iraq, Syria and Libya to become nuclear powers, the probability of a multipolar nuclear Middle East has to be rated as high in case Iran is perceived as having acquired a military nuclear capability. Beyond the Middle East, the possibility of civil war in nuclear-armed Pakistan leading to state failure and the possibility of nukes falling out of the hands of an effective central government. There are historical precedents for such a risk, most notably, but not only(21)in the wake of the collapse of the Soviet Union: timely and lasting action by outside powers, such as the US with the Nunn-Lugar initiative, and the successor states themselves has prevented fissile material from falling into unauthorized hands in significant quantities. Pakistan could pose similar problems in a singularly more hostile domestic environment. As things stand, non-state actors, such as post-Soviet mafiya bosses (interested in resale potential) or Al Qaeda (22) have sought, without apparent success, to benefit from opportunities arising from nuclear disorder in the former USSR and Central Asia. Mercifully, the price Al Qaeda was ready to pay was way below the going rate (upwards of hundreds of $million) for the sorts of services provided by the A.Q.Khan network (see below)to some of his clients.¶ Although North Korea’s nuclear ambitions appear to be both more self-centered and more containable than is the case for Iran, the possibility of state collapse in combination with regional rivalry leave no room for complacency.¶ More broadly we are facing the prospect of a multipolar nuclear Middle East, linked to an uncertain nuclear Pakistan already part of a nuclear South Asia tied via China to the Korean nexus in which nuclear America and Russia also have a stake. More broadly still, such a nuclear arc-of-crisis from the Mediterranean to the Sea of Japan, would presumably imply the breakdown of the NPT regime, or at least its reversion to the sort of status it had during the Seventies, when many of its currently significant members had not yet joined (23), unloosening both the demand and supply sides of proliferation.¶ On the supply side, “old style” proliferation relied on official cooperation between first-generation nuclear or nuclearizing powers, of which the Manhattan project was a forerunner (with American, British and Canadian national contributions and multinational scientific teams), followed inter alia by post-1956 French-Israeli, post-1958 US-UK, pre- 1958 USSR-China cooperation. If India relied heavily on the “unwitting cooperation” , notably on the part of Canada and the US involved in the Atoms for Peace CIRUS research reactor, Pakistan set up the first dedicated, broad spectrum, crossborder trading network to make up for the weakness of its limited industrial base. This import-focused organization thus went beyond traditional espionage-aided efforts (as practiced by the USSR during and after the Manhattan project) or case-by-case purloining or diversion of useful material on the global market (as practiced by Israeli operatives). Even before the Pakistani network had fulfilled its primary task of supplying the national program, it began its transformation into an export-oriented venture.¶ Libya, Iran, North Korea and a fourth country which remains officially unnamed became the main outlets of what became the world’s first private-sector (albeit government originated and ,presumably, supported)proliferation company which was only wound down after strong Western pressure on Pakistan after 9/11. Although the by-now richly documented A.Q.Khan network (24) appears to have ceased to function in its previous incarnation, it has powerfully demonstrated that there is an international market for proliferation which other operators can expect to exploit. Furthermore, budding, resource-weak nuclear powers have a strong incentive to cover the cost of their investment by selling or bartering their nuclear-related assets, including delivery systems. The fruits of state-tostate cooperation between Iran, North Korea and Pakistan are clearly apparent in the close-to-identical genealogy of their nuclear-capable ballistic missiles of the No- Dong/Ghauri/Shahab families displayed in military parades and test launches. Not all such cooperation consists of televised objects.¶ Even in the absence of game-changing breakthroughs, technical trends facilitate both demand and supply-side proliferation. For the time being, the plutonium route towards the bomb remains essentially as easy and as difficult as from the earliest years of the nuclear era. Provided a country runs a (difficult-to-hide) research or a power reactor from which low-irradiated fuel can be downloaded at will (such as CANDUtype natural uranium reactors), reprocessing is a comparatively straightforward and undemanding task. Forging and machining a multiple-isotope metal which is notorious for its numerous physical states and chemical toxicity is a substantial challenge, with the companion complications of devising a reliable implosion mechanism. Nuclear testing is highly desirable to establish confidence in the end-result. Opportunities for taking the plutonium-proliferation road may increase somewhat as new techniques (such as pyro-processing) come on stream. Developments in the enriched uranium field have been more substantial in facilitating proliferation. The development of lighter and more efficient centrifuges make it easier for a state to extract enriched uranium speedily in smaller and less visible facilities. Dealing with the resulting military-level HEU is a comparatively undemanding task. The long-heralded advent of industrially effective and reliable laser enrichment technology may eventually further increase ease of access. Downstream difficulties would still remain. Although implosion-mechanisms are not mandatory, they are desirable in order both to reduce the critical mass of U235 for a nuclear explosion and to make for a lighter and smaller more-readily deliverable weapons package.¶ In sum, incremental improvements increase the risk of proliferation. However, non-state actors are not yet, and will not be on the basis of known technical trends, in a position to master the various steps of the two existing military nuclear fuel cycles, which remain the monopoly of states. Nonstate actors would need the active complicity from (or from accomplices within) states, or benefit from the windfall of state collapse, to acquire a military nuclear capability. The threat of nuclear terrorism continues to be subordinated to developments involving state actors, a remark which is not meant to be reassuring since such developments (see above) are increasingly likely as proliferation spreads to new states and as state failure threatens in the ‘arc of proliferation’ extending from the Mediterranean to North-East Asia. Furthermore, non-state actors can be satisfied with levels of nuclear reliability and performance which states could not accept. A difficult-to-deliver or fizzle-prone nuclear device would not provide a state with the level of deterrence needed to shield it from pre-emptive or retaliatory action, whereas a terrorist group would not be seeking such immunity. A road or ship-delivered imperfect device, which would be closer to a radiological bomb than to a fully-fledged atomic weapon would provide its non-state owners with immense potential. The road to a non-state device does not need to be as well-paved.¶ NUCLEAR FUTURES¶ ‘New’ lessons from a revisited past and current trends in nuclear proliferation, will tie into a number of characteristics of contemporary international relations with potentially destabilizing consequences, leading to an increasing likelihood of nuclear use. Four such characteristics will be singled out here both because of their relevance to nuclear crisis management and because of their growing role in the world system in the age of globalization:¶ - Strategic upsets¶ - Limits of imagination¶ - Unsustainable strains¶ - Radical aims¶ The 2008 French Defence and National Security White Paper (25) developed the concept of ‘ruptures stratégiques’ (strategic upsets) to describe the growing tendency of the world system to generate rapid, unexpected, morphing upsets of international security as a consequence of globalization broadly defined against the backdrop of urbanizing populations generating economic growth and environmental and resource constraints. In themselves, such upsets are not novel (see inter alia, a pandemic such as the Black Death in 1348-49, the Great Depression not to mention World Wars or indeed the major and benign strategic upset of 1989-1991) but the very nature of globalization and the relationship between human activity and the Earth’s ability to sustain them) mean more, and more frequent as well as more complex upsets. If this reading is correct –and the Great financial crisis, the Arab revolutions, the accession of China to superpower status can be mentioned as examples which followed the publication of the White paper- ,then the consequences in the nuclear arena will be twofold. First, nuclear doctrines and dispositions which were conceived under a set of circumstances (such as the Cold War or the India-Pakistan balance of power) may rapidly find themselves overtaken by events. For instance it is easier to demonstrate that US and Russian nuclear forces still visibly bear the imprint of their 1950s template than it is to demonstrate their optimal adaptation to post-post-Cold War requirements. Second, more challenges to international security and of a largely unforeseeable nature mean greater strains placed on the ability of nuclear powers to manage crises against the backdrop of their possession of nuclear weapons. In many, indeed most, cases, such ‘ruptures stratégiques’ will no doubt be handled with nuclear weapons appearing as irrelevant: hypothetical security consequences of an epidemic (such as the interhuman transmission of the H5N1 bird flu virus) or prospective conflicts resulting from climate change do not have prima facie nuclear aspects. But beyond the reminder that we don’t know that as a fact, the probability is, under the ‘rupture stratégique’ hypothesis, that there will be more occasions for putting all crisis management, including nuclear, to the test.¶ Human societies tend to lack the imagination to think through, and to act upon, what have become known as ‘black swan’ events (26): that which has never occurred (or which has happened very rarely and in a wholly different context) is deemed not be in the field of reality, and to which must be added eventualities which are denied because their consequences are to awful to contemplate. The extremes of human misconduct (the incredulity in the face of evidence of the Holocaust, the failure to imagine 9/11) bear testimony to this hard-wired trait of our species. This would not normally warrant mention as a factor of growing salience if not for the recession into time of the original and only use of nuclear weapons in August 1945. Non-use of nuclear weapons may be taken for granted rather than being an absolute taboo. Recent writing on the reputedly limited effects of the Hiroshima and Nagasaki bombs (27) may contribute to such a trend, in the name of reducing the legitimacy of nuclear weapons. Recent (and often compelling) historical accounts of the surrender of the Japanese Empire which downplay the role of the atomic bombings in comparison to early research can produce a similar effect, even if that may not have been the intention (28). However desirable it has been, the end of atmospheric nuclear testing (29) has removed for more than three decades the periodic reminders which such monstrous detonations made as to the uniquely destructive nature of nuclear weapons. There is a real and growing risk that we forget what was obvious to those who first described in 1941 the unique nature of yet-to-be produced nuclear weapons (30). The risk is no doubt higher in those states for which the history of World War II has little relevance and which have not had the will or the opportunity to wrestle at the time or ex post facto with the moral and strategic implications of the nuclear bombing of Japan in 1945.¶ Unsustainable strains are possibly the single most compelling feature of contemporary proliferation. Tight geographical constraints –with, for instance, New Delhi and Islamabad located within 300 miles of each other-; nuclear multipolarity against the backdrop of multiple, criss-crossing, sources of tension in the Middle East (as opposed to the relative simplicity of the US-Soviet confrontation); the existence of doctrines (such as India’s ‘cold start’) and force postures (such as Pakistan’s broadening array of battlefield nukes) which rest on the expectation of early use; the role of non-state actors as aggravating or triggering factors when they are perceived as operating with the connivance of an antagonist state ( in the past, the assassination of the Austrian Archduke in Sarajevo in 1914; in the future, Hezbollah operatives launching rockets with effect against Israel or Lashkar-e-Taiba commandos doing a ‘Bombay’ redux in India?) : individually or in combination, these factors test crisis management capabilities more severely than anything seen during the Cold War with the partial exception of the Cuban missile crisis. Even the overabundant battlefield nuclear arsenals in Cold War Central Europe, with their iffy weapons’ safety and security arrangements, were less of a challenge: the US and Soviet short-range nuclear weapons so deployed were not putting US and Soviet territory and capitals at risk.¶ It may be argued that these risk factors are known to potential protagonists and that they therefore will be led to avoid the sort of nuclear brinksmanship which characterized US and Soviet behavior during the Cold War in crises such as the Korean war, Berlin, Cuba or the Yom Kippur war. Unfortunately, the multiple nuclear crises between India and Pakistan demonstrate no such prudence, rather to the contrary. And were such restraint to feed into nuclear policy and crisis planning –along the lines of apparently greater US and Soviet nuclear caution from the mid-Seventies onwards-, the fact would remain that initial intent rarely resists the strains of a complex, multi-actor confrontation between inherently distrustful antagonists. It is also worth reflecting on the fact that during the 1980s, there was real and acute fear in Soviet ruling circles that the West was preparing an out-of-the-blue nuclear strike, a fear which in turn fed into Soviet policies and dispositions (31).¶ The Cold War was a set of crises and misunderstandings which came within a whisker of a nuclear holocaust; India and Pakistan’s nuclear standoff is deeply unstable not least as a result of the interaction with non-state actors; a multipolar nuclear Middle East would make the Cuban missile crisis look easy in comparison.¶ Great conflicts tend to occur when one or several of the antagonists views the status quo as sufficiently undesirable and/or unsustainable to prompt forceful pro-action. Notwithstanding widespread perceptions to the contrary, this was not the case of the USSR and the United States during the Cold War. The US had chosen a policy of containment, as opposed to roll-back, of the Soviet Empire within its limits established as a result of World War II. The Soviet Union seized targets of opportunity outside of its 1945 area of control but avoided direct confrontation with US forces. Messianic language from the USSR on the global victory of communism or from the US about the end of the Evil Empire did not take precedence over the prime Soviet concern of preserving the Warsaw Pact and the US pursuit of containment – and, no less crucially, their mutual confidence that they could achieve these aims without going to war one with the other.¶ No such generalization can be made about the Middle East, a region in which the very existence of a key state (Israel) is challenged while others have gone to war with each other (e.G.Iran-Iraq war, the Gulf War of 1990-1991), or are riven by deep internal conflicts. Actors such as Hezbollah, with its organic and functional links with Islamic Iran and Alawite Syria add to the complexities and dangers. Extreme views and actions vis à vis the strategic status quo are widely prevalent. Although the India-Pakistan relationship corresponds to something akin to the US-Soviet ‘adversarial partnership’, that does not apply to radical non-state actors prevalent in Pakistan with more or less tight links to that country’s military intelligence services (ISI, Inter-Services Intelligence). The potential for danger is compounded by the variety of such groups: the Pashtu-related Pakistani Taliban (TTP), Kashmiri-related groups, Jihadi militants from the core provinces of Punjab and Sind… Their common characteristics are extreme radicalism, high levels of operational proficiency, and shared enmity of India. Their potential for triggering a conflict between the two countries is substantial, above and beyond the intentions of government officials.

**Especially true in these regions**

**Elhefnawy 2008** (Nader Elhefnawy, PhD, Army War College, August 2008, “The Next Wave of Nuclear Proliferation,” Parameters, online)

It is inconceivable that anything like this distribution will continue in a world turning heavily to nuclear energy, a fact that has already laid the foun- dation for a broadening of production and use in East and South Asia.8 We should also expect a large-scale, rapid establishment of nuclear energy production in areas where it has been virtually absent, for example, the Middle East, sub-Saharan Africa, and Latin America. To approximate France’s current level of nuclear energy reliance, for instance, Iran alone would require roughly 18 operational reactors; Saudi Arabia, 20. More extensive substitution of nuclear energy for other sources of power, or future economic expansion (such as de- scribed above), will require a commensurate growth in the number of reactors.9¶ All of this may sound abstract, but moves in this direction are al- ready well under way. Some 40 developing nations have expressed interest in starting nuclear energy programs, and many have moved beyond vague state- ments of intentions.10 The United Arab Emirates, for instance, has already struck a deal for two reactors, the only one of 11 nations in this region (thus far) to have announced such plans.11¶ Assessing the Danger¶ As outlined above, a future in which the world as a whole turned to nuclear energy will mean not just an expansion of nuclear energy production, but substantial changes in production impacting mainland Asia, Africa, and Latin America. An assessment of the associated proliferation risk involved devolves basically into an examination of two dimensions, capabilities and intentions—what widened nuclear energy use will mean for the access of these states to nuclear weapons technology; and the impact that this new envi ronment will have on a government’s motivation to actually use that access to produce nuclear weaponry.¶ Technological Access¶ The increase in nuclear energy production described above will mean greater production, trading, and consumption of the fissile materials and other technologies that are part of the nuclear fuel cycle. The specifics differ according to reactor type, but every reactor uses uranium in the produc- tion of its fuel and produces plutonium in its waste, extractable in the fuel re- processing procedure, and in such a manner that every type of reactor poses a measure of proliferation risk.12 Gas-cooled and heavy-water reactors use natural uranium as fuel, but are ideal for producing weapons-grade plutonium. “Fast-neutron” reactors use fissile material (such as highly enriched uranium or plutonium) at the very start of their fuel cycle, and Fast Breeder Reactors in particular produce more fissile material than they consume.¶ Even Light Water Reactors (LWRs), which have been described as “proliferation-resistant” (two of which were provided to North Korea under the Agreed Framework), are no exception.13 They use low-enriched uranium, which is not useful for making weapons, but which is produced in the same en- richment process used to manufacture weapons. Additionally, low-enriched uranium can be seen as halfway to weapons grade, since it can be more rapidly enriched to the needed level than stock natural uranium. At the same time, while these reactors produce relatively smaller quantities of lower quality plu- tonium than other types, it has been estimated that a 1,000-megawatt LWR can still generate enough “weapons-usable” plutonium for up to 50 bombs a year.14¶ The response on the part of those seeking to limit proliferation has, accordingly, been to encourage as many nuclear energy users as possible not to develop the entire fuel cycle; that is, to forgo building up their own fuel en- richment and reprocessing capabilities. Instead, it is proposed that they buy fuel and reprocessing services on the world market, as proposed in the Global Nuclear Energy Partnership of February 2006. There are, however, widespread doubts about the initiative’s likely cost and effectiveness, concerns articulated in a letter signed by a number of control organizations, including the Federation of American Scientists, the Union of Concerned Scientists, and the Arms Control Association.15 Their objections, however, fail to include one important point—that states have been partly dissuaded from developing the full nuclear fuel cycle for eco- nomic reasons, a fact that may not remain operative in any massive expansion of nuclear energy use.¶ Simply put, it is cheaper for a small nuclear program to buy nuclear fuel on the world market than to build and operate the facilities required to en- rich uranium domestically. This has resulted in only eight of some 30 nuclear energy producers actually engaging in enrichment on an industrial scale.16 The same is true for fuel reprocessing facilities, especially given the relatively low cost of newly mined uranium. Accordingly, only a handful of states (Britain, France, Russia, Japan, and India) actually practice civil reprocessing.17¶ Any significant growth in nuclear energy production would change those economics. Many of today’s “small” programs would become equal in size to those now considered large-scale, and for that reason their investments in enrichment and reprocessing less impractical. Additionally, with more programs large and small operational, there would be a larger, more lucrative market for fuel production and fuel recycling services; the latter would in all likelihood grow more attractive as enlarged uranium consumption tightens supplies and drives up prices. (Indeed, as the situation currently stands, many uranium exporters not regarded as likely proliferators—including Australia and Canada—are interested in enrichment technology because enriching their uranium before export would increase profitability.)18 Certainly if ura- nium prices were to rise, there would be more interest in Fast Breeder Reac- tors, which one analyst suggests can extract more than 60 times as much energy per ton of mined ore as a “conventional” nuclear plant when operated in a closed circuit with thermal reactors and reprocessing facilities.19¶ In short, the economic incentives for states to refrain from developing the full nuclear fuel cycle will almost certainly weaken, while the particularly worrisome fast-neutron reactors will become more attractive. At the same time, the heightened dependence on nuclear energy, and the experience of en- ergy scarcity, will continue to reinforce the search for “energy independence” and “energy security,” contributing to the pressure that the nonproliferation re- gime is already experiencing, as the result of being a “ratifier” of unequal ac- cess to nuclear technology.20 In any event, such changes enormously increase the already substantial burden of monitoring and securing the storage and movement of the supplies associated with nuclear power generation, not to mention the political costs of maintaining the regime.21 Motivation¶ As outlined previously, any plausible combination of political ar- rangements and technological innovations is likely to have uneven results. Determined states are likely to find it easier to acquire the means for produc- ing fissile material, which raises the other key dimension of the issue—the motivation for acquiring these weapons in the first place.¶ Long-established research strongly indicates that the motivation to build nuclear weapons is more of a factor than simply achieving the technological capacity.22 Indeed, it is due to this excessive focus on capacity that ear- lier predictions about the speed and the extent of nuclear proliferation (which projected 25 to 50 nuclear-weapon states by the year 2000) proved wrong.23 The relative ease with which the weapons might be built is proof of this; a pro- gram to develop a minimal capability from scratch could cost as little as $500 million, less than the price of a modern warship.24¶ In short, were capacity the only issue, there would be far more nu- clear powers in the world, though of course access to the means cannot be ruled out as a factor in decisionmaking. When much of the infrastructure for developing a nuclear arsenal is already in place, as may be the case in several advanced countries, the decision to do so entails lower costs; and given the speed with which these programs can be initiated, the nations in question are also less susceptible to preventative action than countries starting from scratch.25 A particular danger is that having such facilities in place provides them with the option of diverting material from the fuel cycle for covert weapon programs.26¶ The rationale driving the shift to nuclear energy in the first place (en- ergy and climate stress) will increasingly translate into greater motivation on the part of some actors to pursue a nuclear capability. Broad economic disrup- tion is nearly certain as the result of the tightening of oil supplies and the cli- mate changes this scenario anticipates. Politically, this may translate into changes in the distribution of international power depending on individual states’ ability to cope (as with wealthier nations, or ones with energy-efficient economies), or even profit from these conditions (for instance, oil exporters); while the most vulnerable states may collapse, creating even greater problems for the international community (havens for crime, terrorism, or refugee flows).27 Intensified conflict over territory and waters rich in energy and other resources will become increasingly likely.¶ Alliances, trading relationships, and other arrangements will be in flux, and when combined with the associated anxiety and vulnerability may exacerbate a desire on the part of certain states to minimize their vulnerability. A goal which nuclear weapons have long been viewed as a cheap way of achieving. The “nuclearization” of a single state can induce a chain reaction across a region. The nuclearization of China spurred India and in turn Pakistan to follow suit, and the Argentinean and Brazilian nuclear programs fed off one another. Today the pos- sibility that a nuclear North Korea may lead South Korea or Japan to acquire nu- clear weapons is often discussed.28 In the Middle East there are signs that Saudi Arabia is reviewing its nuclear options, and a nuclear-armed Iran may encourage the Saudis and others in the region to continue down this path.29¶ With nuclear technology more widely available these actions can be taken much more rapidly and at less cost. Those pursuing this course of action will find it a simple matter to amass large stockpiles of nuclear weapons. It is also worth noting that even were the development of actual nuclear weapons to remain a rarity, “virtual arsenals” could be more common, leaving the nuclear weapons status of a longer list of countries uncertain, in many cases deliberately so, with a detrimental impact on the security environment.30

#### And extinction

Kroenig 2012 (Matthew Kroenig, Assistant Professor of Government at Georgetown University and Stanton Nuclear Security Fellow at CFR, May 26, 2012, “The History of Proliferation Optimism: Does It Have A Future?,” <http://www.npolicy.org/article.php?aid=1182&tid=30>)

Proliferation Optimism: Proliferation optimism was revived in the academy in Kenneth Waltz’s 1979 book, Theory of International Politics.[[1]](#footnote-1)[29] In this, and subsequent works, Waltz argued that the spread of nuclear weapons has beneficial effects on international politics. He maintained that states, fearing a catastrophic nuclear war, will be deterred from going to war with other nuclear-armed states. As more and more states acquire nuclear weapons, therefore, there are fewer states against which other states will be willing to wage war. The spread of nuclear weapons, according to Waltz, leads to greater levels of international stability. Looking to the empirical record, he argued that the introduction of nuclear weapons in 1945 coincided with an unprecedented period of peace among the great powers. While the United States and the Soviet Union engaged in many proxy wars in peripheral geographic regions during the Cold War, they never engaged in direct combat. And, despite regional scuffles involving nuclear-armed states in the Middle East, South Asia, and East Asia, none of these conflicts resulted in a major theater war. This lid on the intensity of conflict, according to Waltz, was the direct result of the stabilizing effect of nuclear weapons. Following in the path blazed by the strategic thinkers reviewed above, Waltz argued that the requirements for deterrence are not high. He argued that, contrary to the behavior of the Cold War superpowers, a state need not build a large arsenal with multiple survivable delivery vehicles in order to deter its adversaries. Rather, he claimed that a few nuclear weapons are sufficient for deterrence. Indeed, he even went further, asserting that any state will be deterred even if it merely suspects its opponent might have a few nuclear weapons because the costs of getting it wrong are simply too high. Not even nuclear accident is a concern according to Waltz because leaders in nuclear-armed states understand that if they ever lost control of nuclear weapons, resulting in an accidental nuclear exchange, the nuclear retaliation they would suffer in response would be catastrophic. Nuclear-armed states, therefore, have strong incentives to maintain control of their nuclear weapons. Not even new nuclear states, without experience in managing nuclear arsenals, would ever allow nuclear weapons to be used or let them fall in the wrong hands. Following Waltz, many other scholars have advanced arguments in the proliferation optimist school. For example, Bruce Bueno de Mesquite and William Riker explore the “merits of selective nuclear proliferation.”[[2]](#footnote-2)[30] John Mearsheimer made the case for a “Ukrainian nuclear deterrent,” following the collapse of the Soviet Union.[[3]](#footnote-3)[31] In the run up to the 2003 Gulf War, John Mearsheimer and Steven Walt argued that we should not worry about a nuclear-armed Iraq because a nuclear-armed Iraq can be deterred.[[4]](#footnote-4)[32] And, in recent years, Barry Posen and many other realists have argued that nuclear proliferation in Iran does not pose a threat, again arguing that a nuclear-armed Iran can be deterred.[[5]](#footnote-5)[33] What’s Wrong with Proliferation Optimism? The proliferation optimist position, while having a distinguished pedigree, has several major problems. Many of these weaknesses have been chronicled in brilliant detail by Scott Sagan and other contemporary proliferation pessimists.[[6]](#footnote-6)[34] Rather than repeat these substantial efforts, I will use this section to offer some original critiques of the recent incarnations of proliferation optimism. First and foremost, proliferation optimists do not appear to understand contemporary deterrence theory. I do not say this lightly in an effort to marginalize or discredit my intellectual opponents. Rather, I make this claim with all due caution and with complete sincerity. A careful review of the contemporary proliferation optimism literature does not reflect an understanding of, or engagement with, the developments in academic deterrence theory in top scholarly journals such as the American Political Science Review and International Organization over the past few decades.[[7]](#footnote-7)[35] While early optimists like Viner and Brodie can be excused for not knowing better, the writings of contemporary proliferation optimists ignore the past fifty years of academic research on nuclear deterrence theory. In the 1940s, Viner, Brodie, and others argued that the advent of Mutually Assured Destruction (MAD) rendered war among major powers obsolete, but nuclear deterrence theory soon advanced beyond that simple understanding.[[8]](#footnote-8)[36] After all, great power political competition does not end with nuclear weapons. And nuclear-armed states still seek to threaten nuclear-armed adversaries. States cannot credibly threaten to launch a suicidal nuclear war, but they still want to coerce their adversaries. This leads to a credibility problem: how can states credibly threaten a nuclear-armed opponent? Since the 1960s academic nuclear deterrence theory has been devoted almost exclusively to answering this question.[[9]](#footnote-9)[37] And, unfortunately for proliferation optimists, the answers do not give us reasons to be optimistic. Thomas Schelling was the first to devise a rational means by which states can threaten nuclear-armed opponents.[[10]](#footnote-10)[38] He argued that leaders cannot credibly threaten to intentionally launch a suicidal nuclear war, but they can make a “threat that leaves something to chance.”[[11]](#footnote-11)[39] They can engage in a process, the nuclear crisis, which increases the risk of nuclear war in an attempt to force a less resolved adversary to back down. As states escalate a nuclear crisis there is an increasingprobability that the conflict will spiral out of control and result in an inadvertent or accidental nuclear exchange. As long as the benefit of winning the crisis is greater than the incremental increase in the risk of nuclear war, threats to escalate nuclear crises are inherently credible. In these games of nuclear brinkmanship, the state that is willing to run the greatest risk of nuclear war before back down will win the crisis as long as it does not end in catastrophe. It is for this reason that Thomas Schelling called great power politics in the nuclear era a “competition in risk taking.”[[12]](#footnote-12)[40] This does not mean that states eagerly bid up the risk of nuclear war. Rather, they face gut-wrenching decisions at each stage of the crisis. They can quit the crisis to avoid nuclear war, but only by ceding an important geopolitical issue to an opponent. Or they can the escalate the crisis in an attempt to prevail, but only at the risk of suffering a possible nuclear exchange. Since 1945 there were have been many high stakes nuclear crises (by my count, there have been twenty) in which “rational” states like the United States run a risk of nuclear war and inch very close to the brink of nuclear war.[[13]](#footnote-13)[41] By asking whether states can be deterred or not, therefore, proliferation optimists are asking the wrong question. The right question to ask is: what risk of nuclear war is a specific state willing to run against a particular opponent in a given crisis? Optimists are likely correct when they assert that Iran will not intentionally commit national suicide by launching a bolt-from-the-blue nuclear attack on the United States or Israel. This does not mean that Iran will never use nuclear weapons, however. Indeed, it is almost inconceivable to think that a nuclear-armed Iran would not, at some point, find itself in a crisis with another nuclear-armed power and that it would not be willing to run any risk of nuclear war in order to achieve its objectives. If a nuclear-armed Iran and the United States or Israel have a geopolitical conflict in the future, over say the internal politics of Syria, an Israeli conflict with Iran’s client Hezbollah, the U.S. presence in the Persian Gulf, passage through the Strait of Hormuz, or some other issue, do we believe that Iran would immediately capitulate? Or is it possible that Iran would push back, possibly even brandishing nuclear weapons in an attempt to deter its adversaries? If the latter, there is a real risk that proliferation to Iran could result in nuclear war. An optimist might counter that nuclear weapons will never be used, even in a crisis situation, because states have such a strong incentive, namely national survival, to ensure that nuclear weapons are not used. But, this objection ignores the fact that leaders operate under competing pressures. Leaders in nuclear-armed states also have very strong incentives to convince their adversaries that nuclear weapons could very well be used. Historically we have seen that in crises, leaders purposely do things like put nuclear weapons on high alert and delegate nuclear launch authority to low level commanders, purposely increasing the risk of accidental nuclear war in an attempt to force less-resolved opponents to back down. Moreover, not even the optimists’ first principles about the irrelevance of nuclear posture stand up to scrutiny. Not all nuclear wars would be equally devastating.[[14]](#footnote-14)[42] Any nuclear exchange would have devastating consequences no doubt, but, if a crisis were to spiral out of control and result in nuclear war, any sane leader would rather be facing a country with five nuclear weapons than one with thirty-five thousand. Similarly, any sane leader would be willing to run a greater risk of nuclear war against the former state than against the latter. Indeed, systematic research has demonstrated that states are willing to run greater risks and, therefore, more likely to win nuclear crises when they enjoy nuclear superiority over their opponent.[[15]](#footnote-15)[43] Proliferation optimists miss this point, however, because they are still mired in 1940s deterrence theory. It is true that no rational leader would choose to launch a nuclear war, but, depending on the context, she would almost certainly be willing to risk one. Nuclear deterrence theorists have proposed a second scenario under which rational leaders could instigate a nuclear exchange: a limited nuclear war.[[16]](#footnote-16)[44] By launching a single nuclear weapon against a small city, for example, it was thought that a nuclear-armed state could signal its willingness to escalate the crisis, while leaving its adversary with enough left to lose to deter the adversary from launching a full-scale nuclear response. In a future crisis between a nuclear-armed China and the United States over Taiwan, for example, China could choose to launch a nuclear attack on Honolulu to demonstrate its seriousness. In that situation, with the continental United States intact, would Washington choose to launch a full-scale nuclear war on China that could result in the destruction of many more American cities? Or would it back down? China might decide to strike hoping that Washington will choose a humiliating retreat over a full-scale nuclear war. If launching a limited nuclear war could be rational, it follows that the spread of nuclear weapons increases the risk of nuclear use. Again, by ignoring contemporary developments in scholarly discourse and relying exclusively on understandings of nuclear deterrence theory that became obsolete decades ago, optimists reveal the shortcomings of their analysis and fail to make a compelling case. The optimists also error by confusing stability for the national interest. Even if the spread of nuclear weapons contributes to greater levels of international stability (which discussions above and below suggest it might not) it does not necessarily follow that the spread of nuclear weapons is in the U.S. interest. There might be other national goals that trump stability, such as reducing to zero the risk of nuclear war in an important geopolitical region. Optimists might argue that South Asia is more stable when India and Pakistan have nuclear weapons, but certainly the risk of nuclear war is higher than if there were no nuclear weapons on the subcontinent. In addition, it is wrong to assume that stability is always in the national interest. Sometimes it is, but sometimes it is not. If stability is obtained because Washington is deterred from using force against a nuclear-armed adversary in a situation where using force could have advanced national goals, stability harms, rather than advances, U.S. national interests. The final gaping weakness in the proliferation optimist argument, however, is that it rests on a logical contradiction. This is particularly ironic, given that many optimists like to portray themselves as hard-headed thinkers, following their premises to their logical conclusions. But, the contradiction at the heart of the optimist argument is glaring and simple to understand: either the probability of nuclear war is zero, or it is nonzero, but it cannot be both. If the probability of nuclear war is zero, then nuclear weapons should have no deterrent effect. States will not be deterred by a nuclear war that could never occur and states should be willing to intentionally launch large-scale wars against nuclear-armed states. In this case, proliferation optimists cannot conclude that the spread of nuclear weapons is stabilizing. If, on the other hand, the probability of nuclear war is nonzero, then there is a real danger that the spread of nuclear weapons increases the probability of a catastrophic nuclear war. If this is true, then proliferation optimists cannot be certain that nuclear weapons will never be used. In sum, the spread of nuclear weapons can either raise the risk of nuclear war and in so doing, deter large-scale conventional conflict. Or there is no danger that nuclear weapons will be used and the spread of nuclear weapons does not increase international instability. But, despite the claims of the proliferation optimists, it is nonsensical to argue that nuclear weapons will never be used and to simultaneously claim that their spread contributes to international stability. Proliferation Anti-obsessionists: Other scholars, who I label “anti-obsessionists” argue that the spread of nuclear weapons has neither been good nor bad for international politics, but rather irrelevant. They argue that academics and policymakers concerned about nuclear proliferation spend too much time and energy obsessing over something, nuclear weapons, that, at the end of the day, are not all that important. In Atomic Obsession, John Mueller argues that widespread fears about the threat of nuclear weapons are overblown.[[17]](#footnote-17)[45] He acknowledges that policymakers and experts have often worried that the spread of nuclear weapons could lead to nuclear war, nuclear terrorism and cascades of nuclear proliferation, but he then sets about systematically dismantling each of these fears. Rather, he contends that nuclear weapons have had little effect on the conduct of international diplomacy and that world history would have been roughly the same had nuclear weapons never been invented. Finally, Mueller concludes by arguing that the real problem is not nuclear proliferation, but nuclear nonproliferation policy because states do harmful things in the name of nonproliferation, like take military action and deny countries access to nuclear technology for peaceful purposes. Similarly, Ward Wilson argues that, despite the belief held by optimists and pessimists alike, nuclear weapons are not useful tools of deterrence.[[18]](#footnote-18)[46] In his study of the end of World War II, for example, Wilson argues that it was not the U.S. use of nuclear weapons on Hiroshima and Nagasaki that forced Japanese surrender, but a variety of other factors, including the Soviet Union’s decision to enter the war. If the actual use of nuclear weapons was not enough to convince a country to capitulate to its opponent he argues, then there is little reason to think that the mere threat of nuclear use has been important to keeping the peace over the past half century. Leaders of nuclear-armed states justify nuclear possession by touting their deterrent benefits, but if nuclear weapons have no deterrent value, there is no reason, Ward claims, not to simply get rid of them. Finally, Anne Harrington de Santana argues that nuclear experts “fetishize” nuclear weapons.[[19]](#footnote-19)[47] Just like capitalists, according to Karl Marx, bestow magical qualities on money, thus fetishizing it, she argues that leaders and national security experts do the same thing to nuclear weapons. Nuclear deterrence as a critical component of national security strategy, according to Harrington de Santana, is not inherent in the technology of nuclear weapons themselves, but is rather the result of how leaders in countries around the world think about them. In short, she argues, “Nuclear weapons are powerful because we treat them as powerful.”[[20]](#footnote-20)[48] But, she maintains, we could just as easily “defetish” them, treating them as unimportant and, therefore, rendering them obsolete. She concludes that “Perhaps some day, the deactivated nuclear weapons on display in museums across the United States will be nothing more than a reminder of how powerful nuclear weapons used to be.”[[21]](#footnote-21)[49] The anti-obsessionists make some thought-provoking points and may help to reign in some of the most hyperbolic accounts of the effect of nuclear proliferation. They remind us, for example, that our worst fears have not been realized, at least not yet. Yet, by taking the next step and arguing that nuclear weapons have been, and will continue to be, irrelevant, they go too far. Their arguments call to mind the story about the man who jumps to his death from the top of a New York City skyscraper and, when asked how things are going as he passes the 15th story window, replies, “so far so good.” The idea that world history would have been largely unchanged had nuclear weapons not been invented is a provocative one, but it is also unfalsifiable. There is good reason to believe that world history would have been different, and in many ways better, had certain countries not acquired nuclear weapons. Let’s take Pakistan as an example. Pakistan officially joined the ranks of the nuclear powers in May 1998 when it followed India in conducting a series of nuclear tests. Since then, Pakistan has been a poster child for the possible negative consequences of nuclear proliferation. Pakistan’s nuclear weapons have led to further nuclear proliferation as Pakistan, with the help of rogue scientist A.Q. Khan, transferred uranium enrichment technology to Iran, Libya, and North Korea.[[22]](#footnote-22)[50] Indeed, part of the reason that North Korea and Iran are so far along with their uranium enrichment programs is because they got help from Pakistan. Pakistan has also become more aggressive since acquiring nuclear weapons, displaying an increased willingness to sponsor cross-border incursions into India with terrorists and irregular forces.[[23]](#footnote-23)[51] In a number of high-stakes nuclear crises between India and Pakistan, U.S. officials worried that the conflicts could escalate to a nuclear exchange and intervened diplomatically to prevent Armageddon on the subcontinent. The U.S. government also worries about the safety and security of Pakistan’s nuclear arsenal, fearing that Pakistan’s nukes could fall into the hands of terrorists in the event of a state collapse or a break down in nuclear security. And we still have not witnessed the full range of consequences arising from Pakistani nuclear proliferation. Islamabad has only possessed the bomb for a little over a decade, but they are likely to keep it for decades to come, meaning that we could still have a nuclear war involving Pakistan. In short, Pakistan’s nuclear capability has already had deleterious effects on U.S. national security and these threats are only likely to grow over time. In addition, the anti-obsessionists are incorrect to argue that the cure of U.S. nuclear nonproliferation policy is worse than the disease of proliferation. Many observers would agree with Mueller that the U.S. invasion of Iraq in 2003 was a disaster, costing much in the way of blood and treasure and offering little strategic benefit. But the Iraq War is hardly representative of U.S. nonproliferation policy. For the most part, nonproliferation policy operates in the mundane realm of legal frameworks, negotiations, inspections, sanctions, and a variety of other tools. Even occasional preventive military strikes on nuclear facilities have been far less calamitous than the Iraq War. Indeed, the Israeli strikes on nuclear reactors in Iraq and Syria in 1981 and 2007, respectively, produced no meaningful military retaliation and a muted international response. Moreover, the idea that the Iraq War was primarily about nuclear nonproliferation is a contestable one, with Saddam Hussein’s history of aggression, the unsustainability of maintaining the pre-war containment regime indefinitely, Saddam’s ties to terrorist groups, his past possession and use of chemical and biological weapons, and the window of opportunity created by September 11th, all serving as possible prompts for U.S. military action in the Spring of 2003. The claim that nonproliferation policy is dangerous because it denies developing countries access to nuclear energy also rests on shaky ground. If anything, the global nonproliferation regime has, on balance, increased access to nuclear technology. Does anyone really believe that countries like Algeria, Congo, and Vietnam would have nuclear reactors today were it not for Atoms for Peace, Article IV of the NPT, and other appendages of the nonproliferation regime that have provided developing states with nuclear technology in exchange for promises to forgo nuclear weapons development? Moreover, the sensitive fuel-cycle technology denied by the Nuclear Suppliers Group (NSG) and other supply control regimes is not even necessary to the development of a vibrant nuclear energy program as the many countries that have fuel-cycle services provided by foreign nuclear suppliers clearly demonstrate. Finally, the notion that nuclear energy is somehow the key to lifting developing countries from third to first world status does not pass the laugh test. Given the large upfront investments, the cost of back-end fuel management and storage, and the ever-present danger of environmental catastrophe exemplified most recently by the Fukushima disaster in Japan, many argue that nuclear energy is not a cost-effective source of energy (if all the externalities are taken into account) for any country, not to mention those developing states least able to manage these myriad challenges. Taken together, therefore, the argument that nuclear nonproliferation policy is more dangerous than the consequences of nuclear proliferation, including possible nuclear war, is untenable. Indeed, it would certainly come as a surprise to the mild mannered diplomats and scientists who staff the International Atomic Energy Agency, the global focal point of the nuclear nonproliferation regime, located in Vienna, Austria. The anti-obsessionsists, like the optimists, also walk themselves into logical contradictions. In this case, their policy recommendations do not necessarily follow from their analyses. Ward argues that nuclear weapons are irrelevant and, therefore, we should eliminate them.[[24]](#footnote-24)[52] But, if nuclear weapons are really so irrelevant, why not just keep them lying around? They will not cause any problems if they are as meaningless as anti-obsessionists claim and it is certainly more cost effective to do nothing than to negotiate complicated international treaties and dismantle thousands of warheads, delivery vehicles, and their associated facilities. Finally, the idea that nuclear weapons are only important because we think they are powerful is arresting, but false. There are properties inherent in nuclear weapons that can be used to create military effects that simply cannot, at least not yet, be replicated with conventional munitions. If a military planner wants to quickly destroy a city on the other side of the planet, his only option today is a nuclear weapon mounted on an ICBM. Therefore, if the collective “we” suddenly decided to “defetishize” nuclear weapons by treating them as unimportant, it is implausible that some leader somewhere would not independently come to the idea that nuclear weapons could advance his or her country’s national security and thereby re-fetishize them. In short, the optimists and anti-obsessionists have brought an important perspective to the nonproliferation debate. Their arguments are provocative and they raise the bar for those who wish to argue that the spread of nuclear weapons is indeed a problem. Nevertheless, their counterintuitive arguments are not enough to wish away the enormous security challenges posed by the spread of the world’s most dangerous weapons. These myriad threats will be considered in the next section. Why Nuclear Proliferation Is a Problem The spread of nuclear weapons poses a number of severe threats to international peace and U.S. national security including: nuclear war, nuclear terrorism, emboldened nuclear powers, constrained freedom of action, weakened alliances, and further nuclear proliferation. This section explores each of these threats in turn. Nuclear War. The greatest threat posed by the spread of nuclear weapons is nuclear war. The more states in possession of nuclear weapons, the greater the probability that somewhere, someday, there is a catastrophic nuclear war. A nuclear exchange between the two superpowers during the Cold War could have arguably resulted in human extinction and a nuclear exchange between states with smaller nuclear arsenals, such as India and Pakistan, could still result in millions of deaths and casualties, billions of dollars of economic devastation, environmental degradation, and a parade of other horrors. To date, nuclear weapons have only been used in warfare once. In 1945, the United States used one nuclear weapon each on Hiroshima and Nagasaki, bringing World War II to a close. Many analysts point to sixty-five-plus-year tradition of nuclear non-use as evidence that nuclear weapons are unusable, but it would be naïve to think that nuclear weapons will never be used again. After all, analysts in the 1990s argued that worldwide economic downturns like the great depression were a thing of the past, only to be surprised by the dot-com bubble bursting in the later 1990s and the Great Recession of the late Naughts.[[25]](#footnote-25)[53] This author, for one, would be surprised if nuclear weapons are not used in my lifetime. Before reaching a state of MAD, new nuclear states go through a transition period in which they lack a secure-second strike capability. In this context, one or both states might believe that it has an incentive to use nuclear weapons first. For example, if Iran acquires nuclear weapons neither Iran, nor its nuclear-armed rival, Israel, will have a secure, second-strike capability. Even though it is believed to have a large arsenal, given its small size and lack of strategic depth, Israel might not be confident that it could absorb a nuclear strike and respond with a devastating counterstrike. Similarly, Iran might eventually be able to build a large and survivable nuclear arsenal, but, when it first crosses the nuclear threshold, Tehran will have a small and vulnerable nuclear force. In these pre-MAD situations, there are at least three ways that nuclear war could occur. First, the state with the nuclear advantage might believe it has a splendid first strike capability. In a crisis, Israel might, therefore, decide to launch a preemptive nuclear strike to disarm Iran’s nuclear capabilities and eliminate the threat of nuclear war against Israel. Indeed, this incentive might be further increased by Israel’s aggressive strategic culture that emphasizes preemptive action. Second, the state with a small and vulnerable nuclear arsenal, in this case Iran, might feel use ‘em or loose ‘em pressures. That is, if Tehran believes that Israel might launch a preemptive strike, Iran might decide to strike first rather than risk having its entire nuclear arsenal destroyed. Third, as Thomas Schelling has argued, nuclear war could result due to the reciprocal fear of surprise attack.[[26]](#footnote-26)[54] If there are advantages to striking first, one state might start a nuclear war in the belief that war is inevitable and that it would be better to go first than to go second. In a future Israeli-Iranian crisis, for example, Israel and Iran might both prefer to avoid a nuclear war, but decide to strike first rather than suffer a devastating first attack from an opponent. Even in a world of MAD, there is a risk of nuclear war. Rational deterrence theory assumes nuclear-armed states are governed by rational leaders that would not intentionally launch a suicidal nuclear war. This assumption appears to have applied to past and current nuclear powers, but there is no guarantee that it will continue to hold in the future. For example, Iran’s theocratic government, despite its inflammatory rhetoric, has followed a fairly pragmatic foreign policy since 1979, but it contains leaders who genuinely hold millenarian religious worldviews who could one day ascend to power and have their finger on the nuclear trigger. We cannot rule out the possibility that, as nuclear weapons continue to spread, one leader will choose to launch a nuclear war, knowing full well that it could result in self-destruction. One does not need to resort to irrationality, however, to imagine a nuclear war under MAD. Nuclear weapons may deter leaders from intentionally launching full-scale wars, but they do not mean the end of international politics. As was discussed above, nuclear-armed states still have conflicts of interest and leaders still seek to coerce nuclear-armed adversaries. This leads to the credibility problem that is at the heart of modern deterrence theory: how can you threaten to launch a suicidal nuclear war? Deterrence theorists have devised at least two answers to this question. First, as stated above, leaders can choose to launch a limited nuclear war.[[27]](#footnote-27)[55] This strategy might be especially attractive to states in a position of conventional military inferiority that might have an incentive to escalate a crisis quickly. During the Cold War, the United States was willing to use nuclear weapons first to stop a Soviet invasion of Western Europe given NATO’s conventional inferiority in continental Europe. As Russia’s conventional military power has deteriorated since the end of the Cold War, Moscow has come to rely more heavily on nuclear use in its strategic doctrine. Indeed, Russian strategy calls for the use of nuclear weapons early in a conflict (something that most Western strategists would consider to be escalatory) as a way to de-escalate a crisis. Similarly, Pakistan’s military plans for nuclear use in the event of an invasion from conventionally stronger India. And finally, Chinese generals openly talk about the possibility of nuclear use against a U.S. superpower in a possible East Asia contingency. Second, as was also discussed above leaders can make a “threat that leaves something to chance.”[[28]](#footnote-28)[56] They can initiate a nuclear crisis. By playing these risky games of nuclear brinkmanship, states can increases the risk of nuclear war in an attempt to force a less resolved adversary to back down. Historical crises have not resulted in nuclear war, but many of them, including the 1962 Cuban Missile Crisis, have come close. And scholars have documented historical incidents when accidents could have led to war.[[29]](#footnote-29)[57] When we think about future nuclear crisis dyads, such as India and Pakistan and Iran and Israel, there are fewer sources of stability that existed during the Cold War, meaning that there is a very real risk that a future Middle East crisis could result in a devastating nuclear exchange.

**Loose fissile material in SSA gets stolen**

**Belcher 2011** (Emma L. Belcher, former Stanton nuclear security fellow at the Council on Foreign Relations and MA/PhD from Tufts University, July 2011, “A Nuclear Security Fund,” Council on Foreign Relations, http://www.cfr.org/proliferation/nuclear-security-fund/p25388)

Al-Qaeda and other terrorist groups say they want nuclear weapons and will use them if they can. The most likely acquisition method is to buy or steal fissile material and fashion a crude Hiroshima-style device, provided they have some training in explosives and engineering. Alternatively, a group could use fissile material in a radiological dispersal device, or dirty bomb, which would cause panic, even if it did not cause significant destruction. This makes securing fissile material, and preventing its trafficking if it is stolen, vitally important. There are approximately 1,600 metric tons of highly enriched uranium (HEU) and 400 metric tons of plutonium in over 1,100 civilian and military locations worldwide—enough for many thousands of bombs. The security of these sources varies widely, as does the robustness of measures to prevent smuggling of stolen sources.¶ Though many nations are taking measures to prevent terrorists from acquiring fissile material, others lack the resources or prefer to fund other and—in their view—more pressing problems. This situation is most prevalent in eastern Europe and the Caucasus, where sources of fissile material are concentrated, and in sub-Saharan Africa, where public health and civil strife issues take priority over securing borders against smuggling. Terrorist groups could exploit these critical gaps, thus undermining global nuclear security efforts.

#### They’ll WMD attack the US in the next 2 years- Neg evidence underestimates their capability

Kanani 2011 (Rahim Kanani, founder and editor-in-chief of World Affairs Commentary, Citing Rolf Mowatt-Larssen, Senior Fellow, Belfer Center for Science and International Affairs, John F. Kennedy School of Government, Harvard University, former Director of the Office of Intelligence and Counterintelligence, U.S. Department of Energy, former Chief of the Weapons of Mass Destruction Department, Counter-terrorist Center, Central Intelligence Agency, recipient of the CIA Director’s Award, graduate of the U.S. Military Academy, June 29th, “New al-Qaeda Chief Zawahiri Has Strong Nuclear Intent”, Forbes, http://blogs.forbes.com/rahimkanani/2011/06/29/new-al-qaeda-chief-zawahiri-has-strong-nuclear-intent/)

We should be especially worried about the threat of nuclear terrorism under Zawahiri’s leadership. In a recent report titled “Islam and the Bomb: Religious Justification For and Against Nuclear Weapons”, which I researched for and contributed to, lead author Rolf Mowatt-Larssen, former director of intelligence and counterintelligence at the U.S. Department of Energy, argues that al-Qaeda’s WMD ambitions are stronger than ever. And that “this intent no longer feels theoretical, but operational.” “I believe al-Qaeda is laying the groundwork for a large scale attack on the United States, possibly in the next year or two,” continues Mowatt-Larssen in the opening of the report issued earlier this year by the Belfer Center for Science and International Affairs at Harvard Kennedy School. “The attack may or may not involve the use of WMD, but there are signs that al-Qaeda is working on an event on a larger scale than the 9/11 attack.” Most will readily dismiss such claims as implausible and unlikely, and we hope they are right, but after spending months with Mowatt-Larssen, who also served as the former head of the Central Intelligence Agency’s WMD and terrorism efforts, scrutinizing and cross-referencing Zawahiri’s 268-page treatise published in 2008 titled “Exoneration”, the analytics steered us towards something far more remarkable than expected. “As I read the text closely, in the broader context of al-Qaeda’s past, my concerns grew that Zawahiri has written this treatise to play a part in the ritualistic process of preparing for an impending attack,” states Mowatt-Larssen. “As Osama bin Laden’s fatwa in 1998 foreshadowed the 9/11 attack, Ayman Zawahiri’s fatwa in 2008 may have started the clock ticking for al-Qaeda’s next large scale strike on America. If the pattern of al-Qaeda’s modus operandi holds true, we are in the middle of an attack cycle.” Among several important findings, Zawahiri sophisticatedly weaves identical passages, sources and religious justifications for a nuclear terrorist attack against the United States previously penned by radical Saudi cleric Nasir al Fahd. Indeed, the language used, research cited, and arguments put forth are nothing short of detailed and deliberate. Reading as both a religious duty to kill millions of Americans and a lengthy suicide note together, this piece of literature is something we must take seriously with Zawahiri now at the helm of al-Qaeda. The time may have come for al-Qaeda’s new CEO to leave a legacy of his own. Concluding the author’s note, Mowatt-Larssen states, “Even if this theory proves to be wrong, it is better to overestimate the enemy than to under­estimate him. Conventional wisdom holds that al-Qaeda is spent—that they are incapable of carrying out another 9/11. Leaving aside whether this view is correct, for which I harbor grave doubts, we will surely miss the signs of the next attack if we continue to overestimate our own successes, and dismiss what terrorists remain capable of accomplishing when they put their minds to it.”

**Terrorism causes miscalculation that draws in great powers and culminates in extinction- also causes rising alert levels**

Ayson 2010 (Robert Ayson, Professor of Strategic Studies and Director of the Centre for Strategic Studies: New Zealand at the Victoria University of Wellington, “After a Terrorist Nuclear Attack: Envisaging Catalytic Effects,” Studies in Conflict & Terrorism, Volume 33, Issue 7, July, Available Online to Subscribing Institutions via InformaWorld)

A terrorist nuclear attack, and even the use of nuclear weapons in response by the country attacked in the first place, would not necessarily represent the worst of the nuclear worlds imaginable. Indeed, there are reasons to wonder whether nuclear terrorism should ever be regarded as belonging in the category of truly existential threats. A contrast can be drawn here with the global catastrophe that would come from a massive nuclear exchange between two or more of the sovereign states that possess these weapons in significant numbers. Even the worst terrorism that the twenty-first century might bring would fade into insignificance alongside considerations of what a general nuclear war would have wrought in the Cold War period. And it must be admitted that as long as the major nuclear weapons states have hundreds and even thousands of nuclear weapons at their disposal, there is always the possibility of a truly awful nuclear exchange taking place precipitated entirely by state possessors themselves. But these two nuclear worlds—a non-state actor nuclear attack and a catastrophic interstate nuclear exchange—are not necessarily separable. It is just possible that some sort of terrorist attack, and especially an act of nuclear terrorism, could precipitate a chain of events leading to a massive exchange of nuclear weapons between two or more of the states that possess them. In this context, today’s and tomorrow’s terrorist groups might assume the place allotted during the early Cold War years to new state possessors of small nuclear arsenals who were seen as raising the risks of a catalytic nuclear war between the superpowers started by third parties. These risks were considered in the late 1950s and early 1960s as concerns grew about nuclear proliferation, the so-called n+1 problem. It may require a considerable amount of imagination to depict an especially plausible situation where an act of nuclear terrorism could lead to such a massive inter-state nuclear war. For example, in the event of a terrorist nuclear attack on the United States, it might well be wondered just how Russia and/or China could plausibly be brought into the picture, not least because they seem unlikely to be fingered as the most obvious state sponsors or encouragers of terrorist groups. They would seem far too responsible to be involved in supporting that sort of terrorist behavior that could just as easily threaten them as well. Some possibilities, however remote, do suggest themselves. For example, how might the United States react if it was thought or discovered that the fissile material used in the act of nuclear terrorism had come from Russian stocks,40 and if for some reason Moscow denied any responsibility for nuclear laxity? The correct attribution of that nuclear material to a particular country might not be a case of science fiction given the observation by Michael May et al. that while the debris resulting from a nuclear explosion would be “spread over a wide area in tiny fragments, its radioactivity makes it detectable, identifiable and collectable, and a wealth of information can be obtained from its analysis: the efficiency of the explosion, the materials used and, most important … some indication of where the nuclear material came from.”41 Alternatively, if the act of nuclear terrorism came as a complete surprise, and American officials refused to believe that a terrorist group was fully responsible (or responsible at all) suspicion would shift immediately to state possessors. Ruling out Western ally countries like the United Kingdom and France, and probably Israel and India as well, authorities in Washington would be left with a very short list consisting of North Korea, perhaps Iran if its program continues, and possibly Pakistan. But at what stage would Russia and China be definitely ruled out in this high stakes game of nuclear Cluedo? In particular, if the act of nuclear terrorism occurred against a backdrop of existing tension in Washington’s relations with Russia and/or China, and at a time when threats had already been traded between these major powers, would officials and political leaders not be tempted to assume the worst? Of course, the chances of this occurring would only seem to increase if the United States was already involved in some sort of limited armed conflict with Russia and/or China, or if they were confronting each other from a distance in a proxy war, as unlikely as these developments may seem at the present time. The reverse might well apply too: should a nuclear terrorist attack occur in Russia or China during a period of heightened tension or even limited conflict with the United States, could Moscow and Beijing resist the pressures that might rise domestically to consider the United States as a possible perpetrator or encourager of the attack? Washington’s early response to a terrorist nuclear attack on its own soil might also raise the possibility of an unwanted (and nuclear aided) confrontation with Russia and/or China. For example, in the noise and confusion during the immediate aftermath of the terrorist nuclear attack, the U.S. president might be expected to place the country’s armed forces, including its nuclear arsenal, on a higher stage of alert. In such a tense environment, when careful planning runs up against the friction of reality, it is just possible that Moscow and/or China might mistakenly read this as a sign of U.S. intentions to use force (and possibly nuclear force) against them. In that situation, the temptations to preempt such actions might grow, although it must be admitted that any preemption would probably still meet with a devastating response. As part of its initial response to the act of nuclear terrorism (as discussed earlier) Washington might decide to order a significant conventional (or nuclear) retaliatory or disarming attack against the leadership of the terrorist group and/or states seen to support that group. Depending on the identity and especially the location of these targets, Russia and/or China might interpret such action as being far too close for their comfort, and potentially as an infringement on their spheres of influence and even on their sovereignty. One far-fetched but perhaps not impossible scenario might stem from a judgment in Washington that some of the main aiders and abetters of the terrorist action resided somewhere such as Chechnya, perhaps in connection with what Allison claims is the “Chechen insurgents’ … long-standing interest in all things nuclear.”42 American pressure on that part of the world would almost certainly raise alarms in Moscow that might require a degree of advanced consultation from Washington that the latter found itself unable or unwilling to provide. There is also the question of how other nuclear-armed states respond to the act of nuclear terrorism on another member of that special club. It could reasonably be expected that following a nuclear terrorist attack on the United States, both Russia and China would extend immediate sympathy and support to Washington and would work alongside the United States in the Security Council. But there is just a chance, albeit a slim one, where the support of Russia and/or China is less automatic in some cases than in others. For example, what would happen if the United States wished to discuss its right to retaliate against groups based in their territory? If, for some reason, Washington found the responses of Russia and China deeply underwhelming, (neither “for us or against us”) might it also suspect that they secretly were in cahoots with the group, increasing (again perhaps ever so slightly) the chances of a major exchange. If the terrorist group had some connections to groups in Russia and China, or existed in areas of the world over which Russia and China held sway, and if Washington felt that Moscow or Beijing were placing a curiously modest level of pressure on them, what conclusions might it then draw about their culpability? If Washington decided to use, or decided to threaten the use of, nuclear weapons, the responses of Russia and China would be crucial to the chances of avoiding a more serious nuclear exchange. They might surmise, for example, that while the act of nuclear terrorism was especially heinous and demanded a strong response, the response simply had to remain below the nuclear threshold. It would be one thing for a non-state actor to have broken the nuclear use taboo, but an entirely different thing for a state actor, and indeed the leading state in the international system, to do so. If Russia and China felt sufficiently strongly about that prospect, there is then the question of what options would lie open to them to dissuade the United States from such action: and as has been seen over the last several decades, the central dissuader of the use of nuclear weapons by states has been the threat of nuclear retaliation. If some readers find this simply too fanciful, and perhaps even offensive to contemplate, it may be informative to reverse the tables. Russia, which possesses an arsenal of thousands of nuclear warheads and that has been one of the two most important trustees of the non-use taboo, is subjected to an attack of nuclear terrorism. In response, Moscow places its nuclear forces very visibly on a higher state of alert and declares that it is considering the use of nuclear retaliation against the group and any of its state supporters. How would Washington view such a possibility? Would it really be keen to support Russia’s use of nuclear weapons, including outside Russia’s traditional sphere of influence? And if not, which seems quite plausible, what options would Washington have to communicate that displeasure? If China had been the victim of the nuclear terrorism and seemed likely to retaliate in kind, would the United States and Russia be happy to sit back and let this occur? **In the charged** atmosphere immediately after a nuclear terrorist attack, how would the attacked country respond to pressure from other major nuclear powers not to respond in kind? The phrase “how dare they tell us what to do” immediately springs to mind. Some might even go so far as to interpret this concern as a tacit form of sympathy or support for the terrorists. This might not help the chances of nuclear restraint.

### 1AC Afghanistan adv

#### Four reasons grid collapse is inevitable

Overload

Weather

Cyber attacks

Supply disruption

DSB Taskforce 2008 (Defense Science Board Task Force, Federal Advisory Committee established to provide independent advice to the Secretary of Defense, Tom Morehouse, editor, February 2008, Office of the Under Secretary of Defense For Acquisition, Technology, and Logistics, http://www.acq.osd.mil/dsb/reports/ADA477619.pdf)

The first risk is from overload. As wires become overloaded, they heat up and sag, making them vulnerable to entanglement with trees and other objects. This happened near Cleveland, Ohio on August 14, 2003. According to the U.S.-Canada Power System Outage Task Force, high demand caused a high-voltage line to come in contact with overgrown trees. The resulting cascade of failures plunged many of the 50 million people in the Northeast U.S. and Canada living in an area covering 9,300 square miles into darkness. It shut down more than 500 generating units at 265 power plants, including 22 nuclear plants.29¶ A second risk comes from natural disasters, such as hurricanes, tornadoes, electrical storms or other extreme weather events. The consequences could be very much as described above, but with the added risk of physical damage to the infrastructure. Favorable commentary about the performance of the grid following the August 2003 outage focused on the fact that restoration occurred fairly quickly. Within a few days power was restored virtually everywhere, with much of the area back up within a few hours. This was largely because safety features built into the grid successfully prevented damage to critical equipment such as generators, breakers and transformers. 30 However, the Task Force is concerned that such an extensive outage could be caused by such a commonplace event – a single line contacting a tree. This inevitably raises the next issue below: what the result might have been had there been physical damage to infrastructure, such as from a deliberate attack by knowledgeable adversaries?¶ A third risk comes from sabotage or terrorist activity, whether local, trans-national, or state-sponsored, and including both conventional and nuclear attack. Nuclear attack could take place either directly or through the generation of a high altitude electromagnetic pulse (EMP). The grid is a relatively easy target for a terrorist. It is brittle, increasingly centralized, capacity-strained, and largely unprotected from physical attack, with little stockpiling of critical hardware. Although the system is designed to survive single points of failure, increasing demand on the system and increasing network constraints make multiple points of failure more likely. These are difficult to anticipate and more likely to result in cascading outages and catastrophic outages that cover large areas for long periods of time. Network Single Points of Failure (NSPF) are abundant. High voltage transformers, breakers, and other long-lead time items are particularly critical system elements.31 They can be easily targeted and destroyed. Grid sections could be taken down for months even if replacement transformers and breakers could be found; or for years if certain components need to be newly manufactured and transported. There are only limited backups located around the country—generally co-located with operating equipment. For some of the largest equipment, there is no domestic supply and only limited overseas production capacity which is fully booked years ahead. 32 For example, 765 kV transformers are manufactured only by one company in Canada. Armed with the right knowledge, a small number of people could shut down electricity over significant areas for an extended period of time, including power to critical DoD missions. The grid is not designed to withstand a coordinated multi-pronged or wide-area attack.33 The Task Force noted that attacks on the grid are one of the most common and effective tactics of insurgents in Iraq, and are increasingly seen in Afghanistan.34¶ In addition to physical attacks on the grid, there is the potential for cyber attacks. U.S. grid control systems are continuously probed electronically, and there have been numerous attempted attacks on the Supervisory Control and Data Acquisition (SCADA) systems that operate the grid. None have yet resulted in major problems in the U.S., but the potential exists for major outages in the same way successful hackers can disrupt computer networks.35 Further details regarding the potential for deliberate attacks to the grid and their potential consequences are contained in a classified annex to this report.¶ A fourth risk comes from interruptions in supplies to generating plants, which can be caused by natural events, infrastructure failures, attack or even market forces. This occurred in California during 2000 and 2001 when supplies of natural gas were interrupted and forced a reduction in electricity generation.36 Approximately 20% of U.S. electricity is generated by natural gas and market prices have swung wildly over the past several years.37 Approximately 52% of U.S. electricity is generated by coal and transportation routes that move coal from mines to generating plants are sometimes remote and lacking in alternatives. Critical rail lines or bridges could be taken out by determined saboteurs. For example, in May 2005, 43 rail cars came off the tracks. The disruption to coal deliveries caused prices to spike, and raised electricity prices by 6% nationally, according to the Bureau of Labor Statistics. The 100 mile length of rail line through Wyoming that carries the output of the Western coal belt to power plants is the most heavily traveled in the nation.38 So in addition to risks from grid outage, there are risks to the supply chain that enables the grid to work—not least from electricity supply failures themselves, which could disable the pipelines and controls used by other forms of energy, notably oil and gas.

#### Collapses drone operations in Afghanistan

Aimone 2012 (Michael Aimone, Director¶ Business Enterprise Integration¶ Office of the Deputy Under Secretary of Defense, September 12, 2012, Testimony Before the House Committee on Homeland Security¶ Subcommittee on Cybersecurity, Infrastructure Protection and Security Technologies, http://homeland.house.gov/sites/homeland.house.gov/files/Testimony%20-%20Aimone.pdf)

DoD’s facility energy strategy is also focused heavily on grid security in the name of mission assurance. Although the Department’s fixed installations traditionally served largely as a platform for training and deployment of forces, in recent years they have begun to provide direct support for combat operations, such as unmanned aerial vehicles (UAVs) flown in Afghanistan from fixed installations here in the United States. Our fixed installations also serve as staging platforms for humanitarian and homeland defense missions. These installations are largely dependent on a commercial power grid that is vulnerable to disruption due to aging infrastructure, weather-related events, and potential kinetic, cyber attack. In 2008, the Defense Science Board warned that DoD’s reliance on a fragile power grid to deliver electricity to its bases places critical missions at risk.1

#### Drones key to contain insurgents

Dale 2011 (Catherine Dale, specialist in international security at the Congressional Research Service, March 9, 2011, “War in Afghanistan: Strategy, Operations, and Issues for Congress,” http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA542626)

By 2008, President Bush had reportedly authorized U.S. military cross-border operations into Pakistan, by ground or Predator unmanned aerial vehicles (UAV).210 Neither the Central Intelligence Agency nor the U.S. military officially confirms the use of the drone strikes.¶ To be clear, NATO’s policy for ISAF does not include cross-border strikes. Asked in July 2008 whether the Alliance would go after militants in Pakistan, Secretary-General Jaap de Hoop Scheffer said, “My answer is an unqualified ‘no.’ We have a United Nations mandate for Afghanistan and that’s it. If NATO forces are shot at from the other side of the border, there is¶ always the right to self-defense but you will not see NATO forces crossing into Pakistani territory.”211¶ According to publicly available reporting, based primarily on accounts from people on the ground, a major early focus of the drone strikes was the South Waziristan agency in the FATA, long the home base for the TTP, the Pakistani Taliban umbrella organization; a drone strike killed TTP leader Baitullah Mahsud in August 2009. Subsequently, the focus of the drone strikes shifted to the North Waziristan agency, understood to be the stronghold of the Haqqani network, one of the major insurgencies active in Afghanistan. Observers have suggested that under the Obama Administration, the frequency of the drone attacks has increased markedly.212¶ Senior ISAF officials have noted that cross-border attacks have yielded big operational and tactical benefits for the campaign in Afghanistan—by causing the insurgent networks to feel disconnected, and by prompting local residents in Pakistan to want al Qaeda and other outsiders to leave their communities.213

#### Even after 2014 drones key to contain Taliban and prevent Afghan collapse

Singh 10/3 (Colonel Ajay Singh, October 3, 2012, “Afghanistan 2014 and Beyond,” South Asia Defence and Strategic Review, http://www.defstrat.com/exec/frmArticleDetails.aspx?DID=368)

When President Obama announced the termination of military operations in Afghanistan post 2014, he followed it up by saying, “In the pre-dawn darkness of Afghanistan we can see the light of a new day”. But then, perhaps he was just using his superb powers of oratory and his felicity with the language to justify the termination of US military operations in Afghanistan from December 2014. There is a grey darkness in Afghanistan now a prolonged dark interspersed with flashes of bombings and attacks. Yet, is this period - an uncertain, tentative period before the US completes its withdrawal, the dark of a pre-dawn era or the even more chilling darkness of another long, desolate night.¶ President Obama does seem to put timelines on his operations and so far most of these timelines have been adhered to. In July, at the NATO Chicago conference he announced that the US and NATO will end all combat operations by December 2013 and withdraw all troops less those engaged in essential security and advisory roles by 31 December 2014. This effectively draws the curtain on America's longest and most expensive war, one which has cost over $ 3 Trillion and claimed over 3600 lives. The fatigue of 12 years of inconclusive conflict is telling on the US and its allies. No President, especially in an election year, wants to face a mandate which is deeply against an unpopular war. Perhaps the timing of President Obama's withdrawal announcement has a lot to do with the US elections in November 2014. ¶ Yet it is not a complete withdrawal as such. The US will leave behind an estimated 20,000-30,000 troops in training and advisory duties and still retain some of its major bases to assist the Afghan National Security Force in counter terrorist actions. Bagram and Shamsi Air Fields will also be retained to launch continual drone attacks in Afghanistan and Pakistan. But will it suffice to ensure the stability of the war-torn nation and prevent it from slipping into chaos. Many fear a repeat of the post Soviet withdrawal period a vacuum of power that plunged the nation in to a civil war and brought the Taliban into power. The scenario in Afghanistan, post 2014, may not be so bleak, but the US withdrawal will definitely cause a power shift that will impact the entire region.¶ For one, the US aims in Afghanistan are not really completed. When it rushed into Afghanistan to extract retribution for the 9/11attacks, the immediate aim was the destruction of Al-Qaeda and its Taliban allies. Today it can claim to have virtually removed Al-Qaeda from Afghanistan. Osama Bin Laden has been spectacularly eliminated. Virtually the entire leadership has been wiped out in a series of drone attacks. Only the spiritual head, Al Zawahiri remains. Many of their cadres have shifted base towards Somalia and Yemen. Yet if Al Qaeda has been contained to a great extent, the Taliban is as active if not much more, as ever. The US policy of focusing exclusively on Al-Qaeda let the Taliban regroup after its initial reverses. Today, the major militant presence in Afghanistan is not of Al Qaeda, but the Taliban, which is gearing up for the post US withdrawal scenario. Gradually they have taken over the areas of Helmand, Ghazni and Anbar which have been vacated by NATO troops. As they consolidate, the fear is that, post 2014, they will simply step back into Afghanistan and regain power in the same manner that they did in the wake of the Soviet withdrawal.¶ The signs do seem to indicate that the Taliban are gearing up for a sustained offensive that will set the grounds for them to eventually come into power after the US withdrawal. There has been an intensification of attacks significantly almost all by the Taliban and none by Al Qaeda - in the period following the announcement of the withdrawal. There have been 34 major attacks with the deadliest being on the eve of the Id festival which killed over 50 Shai worshippers in their shrines. This is a grim reminder of the Taliban's propensity to target the minority Shia community, especially the Hazaras. The increase in their attacks also corresponds to the reduction in operations launched by NATO forces. As part of the pre-withdrawal plans, most operations, especially night operations are now conducted by the Afghan National Army and local police, with US forces in a advisory or supporting role. The linchpin of the US policy post 2014 is to develop the Afghan National Security Force to be strong enough to ensure the security of their own country. But at the moment, in spite of the huge investments in training and equipping the Afghan army, it does not seem to be up to the task. It was estimated that an Afghan Security Force of 3,52,000 would be required to ensure continual security. This figure was pruned down to 2,30,000 because of the exorbitant costs of $ 6 billion per year. (With the new figure, the price tag will drop to $ 4 billion per year). This parsimony may be a mistake in the long term. Even with 1,30,000 US troops already in the country, the Afghan Security Forces have been unable to curb the Taliban. After the withdrawal, even with a residual force of 20-30000 US troops, will the ANSF be able to resist a full-fledged Taliban offensive to take over their country.¶ There are other ominous signs. Taliban infiltration in the Security force is fairly rampant. There has been a series of attacks NATO troops from their local allies in the Afghan Security force. These “Green on Blue” attacks have claimed 45 NATO soldiers and wounded 69 others in this calendar year itself. Most of these attacks have been attributed to Taliban infiltration in the security forces. In fact, just last week NATO suspended training of the Afghan Local Police after a series of 12 insider attacks in the month of August alone. All this is not a happy augury for the capabilities of the Afghan Security Force to hold their country together post 2015, though in the long run, Afghanistan's security must be ensured by Afghans themselves. ¶ The US is taking pains to ensure that they still have a continual stake in Afghanistan's security so that it is not simply abandoned post 2014. The US signed a Strategic Partnership Agreement with Kabul that is valid for a decade after 2014 and assures it of continual US support. Afghanistan was also granted Major Non NATO Ally status in July thus giving it entry into a select club that includes Israel, Japan, Pakistan and South Korea. This will provide Afghanistan special privileges such as access to military equipment, training facilities and special grants. Surveillance and fire power capabilities will be provided. Drone and air attacks on militant hide outs on both sides of the Durand Line will continue. But in spite of the supporting role that the US will still play, will Anti-Taliban operations have the same momentum- especially when the operations will now be conducted by the Pushtoon dominated military against their own tribal brethren.

#### Afghanistan failure causes WWIII great power war

Fox 2011 (Robert Fox, international reporter and associate at the Corriere della Sera in Milan, July 12, 2011, “Afghanistan: If we’re not careful, WW3 is imminent,” The Week, http://goo.gl/PlUTV)

There are growing fears that a speedy withdrawal of western troops from Afghanistan, accompanied by a fudged deal to bring the Taliban back into power in some sort of coalition, could trigger another dreadful round of civil war. And, given the meddling already undertaken by neighbours such as Pakistan and Iran, this civil war could quickly become a regional war. This in turn could morph into a contest of global significance between India and China and their proxies and allies. In short, welcome to the Third World War in the 21st century. There is a list of concerns which suggest this might happen. First there is the endemic corruption in Kabul under President Karzai. This is about to be highlighted by the IMF's attempt to sort out the crash of the Kabul Bank, with a loss of some $700 million. The problem is not just the Kabul bank, but banks in general across Afghanistan, which the kleptocrats of Kabul seem to regard as their personal piggy banks. Then there is Karzai himself, who seems to be trying to bend or break the constitution so he can run for a third term in two years' time – banned under the present rules. The armed services and police are also a concern. Though recruiting and training have made huge strides, with more than 250,000 under arms now, there are worries about the continuing imbalance between the different ethnic groups, with the Tajiks and Hazara over-represented, and the recruiting of southern Pashtuns still limping. The danger is that the Afghan army will split on ethnic lines when Afghanistan gains full control of its security in 2015. In a civil war, the southern Pashtuns would turn to the Pakistan army and ISI intelligence service, who are more deeply involved in backing Islamist militants than previously thought, according to some devastating reports for the New York Times by Carlotta Gall.

#### Civil war gives Al Qaeda a foothold causes Pakistani state failure

Felbab-Brown 2012 (Dr. Vanda Felbab-Brown, Fellow in Foreign Policy at the Brookings Institution, January 2012, “The Crucibles and Dilemmas of US State Building in Afghanistan,” South Asia Journal, Issue 3, http://goo.gl/ZohKo)

Yet in the context of the collapsing legitimacy of the national government, heightened ethnic tensions, and increasing influence of problematic powerbrokers, many Afghans also understand that it is the presence of the international forces that is keeping the country from exploding into a full-blown civil war. The consequences of such an outcome and more broadly of a failure to leave a stable government behind in Afghanistan would be dire for the United States. Although al Qaeda’s capabilities in Afghanistan have been diminished, should parts of Afghanistan fall back to the Taliban – an inevitable outcome during a civil war under the current circumstances – violent jihadi groups would likely be able to reestablish significant presence in Afghanistan and once again plot dangerous terrorist attacks. Equally significant, an unstable Afghanistan with strong jihadi terrorist presence would also further weaken the already-fragile Pakistan. Pakistan-oriented salafi groups could use Afghanistan as a safe haven for actions in Pakistan. Pakistan’s military and intelligences services, preoccupied with minimizing India’s influence in Afghanistan and with Pakistan’s perceived encirclement, would likely be even more reluctant to confront Pakistan’s own militant groups forcefully, jeopardizing the country’s internal security. As the 2014 withdrawal of the majority of U.S. combat troops from Afghanistan looms ever closer, the question for the United States and the international community is whether they can establish the security and economic superstructures necessary to improve governance in Afghanistan. Underlying that question is a core uncertainly as to whether the internationals still can induce the Afghans to move away from immediate short-term power and profit maximization and resurrect their confidence in a better and stable future.

#### Pakistani militants cause Indo-Pak war

Vira and Cordesman 2011 (Varun Vira and Anthony H. Cordesman, “Pakistan: Violence vs. Stability,” CSIS, http://goo.gl/ZyS4q)

These conflicts have been augmented by violence and tensions inside the rest of Pakistan. In south Punjab, a historical hotbed of militancy, various groups once firmly tethered to state policy have begun to splinter and migrate to the tribal areas. These groups have considerable experience in combat and knowledge of the weapons and technologies needed for asymmetric warfare. They have joined tribal militant groups, and assisted them in bringing terrorist violence into the previously insulated urban centers of the Punjab and the Sindh. In Karachi, a key economic engine of Pakistan, ethno-sectarian violence has risen to new levels with the real danger of a slide back into the communal violence of the early 1990s. Such a reversal would be catastrophic for stability, exacerbating already chronic economic woes, whilst providing fodder for the sectarian and ethnic drivers of conflict in Pakistan. In Baluchistan, a fifth separatist insurgency has become more active since 2004, and is closely linked and influenced by regional geopolitics. The Baloch insurgency is distinct from other conflicts, primarily in that Sunni-Deobandi philosophies play little role, but it nonetheless benefits from many of the same drivers, including widespread impoverishment, chronic underdevelopment and alienation from mainstream Pakistan. The Challenges of External Relations Pakistan‟s focus on the challenge from India affects virtually every aspect of its external relations. This plays out in Afghanistan in the form of a competition for influence over the Afghan government where Pakistan attempts to use its ties to the Afghan Taliban, Haqqani network, and other movements to ensure its influence over the future of Afghanistan and to limit any threat of Pashtun independence movements. The end result is a fundamentally different perception of Pakistan‟s national interest from the US focus on Afghan security and stability. It is the reality behind the rhetoric of “ally” and “strategic partner” that has led to constant tension with the US. Cross-border violence into Afghanistan is a major irritant, and has resulted in deteriorating US-Pakistani relations. Similarly, the Indo-Pakistani border is one of the most tense on the planet, and secured on both sides by nuclear weapons. Cross-border violence into India can greatly escalate the prospects of large-scale war. Many Kashmiri militant groups have splintered, as in south Punjab, and the growing risk of militant proxies operating autonomously cannot be discounted, particularly to divert Pakistani military attention away from the tribal areas.

#### Guaranteed escalation: Miscalc, flight times, devolved authority, no stable deterrent

Yusuf 2011 (Moeed Yusuf, South Asia adviser at the United States Institute of Peace Center in the Center for Conflict Analysis and Prevention, January 25, 2011, “Stability in the Nuclear Context: Making South Asians Safe,” Jinnah Institute, http://goo.gl/FwYXH)

Crises between Pakistan and India represent a quantum leap in terms of the induction of instability inducing factors relevant to the nuclear calculus. To begin with, every crisis carries with it a realistic possibility of uncontrolled escalation leading to a deliberate or inadvertent nuclear strike. Not to mention, in the South Asian context, escalation represents uncharted territory, a dangerous proposition given that no escalation control mechanisms have been institutionalized. Yet, crises remain highly likely for more than one reason. There are outstanding contentious issues between the two sides which keep forcing them to the verge of a diplomatic breakdown. Moreover, both sides seem to believe that limited aggression under the nuclear umbrella is permissible and will not warrant a nuclear response. India’s limited war doctrine, Cold Start, formalizes this belief while Pakistan’s propensity to employ non-state actors on Indian soil in the past underscores its traditional propensity for similar risk taking. 12 In the absence of clearly defined nuclear red lines, it is very difficult to determine just what constitutes as ‘limited aggression’ for either side. A number of simulations the author has been part of point to wide divergence in how the two sides view the situation. Finally, nonstate actors are no longer playing to the tune of the Pakistani state and can engineer a Pakistan-India crisis on their own, Mumbai being a pertinent example. Most analysts suggest that a repeat of such an episode will see some form of Indian aggression followed by a Pakistani counterresponse; 13 what follows is anybody’s guess but it may well entail further escalation at a swift pace during which either side may cross the other’s nuclear red lines. In an escalated conflict, survivability of Indian and Pakistani nuclear arsenals shall remain intact and pre-emption against the nuclear forces would still be a far cry, even from the stronger party, India. Given Pakistan’s mobile delivery systems and a significant number of warheads, it would be impossible for New Delhi to guarantee that the entire arsenal will be successfully neutralized in a pre-emptive strike. This would hold even if Pakistan deployed its weapon systems during the course of an escalation. That said, there are two potential dangers in crisis situations. First, Pakistan and India use dualpurpose missiles and air craft for delivery. In the absence of advanced early warning capabilities, an incoming aircraft or missile could well be perceived as an attempt at pre-emption. The defender may panic and consider launching its own strike before it is too late. Second, it is worth pointing out the vulnerability of Pakistan’s nuclear decision making chain of command. Pakistan’s entire government and military top brass sit within 50 miles in Islamabad/Rawal Pindi and could potentially be neutralized in a pre-emptive strike that seeks to decapitate the country’s nerve center. For those who see this as rather farfetched – the author included – the concern is not as much that such an Indian strike would materialize but that Pakistani decision makers would have considered this possibility in their own contingency planning and taken precautionary measures. In the absence of a bilateral agreement that outlaws pre-emption of the nuclear chain of command, Pakistan may consider dispersing its leadership geographically or even devolving authority of launch to a lower level ex ante. A dispersed NCA amidst the fog of war would find it very difficult to make an informed decision while devolved authority would add to the risk of a premature or miscalculated launch. The challenge of preventing unauthorized or inadvertent launches increases multifold and crystallizes the kind of dangers India and Pakistan may end up subjecting their populations to in crisis situations. Their command and control structures may be robust enough to hold in peace time but the doctrinal and geographical asymmetries transform the equation under the stress of crises. For one, even in the absence of a sea-based capability which has to be constantly deployed for full effect, both sides would inevitably contemplate mating and subsequently deploying their ground and air based assets as a crisis escalates. This implies transportation, wide dispersal, ground preparations which may be misconstrued as an imminent attack by the adversary, and even predelegation of authority to launch. Pakistan, espousing ‘First Use’ and more vulnerable to total annihilation, will be more susceptible to these pressures. 14 In any case, all this adds significantly to the demands on the command and control structure: it necessitates safe transportation in an accident-prone, hot and dry South Asian climate, robust and authenticated communication systems and fool proof, redundant launch protocols under stressful situations. It remains unclear how much confidence the two sides have in their respective mechanisms but the very fact that they have never been tested in real life conditions make malfunctions quite likely if an escalated conflict is experienced. The possibility of a miscalculation in the South Asian case is also substantial given the geographical contiguity between Pakistan and India. The Cold War rivals had the luxury of sitting thousands of miles away and factoring in a decision time of over half an hour in any eventuality. In South Asia, the flight times for missiles between major urban cities are 5-15 minutes. In essence, there is virtually no time for informed decision making; the possibility of making overly conservative judgments about the other side’s intentions during a crisis, and subsequently of premature decisions, is therefore much greater than during the Cold War. This is especially true given that decision makers on both sides already suffer from acute cognitive dissonance about the other. Interestingly enough, even the usually cited remedy, an advanced early warning capability, may not deliver in South Asia; Pakistan and India are geographically too close for the technology to be able to work meaningfully. 15

#### Independently grid failure destroys reachback support

Robyn 2010 (Dr. Dorothy Robyn, Deputy Under Secretary of Defense for Installations and Environment, January 27, 2010, testimony before the Senate Homeland Security and Governmental Affairs Committee Subcommittee on Federal Financial Management, Government Information, Federal Services and International Security, online)

A final challenge is grid vulnerability. DoD’s reliance on a fragile commercial grid to deliver electricity to its 500-plus installations places the continuity of critical missions at risk. Most installations lack the ability to manage their demand for and supply of electrical power and are thus vulnerable to intermittent and/or prolonged power disruption due to natural disasters, cyberattacks and sheer overload of the grid. Because of U.S. combat forces’ increasing reliance on “reachback” support from installations in the United States, power failures at those installations could adversely affect our power projection and homeland defense mission capability. For example, we operate Predator drones in Afghanistan from a facility in Nevada and analyze battlefield intelligence at data centers here at home. This means that an energy threat to bases at home can be a threat to operations abroad.

#### Reachback key to 4GW and counterinsurgency effectiveness

Radzikowski 2008 (Phillip Radzikowski, Captain in the United States Army currently working at the Pentagon, previously served with the 4th Stryker Brigade Combat Team, 2nd Infantry Division, as the brigade assistant S-3, then as a liaison officer with the COIC for 14 months during the brigade’s deployment to Iraq, 2008, “‘Reach-Back’—A New Approach To Asymmetrical Warfare Intelligence,” Association of the United States Army, http://www.ausa.org/publications/armymagazine/archive/2008/12/Documents/FC\_Radzikowski\_1208.pdf)

Reach-back support is a relatively new concept. It provides operational warfighting units—battalions and brigades—the opportunity to reach outside of their traditional avenues of information flow and use national intelligence community assets to gather information to fill “gaps” in tactical intelligence.¶ Traditionally, company commanders develop the ground situation through patrol reports, atmospherics and general situational awareness. Their reporting tells the true story on the ground. The battalion intelligence officer and his shop process, track and attempt to identify patterns of insurgent networks and groups that will help drive targeting operations. Ultimately, targeting is refined at the brigade and battalion levels and then executed at the company level. The brigade MICO expands upon the battalion S-2’s assessments and evaluations and creates broader network analysis of insurgent group development. The MICO has the added responsibility of incorporating the broader intelligence community’s assets into the fight. Traditionally, this works. The problem is that, traditionally, the U.S. Army has not been fighting an insurgency.¶ During combat with an insurgency, the battlefield transforms at an inconceivable speed. Enemy tactics, techniques and procedures (TTPs) evolve, networks move and key individuals change rapidly. For companies, battalions and brigades to keep up and stay ahead of the insurgent execution curve requires the support of an intelligence network that can gather and leverage national information assets immediately and effectively. Reach-back support is the answer.¶ Reach-back support is the ability for forward-deployed units (battalions and brigades) to refer specific intelligence-oriented questions to continen- tal United States-based agencies for support. The U.S. government’s intelligence community has an enormous amount of collected information, including relevant warfighting information, which is compartmentalized for added security. This means that if an individual performing an intelligence function doesn’t know about the avail- ability of certain information, then he or she cannot use it—that poten- tially valuable information is rendered useless.¶ With reach-back support, when members of a tactical unit identify a gap in their own intelligence, then that gap becomes a question. The unit then poses the question to a reach-back sup- port agency that will have a team of in- telligence analysts address that specific problem and produce a “product” that addresses that specific gap.

#### Key to Afghanistan and all asymmetric conflicts- We control impact uniqueness these are the wars of the future

Barno 2011 (David Barno, Ret. Lt. Gen., senior adviser and senior fellow at the Center for a New American Security, former U.S. commander in Afghanistan, March 22, 2011 “Military Power in a Disorderly World,” World Politics Review, http://www.worldpoliticsreview.com/articles/8259/military-power-in-a-disorderly-world)

The opening acts of the 21st century have fundamentally challenged long-held notions of military power. The past decade has unveiled not only the disruptive power of terrorist groups with global reach, but also the ability of low-budget insurgent groups to directly confront the best military forces of the West -- with surprising success. Moreover, recent revolutionary events across the Arab world have demonstrated the limits of military power when facing mass popular uprisings. Disorder, chaos and violent extremism seem on course to replace state-on-state violence as the most common forms of conflict in the new century. Given this new security environment, the U.S. military must begin to play a larger role in conflict prevention in order to fully realize its value, commensurate with its cost, in this new disorderly world. ¶ The attacks of Sept. 11, 2001 -- launched not with tanks, warplanes or intercontinental missiles, but with commercial airliners -- were the most deadly assaults on U.S. soil since the American Civil War. Unconventional wars in Afghanistan and Iraq have also rattled the conventions of military thought, as insurgents equipped with inexpensive weaponry have inflicted prolonged attrition on U.S. forces. The U.S. military has spent billions of dollars defending against these new, low-cost threats, but the West and its military thinkers are still grappling with the full security implications of these dramatic upheavals in traditional military power balances. The era of asymmetric warfare has arrived with a vengeance. ¶ Recent revolutionary events in the Arab world -- starting in Tunisia and rapidly spreading to Egypt, Libya, Yemen and Bahrain -- have further highlighted today's shifting balance of power. While the outcome of these upheavals is still unclear, they reflect a new sort of asymmetrical power wielded by popular movements and expressed through mass street demonstrations. These spontaneous movements -- organized and enabled by modern technologies such as cellphones, Twitter and Facebook -- have directly challenged the "hard power" of state militaries, albeit with mixed results to date. Yet at the same time, the West's hard-power reponse to the Libyan regime's harsh backlash against its people has further demonstrated that conventional military power remains a powerful tool -- in this case employed to enforce the will of the broader international community as expressed by U.N. resolutions. ¶ Another version of this asymmetric power shift has played out against Western forces in the wars for Afghanistan and Iraq. Despite successful high-tech U.S. military campaigns at the outset of each conflict, the enemy quickly adapted with inexpensive forms of asymmetry, in the shape of attacks by car bombs, suicide vests and IEDs, and with clashes often captured and disseminated via cellphone videos. The cost to the insurgents of these unconventional weapons is minimal, but the U.S. defensive response to protect its army is staggering. The multibillion-dollar fleet of heavily protected MRAP vehicles designed to protect U.S. soldiers against IEDs is just one example. This reflects in part an insurgent strategy of "cost imposition," whereby the enemy attempts to drive the costs of the war in lives and fortune to a point where it no longer makes strategic sense for the U.S. to pursue its aims. ¶ The evolving nature of global threats echoes the tactical asymmetry found on the ground in Afghanistan and Iraq. Where the 19th and 20th centuries were dominated by a Westphalian order of nation-states, nonstate actors have moved to center stage in today's global order. This is a "flat world" of multinational companies, interwoven crime syndicates, global special interest groups, Internet-fueled extremist ideologies and terrorist networks. In many ways, the comfortable order and rule of law represented by the nation-states seated at the U.N. is fading, overtaken by a complex mix of other competitors for power. Of even greater concern, the destructive power accessible to even tiny groups is skyrocketing, rendering both deterrence and containment of fringe actors exceedingly difficult. ¶ The role of U.S. military forces in this new era of global disorder requires a careful assessment. The U.S. Department of Defense has traditionally analyzed foreign military capabilities and assigned priorities based upon their potential threat to U.S. interests. In today's world, a threat-calculus based upon conventional military capabilities makes less sense, as does the impetus to simply build a U.S. military to confront these nation-state threats. In a disorderly world, terrorist groups, transnational criminals or state failure may generate a serious threat to U.S. vital interests as readily as a cross-border invasion. In this environment, a U.S. military too deeply invested in conventional military capabilities may be poorly positioned for other strategic challenges facing the United States. But if it seems obvious that the next U.S. military must be able to more than just fight or deter other armies, navies and air forces, exactly what else it should be doing is less clear.¶ In many ways, the current "supply of security capital" by the United States is woefully out of balance with the "demand signal" driven by threats in this new disorderly world. A U.S. Foreign Service with fewer than 8,000 diplomats to cover the globe contrasts with a U.S. Marine Corps of 200,000 leathernecks. A foreign aid and development budget of less than $60 billion competes with a base defense budget that exceeds $550 billion a year. But the bureaucratic realities of Washington and the U.S. Congress give scant hope that any major realignments between U.S. government departments will occur. This is a fundamental dose of reality: Even in an era of fiscal austerity, Defense will continue to have a disproportionate share of U.S. government discretionary spending. This recognition should drive new thinking on maximizing those assets.¶ One outcome should be clear: The U.S. military must begin to play a larger role in global conflict prevention in this new disorderly world. Military forces based largely in the United States waiting for a war to break out are simply an unaffordable resource drain in a financial environment where the annual interest payments on the nation's debt will exceed its $550 billion defense budget by the end of this decade. The U.S. military is no longer a sound investment if it only defends and deters -- it must now also actively help prevent conflicts and stabilize key regions of the world where instability can threaten vital U.S. interests. All three missions -- defend, deter, prevent -- are important, and the next U.S. military should be organized, trained and equipped to actively engage in each. ¶ Making this change will require a strategic reset in both U.S. military and diplomatic thinking. Fortunately, the nation-building and counterinsurgency experiences of the past 10 years have prepared the military well for this adjustment. Building on this experience makes sense. This new task of "selective stabilization" can better align the military with U.S. diplomatic missions abroad in at-risk areas and leverage a broader array of U.S. power. Yet this logic will be strongly opposed by those worried about a further "militarization of foreign policy" -- while failing to recognize that the diplomat's traditional remit of "represent, report and negotiate" is shrinking in today's disorderly world. Fewer regions will demand these traditional diplomatic talents alone, and many more will require new skills in integrating U.S. hard and soft power in potential conflict zones. ¶ Demographic and natural resource trends signal that violent upheaval and the threat of instability will menace ever greater parts of the world, especially in the Middle East, Africa and Central and South Asia. U.S. vital interests in these regions are less threatened by interstate war than by the risks of internal extremism, instability and terrorism. Stabilizing the most important of these regions is an essential new task, and one that will require the combined talents of State and Defense.

#### Most likely nuclear escalation

Richards 2005 (Dr. Chet Richards, J. Addams & Partners July 12, 2005, “Dear Mr. & Ms. 1RP: Welcome to the 21st Century” http://www.zmetro.com/pdf/2005/07/welcome\_21st\_century\_v4.pdf)

Beginning with Mao Tse-Tung, and continuing to the present day, insurgency and other forms of non-state warfare have become more potent and much more dangerous in at least two ways: Groups other than states – that is, multinational organizations ranging from alQa’ida to the narcotrafficking cartels – are beginning to acquire high levels of sophistication in organization and in the information technologies that allow them to plan and conduct operations while widely dispersed.4 These same groups increasingly have the financial wherewithal to acquire virtually any type of weapon, from small arms to chemical and biological to nuclear, that they need to carry out operations. The only exceptions are conventional weapons such as tanks, combat aircraft, and fighting ships that require large facilities to support them, but are primarily of use only against other military forces armed with the same types of weapons. They are using their new capabilities not only to fight local governments, as was the case with traditional insurgencies, but to attack distant superpowers as well. Because they can’t field sizable amounts of conventional military hardware, fourth generation (4GW) forces will never try to achieve victory by defeating the military forces of a state in stand-up battles. Instead, they will try to convince their state opponent that it is simply not worth it to continue the fight. Successful 4GWcampaigns in modern times would include those against the French in Algeria, the US in Vietnam and the Soviet Union in Afghanistan, where the insurgents never defeated the foreign armies in any major battle, but eventually persuaded the governments back home to withdraw them. In a well run 4GW campaign, everything the 4GW forces do – including fighting and usually losing the occasional major battle – will support this goal. Persuading governments to withdraw forces, rather than defeating them on the battlefield, is an “information age” goal.6 To achieve the necessary level of persuasion, practitioners of 4GWwill use every information tool they can find to spread their messages to the enemy population and decision makers: Our cause is just and no threat to you There’s nothing here worth your effort and sacrifice Your troops are becoming brutal and your tactics ineffective If you keep it up, you’re going to bleed for a very long time So why not just leave now? As we enter the 21st Century, 4GWorganizations are becoming adept at spreading such messages through new channels, such as global news services (CNN, Al Jazeerah) and of course, web sites, blogs, and mass e-mailings. What you may not be aware of is that 4GWorganizations are also using the latest information tools to communicate with each other and to share information, particularly about what is and is not working (what the military calls “lessons learned.”)7Messages may be encrypted, or sent using code phrases, or even hidden in web site images, a practice called steganography. As with so many information age techniques, instructions for encryption and steganography are floating all over the Internet. Information age techniques are ideal for loose networks of highly motivated individuals, which is a typical form of organization for 4GW groups. Modern information warfare places a higher premium on creativity and innovation than it does on things 4GW organizations typically don’t have, like massive forces, volumes of regulations, and expensive hardware.8 By emphasizing speed and innovation, 4GWgroups can often invent new techniques faster than more structured and bureaucratic organizations such as the Pentagon.9 First responder organizations themselves may be targets of information warfare operations. The information systems of 1RP organizations, including operational systems as well as payroll and administrative, might make attractive targets in coordination with a physical attack. This is a real threat: Many members of al-Qa’ida and affiliated groups are from the educated classes in their countries, were technically trained (Osama bin Laden is a civil engineer), studied and lived in the West, and are capable of conceiving and managing such attacks. There are other advantages to the non-state player from operating in a loose social network. Obviously a social network is harder to find than an organization that requires a fixed infrastructure and wears uniforms. But perhaps most significant in wars of the weak against the strong, networks are highly resilient, so killing their leaders and destroying portions of the network can leave the rest to regenerate under new leadership in different locations.1112 So long as enough of the network survives to pass along the ideology and culture, along with lessons learned, the new network will likely be more dangerous and more resilient than its predecessor, much like the more resistant forms of bacteria that can emerge as a result of mis-use of antibiotics. In fact, the European resistance movements during World War II exhibited just this kind of toughness and survivability. In addition to its networked structure, there are other attributes of 4GW that should concern the 1RP (editor’s note: First Responder) community. The first is its transnational nature. An operation can be approved in Afghanistan, planned in Germany, funded in the Middle East, and carried out in the United States, as was the 9/11 attack. There is no one state we can retaliate against, nor one nationality we can profile against. Further, because it is transnational, it can involve networks of networks, such as alQa’ida attempting to cooperate with narco-trafficking organizations in Latin America to trade access to potential base areas and help in infiltrating the US for assistance in distributing narcotics.13 The upshot is that the lack of identifiable 4GW activity may not be an indication that an attack is not in the works, if the su4rveillance is being conducted by someone else. One of the more unpleasant aspects of insurgencies that will likely carry over to 4GWis their use of disguise, camouflage, and the other tools of deception. Because they are militarily weak, 4GW groups survive not by confronting superior firepower but by staying out of its sights. Those that have survived have become masters of concealment and deception, making it even more difficult to pick up early warning signals. This is why simple ethnic or national profiling will not work – 4GWteams will go to great lengths not to be identified as members of the groups in question. Skin color, eye color, and hair color are trivially easy to change, and the criminal infrastructure that already exists in most developed countries makes it simple to get drivers licenses or other means of identification (as any victim of identity theft can attest.) In a pinch, one can always recruit a member of a non-targeted group, such as the “shoe bomber,” Richard Reid, and it would be a mistake to assume the next batch will be as poorly trained. If we’re going to let Icelanders (or grandmothers or parents with toddlers, or whoever) through with less security screening than Saudis or Pakistanis or Jordanians, see if you can guess what the next aircraft hijacker will look like. Another unpleasant fact of 4GW is that like insurgency from whence it sprang, 4GW will be a protracted struggle.14 As Henry Kissinger once noted, if the guerillas don’t lose, they win, so they have all the motivation they need to keep going for as long as they think it will take.15 First responders should not draw comfort from what seems like a pause in attacks – operational cycles can stretch over several years, and a fourth generation war can span decades.16 But the most unpleasant fact of 4GW is that in it, we have finally reached the level of total war.17 In the eyes of the 4GW attacker, there are no civilians and no noncombatants. A concern for public relations offers the only reason for limiting the scope or violence of the attacks. What seems like “terrorism” to us, or senseless, random violence, may appear to the 4GW network as a legitimate way to persuade the foreign state government to withdraw, that is to stop the war. Such a strategy is nothing new. It was what Sherman had in mind during his marches through the South after the fall of Vicksburg (July 1863).18 In its local areas, the 4GW organization will spread the message that the foreign state has killed many civilians, which in a war of an advanced state versus a Third World country will often be true and will always be believed. What this means is that when a 4GW group decides to directly attack the United States or another state involved in “their” struggle, no level of violence, even nuclear, is ruled out. They may calculate that the message they are sending to the state government, to the state’s population, to undecided elements in other parts of the world, and to their own members is worth any backlash from the scenes of horror and brutality that ensue.

### 1AC Plan

#### Plan: The United States Federal Government should offer substantial competitive power purchase agreements for electricity from small modular nuclear reactors on military bases in the United States.

### 1AC Solvency

**No disads- Lots of SMR funding now, Obama’s committed**

Biello 2012 (David Biello, journalist at Scientific American, April 19, 2012, Missourians for a Better Energy Future, http://www.moenergyfuture.org/news/small-reactors-make-a-bid-to-revive-nuclear-power/)

Small may be beautiful for the nuclear power industry So argue a host of would-be builders of novel nuclear reactors. While the U.S. government has not given up on investing in large units that boast conventional designs, the Department of Energy has also announced the availability of $450 million in funds to support engineering and licensing of so-called "small modular reactors."¶ "The Obama Administration and the Energy Department are committed to an all-of-the-above energy strategy that develops every source of American energy, including nuclear power," said Secretary of Energy Steven Chu in a statement announcing the funding, which aims to get such modular reactors hooked into the grid by 2022. "The Energy Department and private industry are working to position America as the leader in advanced nuclear energy technology and manufacturing."

**But the DOD’s key- Only way to solve barriers and achieve commercialization**

Andres and Breetz 2011 (Richard B. Andres, Professor of national Security Strategy at the national War College and a Senior fellow and energy and environmental Security and Policy Chair in the Center for Strategic research, institute for national Strategic Studies, at the national Defense University, and Hanna L. Breetz, doctoral candidate in the Department of Political Science at the Massachusetts institute of technology, February 2011, “Small Nuclear Reactors for Military Installations: Capabilities, Costs, and Technological Implications,” National Defense University Strategic Forum, http://www.ndu.edu/press/lib/pdf/strforum/sf-262.pdf)

The preceding analysis suggests that DOD should seriously consider taking a leadership role on small reactors. This new technology has the potential to solve two of the most serious energy-related problems faced by the department today. Small reactors could island domestic military bases and nearby communities, thereby protect- ing them from grid outages. They could also drastically reduce the need for the highly vulnerable fuel convoys used to supply forward operating bases abroad.¶ The technology being proposed for small reactors (much of which was originally developed in U.S. Gov- ernment labs) is promising. A number of the planned designs are self-contained and highly mobile, and could meet the needs of either domestic or forward bases. Some promise to be virtually impervious to accidents, with design characteristics that might allow them to beused even in active operational environments. These re- actors are potentially safer than conventional light wa- ter reactors. The argument that this technology could be useful at domestic bases is virtually unassailable. The argument for using this technology in operational units abroad is less conclusive; however, because of its poten- tial to save lives, it warrants serious investigation.¶ Unfortunately, the technology for these reactors is, for the most part, caught between the drawing board and production. Claims regarding the field utility and safety of various reactors are plausible, but authoritative evalu- ation will require substantial investment and technology demonstration. In the U.S. market, DOD could play an important role in this area. In the event that the U.S. small reactor industry succeeds without DOD support, the types of designs that emerge might not be useful for the department since some of the larger, more efficient designs that have greater appeal to private industry would not fit the department’s needs. Thus, there is significant incentive for DOD to intervene to provide a market, both to help the industry survive and to shape its direction.¶ Since the 1970s, in the **U**nited **S**tates, **only the military** has overcome the considerable barriers to building nuclear reactors. This will probably be the case with small reactors as well. If DOD leads as a first mover in this market—initially by providing analysis of costs, staffing, reactor lines, and security, and, when possible, by moving forward with a pilot installation—the new technology will likely survive and be applicable to DOD needs. If DOD does not, it is possible the tech- nology will be unavailable in the future for either U.S. military or commercial use.

#### Only PPAs solve-

#### Incentivizes production- R&D projects don’t commercialize

Madia 2012 (William Madia, Chairman of the Board of Overseers and Vice President for the SLAC National Accelerator Laboratory at Stanford University, previously the Laboratory Director at the Oak Ridge National Laboratory, Spring 2012, “SMALL MODULAR REACTORS: A POTENTIAL GAME-CHANGING TECHNOLOGY,” Stanford Energy Club, http://energyclub.stanford.edu/index.php/Journal/Small\_Modular\_Reactors\_by\_William\_Madia)

Throughout the history of NPP development, plants grew in size based on classic “economies of scale” considerations. Bigger was cheaper when viewed on a cost per installed kilowatt basis. The drivers that caused the industry to build bigger and bigger NPPs are being offset today by various considerations that make this new breed of SMRs viable. ¶ ¶ Factory manufacturing is one of these considerations. Most SMRs are small enough to allow them to be factory built and shipped by rail or barge to the power plant sites. Numerous industry “rules of thumb” for factory manufacturing show dramatic savings as compared to “on-site” outdoor building methods. Significant schedule advantages are also available because weather delay considerations are reduced. Of course, from a total cost perspective, some of these savings will be offset by the capital costs associated with building multiple modules to get the same total power output. Based on analyses I have seen, overnight costs in the range of $5000 to $8000 per installed kilowatt are achievable. If these analyses are correct, it means that the economies of scale arguments that drove current designs to GW scales could be countered by the simplicity and factory-build possibilities of SMRs.¶ ¶ No one has yet obtained a design certification from the Nuclear Regulatory Commission (NRC) for an SMR, so we must consider licensing to be one of the largest unknowns facing these new designs. Nevertheless, since the most developed of the SMRs are mostly based on proven and licensed components and are configured at power levels that are passively safe, we should not expect many new significant licensing issues to be raised for this class of reactor. Still, the NRC will need to address issues uniquely associated with SMRs, such as the number of reactor modules any one reactor operator can safely operate and the size of the emergency planning zone for SMRs.¶ ¶ To determine if SMRs hold the potential for changing the game in carbon-free power generation, it is imperative that we test the design, engineering, licensing, and economic assumptions with some sort of public-private development and demonstration program. Instead of having government simply invest in research and development to “buy down” the risks associated with SMRs, I propose a more novel approach. Since the federal government is a major power consumer, it should commit to being the “first mover” of SMRs. This means purchasing the first few hundred MWs of SMR generation capacity and dedicating it to federal use. The advantages of this approach are straightforward. The government would both reduce licensing and economic risks to the point where utilities might invest in subsequent units, thus jumpstarting the SMR industry. It would then also be the recipient of additional carbon-free energy generation capacity. This seems like a very sensible role for government to play without getting into the heavy politics of nuclear waste, corporate welfare, or carbon taxes.

**Certainty- PPAs vital to investment and financing**

Hinckley 2012 (Elias Hinckley, Energy Attorney and leader of the clean energy practice at Kilpatrick Townsend, August 29, 2012, “5 Reasons Why Good Energy Projects Don’t Get Financed,” [www.consumerenergyreport.com/2012/08/29/5-reasons-why-good-energy-projects-dont-get-financed/](http://www.consumerenergyreport.com/2012/08/29/5-reasons-why-good-energy-projects-dont-get-financed/))

Much of the market uncertainties in a typical energy project can be partially managed by a long-term fixed price off-take contract (such as a power purchase agreement), which shields an investor from most price volatility risk. For example, a solar developer can assume payment, at a known price, for electricity it generates if that electricity is sold under a solid long-term power purchase agreement. The project will receive the expected revenue regardless of the price movement of electricity, which allows for revenue certainty and protection for the project in the event prices drop below levels used to calculate project returns. Where a long term contract is not available, an alternative strategy is to add a hedge (which is an instrument that acts as an offset or guarantee against the price going up or down). However, hedging is generally difficult to do beyond a few years, and since project performance is often measured over 10 to 20 years it often only manages price risk during the early operation of a project. When building a typical energy project, at least in the current market, a long-term contract for electricity is assumed. Without that long-term contract, securing financing for a power project would be virtually impossible. Long-term contracts for natural gas, crude derivatives, and biomass feedstock are generally not available. Projects subject to markets for these commodities, therefore generally have to have higher margins to provide comfort to investors.

**SMRS are extremely safe**

**Kessides 2010** (Ioannis N. Kessides, Lead Economist in the World Bank's Development Research Group, June 2012, “The Future of the Nuclear Industry Reconsidered Risks, Uncertainties, and Continued Potential,” The World Bank Development Research Group Environment and Energy Team, http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2012/06/29/000158349\_20120629130837/Rendered/INDEX/WPS6112.txt)

Most SMR concepts envision widespread deployment of a large number of small nuclear plants sited in diverse environments and frequently in close proximity to users. These considerations place very stringent requirements on reliability and safety performance—arguably even more exacting relative to traditional large-scale nuclear plants. The need for enhanced levels of safety has led to design options that maximize the use of inherent and passive safety features and incorporate additional layers of defense in depth (IAEA, 2009).18 These safety features can be more easily and effectively implemented in SMRs because of their larger surface- to-volume ratio, reduced core power density, lower source term, and less frequent (multi-year) refueling. For example, large surface-to-volume ratios facilitate the passive (with no external source of electrical power or stored energy) removal of decay heat.¶ SMRs employ an enveloping design approach that seeks to eliminate or prevent as many accident initiators and accident consequences as possible. Any remaining plausible accident initiators and consequences are dealt with appropriate combinations of active and passive safety systems. In water-cooled SMRs, the integration of steam generators and pressurizers within the reactor vessel eliminates large-diameter pipes and penetrations in the reactor vessel, thereby reducing substantially the risk of LOCAs. Moreover, in some designs the application of in- vessel control rod drives eliminates the risk of inadvertent control rod ejections that lead to reactivity insertion accidents. Loss of coolant accidents may also be prevented with compact loop designs that employ short piping and fewer connections between components (Kuznetsov, 2009).¶ In HTGRs, the fuel particles consist of fissionable fuel kernels with tri-structural isotropic (TRISO) coating.19 The TRISO coating system constitutes a miniature pressure vessel that is capable of containing the readionuclides and gases generated by fission of the nuclear material in the kernel. One of the coating layers consists of silicon carbide (a strong refractory material) which can retain radionuclides at extremely high temperatures under all accident conditions—temperatures can remain at 1600°C for several hundred hours without loss of particle coating integrity. Furthermore, the graphite holding the TRISO-coated particles together can withstand even higher temperatures without structural damage.20 And the massive graphite structures in the core create an extremely large heat capacity. The combination of large thermal margins, low power density of the core, and relatively large length-to-diameter ratio of the core, allow for very slow and stable response to transients caused by initiating events and for passive heat removal (INL, 2011).¶ The effectiveness of passive safety features can be illustrated by comparing outcomes from probabilistic risk analysis (PRA). In 1991, a Level-2 PRA was developed for the EBR-II fast neutron spectrum experimental breeder reactor—a 21 MWe plant—to compare its operational risk to that of commercial LWR‘s for which PRA‘s were available. EBR-II employs an extensive array of passive and inherent safety measures to back up traditional active safety systems. This PRA exercise showed that for EBR-II the risk of simply violating a fuel pin technical specification (with no core damage) is less than the risk of significant core disruption for the LWRs of the time. The point of the PRA comparisons is that application of passive and inherent safety measures as incorporated in SMRs can help to overcome the increase in numbers of SMRs needed to deliver the same societal energy provided by a smaller number of large-sized LWRs. Similarly, preliminary Level-1 PRA results for the NuScale Power Reactor indicate a total single-module mean CDF of 2.8x10-8/reactor-year, well below that of existing nuclear plants. And for the VK-300, the probability of severe core damage has been estimated to be less than 2.0x10-8/reactor-year (Hill et al, 1998; Kuznetsov and Gabaraev, 2007; Modarres, 2010).¶ SMRs have a smaller fuel inventory and thus a reduced source term. So on top of reduced hazard of core damage, the hazard attendant to release of radioactivity is also reduced per deployed SMR. The combination of reduced probability of core damage failure, a reduced source term, and additional fission product release barriers, could offer major advantages for emergency planning and response.

**SMRs are good to go- Plan quickly resolves any remaining issues**

Adams 2010 (Rod Adams, nuclear power expert with experience designing and operating small nuclear reactors and a former Submarine Engineer Officer, March 23, 2010, “Small Modular Reactors Could Be An American Export – But We Need to Move Faster,” Atomic Insights, http://atomicinsights.com/2010/03/small-modular-reactors-could-be-an-american-export-but-we-need-to-move-faster.html)

In the March 23, 2010 issue of the Wall Street Journal, Dr. Steven Chu published an op-ed piece titled America’sNew Nuclear Option that describes the Administration’s growing interest in smaller nuclear energy systems that can be produced in factories and delivered nearly complete to sites around the country and around the world. Here is a quote from that editorial:¶ As this paper recently reported, one of the most promising areas is small modular reactors (SMRs). If we can develop this technology in the U.S. and build these reactors with American workers, we will have a key competitive edge.¶ Small modular reactors would be less than one-third the size of current plants. They have compact designs and could be made in factories and transported to sites by truck or rail. SMRs would be ready to “plug and play” upon arrival.¶ If commercially successful, SMRs would significantly expand the options for nuclear power and its applications. Their small size makes them suitable to small electric grids so they are a good option for locations that cannot accommodate large-scale plants. The modular construction process would make them more affordable by reducing capital costs and construction times.¶ Their size would also increase flexibility for utilities since they could add units as demand changes, or use them for on-site replacement of aging fossil fuel plants.¶ Those are some terrific words, but the message loses some of its impact when the numbers are revealed later down the page. In the 2011 budget, the Administration requested just $39 million for a program aimed specifically at small reactors. That amount of money would not even pay for the Nuclear Regulatory Commission costs of reviewing the license for a single nuclear energy system design certification. In an agency whose total budget request is in excess of $28,000 million ($28 billion), a $39 million line item gets lost in the decimal dust.¶ There is an old saying that is appropriate here – “For where your treasure is, there your heart will be also”. The effort by Dr. Chu to publish a piece favorable to small nuclear energy systems in the Wall Street Journal is commendable, but the tiny slice of resource support indicates that there is still a lot of work to be done to enable the technology to reach the market, especially when compared to the massive number of dollars available for industrial wind deployment as a gift from taxpayers to companies like BP, Chevron, GE, FPL, and Siemens.¶ It is beyond comprehension to me that it will take us “about 10 years” (in Dr. Chu’s words) to license and deploy smaller, light water reactors that use essentially the same technology that we have been using successfully for nearly 60 years. We have the knowledge base and the manufacturing capability now; we should build several plants in controlled locations so we can show the regulators how their safety systems work to keep the public protected.¶ Dr. Chu’s op-ed piece concludes with some additional good words about the future potential of systems using high temperature gas – one of my favorites – and fast neutrons for better fuel economy plus the use of modern modeling and simulation techniquest. Dr. Chu’s head is in the right place, but he could use some encouragement to move more aggressively to take advantage of what is currently an American strong suit.¶ There are some Americans who know more than anyone else about what it takes to build durable, safe, secure, small reactors that use light water as a heat transfer and moderating fluid and steam as the power section working fluid. We can improve the economics through well understood principles of series production. The Department of Energy’s budget request for FY2011 currently includes more than $1,000 million for small, light water reactors whose allowed market is limited to military vessels. It would seem that technologies used in that program could be used as the basis for prototype licenses for systems like the mPowerTM and NuScale in a process that could take far less than 10 years.¶ There are several places in the US (Hawaii, Guam, Puerto Rico and Alaska) where early adoption of such systems could dramatically reduce the cost of electricity, reduce the dependence on a fragile fossil fuel tether, and improve its production cleanliness. Success in those locations could lead to successes in similar markets around the world and perhaps even in system refinements allow competitive costs in more traditional electrical power production markets. What are we waiting for?

## \*\*\*2AC\*\*\*

### Case

#### Natural gas will spike and wreck the economy absent the aff

Whitman 2012 (Christine Todd Whitman, former EPA Administrator and Governor of New Jersey, May 9, 2012, “It's dangerous to depend on natural gas,” CNN Money, http://tech.fortune.cnn.com/2012/05/09/christine-whitman-nuclear-energy/)

The United States needs an "all of the above" energy strategy that focuses on low-carbon electricity sources that will lower energy costs, reduce dependency on foreign fuel sources and promote clean electricity. This is a prudent strategy to help drive American manufacturing and transportation networks of the future. Most importantly, this approach can put the country on a sustainable path toward long-term economic growth.¶ While today's rock-bottom natural gas prices are attractive, an unbalanced dependence on natural gas in the electricity sector would put Americans at risk, both economically and in terms of longer term energy security.¶ While many look at energy prices from today's lens, successful energy policy requires a long view that promotes fuel diversity but doesn't pick technology winners; it preserves our air, land and water and is affordable for consumers.¶ We need only look at the volatile history of natural gas prices. Consider the shift from the low, stable prices of the 1990s to the record-high rates and wild supply fluctuations of the mid-2000s.¶ We should take advantage of our domestic energy resources, recognizing that today's natural gas market is still vulnerable. The present oversupply of natural gas opens opportunities for exports into foreign markets at prices two-to-three times higher. If demand from other countries increases as they meet growing energy demand, it will cause our prices to align with higher world prices. During my tenure as governor of a state that relies heavily on nuclear energy, I can attest to the cost effectiveness of nuclear fuel and the protection it offers against price spikes in natural gas or future environmental controls such as a cost on carbon. Nuclear energy doesn't emit any greenhouse gases or controlled pollutants while producing power and it is affordable, predictable and efficient. Moreover, a nuclear power plant with a footprint of one square mile generates the same amount of energy as 20 square miles of solar panels or 2,400 wind turbines spread out across 235 square miles.

### 2AC Rare Earth Turn

**YES nukes now- 50 countries- Their ev is a bad snapshot**

**Hussain 2012** (Yadullah Hussain, March 9, 2012, “50 countries developing nuclear energy plans: report,” Financial Post, http://business.financialpost.com/2012/03/09/50-countries-developing-nuclear-energy-plans-report/)

The nuclear-energy industry is recovering from the Fukushima nuclear power plant debacle, with at least **50 countries** building, operating or considering nuclear power as part of their energy mix, according to a study.¶ About half of these countries are newcomers to nuclear, and there are **more than 60** nuclear plants under construction, mainly in China, Russia, India and South Korea, says a report from the World Energy Council.¶ “Apart from the **limited cases** where the Fukushima accident has caused governments to think again, the majority of countries, **after the initial emotion**, are now engaged in a rational assessment of the pros and cons of nuclear to bring energy to their populations,” said Pierre Gadonneix, chairman of the WEC.¶ Meanwhile, U.N. atomic energy chief said on Friday that nuclear power is safer than it was a year ago. In a statement issued ahead of Sunday’s first anniversary of the world’s worst nuclear crisis since Chernobyl in 1986, Director General Yukiya Amano of the International Atomic Energy Agency (IAEA) said meaningful steps had been taken to strengthen global nuclear safety since Fukushima.¶ “Nuclear safety is stronger than it was a year ago,” he said. “We know what went wrong and we have a clear course of action to tackle those causes – not only in Japan, but anywhere in the world.”¶ Amano added: “Now we have to keep up the momentum. Complacency can kill.”¶ Still, the implications of the Fukushima disaster remain uncertain, especially after Germany, Switzerland and Belgium decided to move away from nuclear power altogether and build up alternative renewable energy sources instead.¶ “Among the long-term outcomes, may be a general sense that ambivalent or negative views of nuclear energy and, in particular, questions about its safety, were justified This may involve an increase in the so-called “not in my backyard” mentality, with people not wanting facilities/plants in their immediate vicinity or neighbourhood.”¶ The WEC report notes that progress in several national programmes, especially in countries new to nuclear power, has been delayed, especially with regard to near-term decisions to start such projects.¶ OECD countries dominate the market with the largest in the USA (104 reactors), followed by France (58 reactors) and Japan (54 reactors) but most of the nuclear plants under construction are in non-OECD countries. China alone accounted for 42% of the construction (27 reactors), followed by Russia with 17% (11 reactors), and India with 8% (five reactors).¶ Similarly, most of the planned and proposed reactors were also in non-OECD regions. Of the total 159 planned reactors, China accounted for 31% (50 reactors), followed by India 11% (18 reactors), Russia 9% (14 reactors), and Japan 8% (12 reactors). Of the 323 proposed reactors, China accounted for 34% (110), India 12% (40), Russia 9% (30), the USA 7% (23), and Ukraine 6% (20).

#### No DOD cutoff

Ratnam 2012 (Gopal Ratnam, “Rare Earth Supplies in U.S. to Meet Defense Needs, Pentagon Says,” Bloomberg, http://www.bloomberg.com/news/2012-04-04/rare-earth-supplies-in-u-s-to-meet-defense-needs-pentagon-says.html)

Domestic rare earth supplies will meet the U.S. defense industry’s needs by 2013 for the materials that go into military motors and electronics, according to a Pentagon report sent to Congress.¶ China, the world’s largest producer of rare earth materials, accounting for at least 90 percent of the global supply, has tried to restrict supplies. The 17 materials include elements such as neodymium, samarium and dysprosium that also go into commercial products, including hybrid batteries, mobile phones and computer hard drives.¶ President Barack Obama’s administration has joined the European Union and Japan to challenge China for placing export limits on the materials, and the countries may ask the World Trade Organization to resolve the issue if the negotiations fail. China says it curbed output and exports to conserve resources and protect the environment.¶ Congress last year required the Pentagon to examine the use of rare earth materials in defense applications, determine if non-U.S. supplies might be disrupted, and suggest ways to ensure long-term availability, as well as secure an assured source of supply by 2015.¶ The Pentagon’s unpublished seven-page report, titled “Rare Earth Materials in Defense Applications,” was sent to Congress last month. While it found the elements are “widely used” in defense applications, such uses “represent a small fraction of U.S. consumption.”¶ ‘Not Uniquely Important’¶ Rare earths “are important to the economy as a whole, but they are not uniquely important” to the Defense Department, Cheryl Irwin, a Pentagon spokeswoman, said yesterday in an e- mail. The Pentagon “monitors rare earth element markets and prices -- as it does for other important commodities,” she said.¶ Of seven rare earth elements that are most used in defense applications, supplies of six -- dysprosium, erbium, europium, gadolinium, neodymium and praseodymium -- are sufficient to meet demand in 2013, according to the Pentagon report. Yttrium, the seventh element, which is mostly used in lasers, may face a shortfall, the Pentagon said.¶ “The assessment determined that by 2013 U.S. production could satisfy the level of consumption required to meet defense procurement needs, with the exception of yttrium,” according to the report. According to the U.S. Geological Survey, China produced about 98 percent of the world’s yttrium in 2011, though the U.S. has about half of China’s reserves of the element.¶ Since 2010, demand for rare earth materials in defense and commercial applications has “decreased significantly,” and domestic and international suppliers have “responded to market conditions” with new investments and corporate restructurings, according to the report.¶ Contingency Plans¶ Forecasts show that non-Chinese consumption is projected to decline and that prices have dropped by half from their peak in July 2011, according to the report. “By 2015, the department believes this will help to stabilize overall markets and improve the availability,” the Pentagon said.¶ The Defense Department will continue to pursue substitutes, reclaim waste through recycling and prepare contingency plans including stockpiling, if necessary, according to the report.¶ Molycorp Inc. (MCP) of Greenwood Village, Colorado, owner of the largest rare earth deposit outside China, said last month that it agreed to purchase Canada’s Neo Material Technologies Inc. (NEM) for C$1.3 billion ($1.3 billion) to add capacity. Neo operates two plants in China.¶ Molycorp, which owns the Mountain Pass mine in California, is restarting the mine and expanding its capacity. Molycorp is also building a center at the site to process the minerals, and in U.S. regulatory filings, the company has said its reserves mostly include so-called light rare earths such as cerium, lanthanum, neodymium, praseodymium and samarium.¶ When its two-phase project is complete, Molycorp will be a “mine-to-magnets” producer that mines as well as processes the materials and can produce as much as 40,000 metric tons of rare earth oxides, the company has said in its filings.

#### Excess supply now- Increased exports, new production, low demand

Onstad 9/19 (Eric Onstad, “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.

#### No shortage- Rare earth for a century

Castor 2008 (Stephen B. Castor, Nevada Bureau of Mines and Geology at University of Nevada, 2008, “Rare Earth Deposits of North America,” EBSCO)

In the past, REE commodities were not only mined dominantly in the USA, but also refined there. During the 1980s this began to change, particularly with the emergence of China as the dominant raw material supplier, and most REE commodities are now produced overseas. In 2003, at least 20 companies in Japan produced REE commodities that are mainly used in its domestic industries, and 16 European countries exported REE commodities to the USA in 2003.The classification of China as a Most Favored Nation in 1978 by the USA had a strong impact on REE markets, and the US Government has shown little interest in protecting domestic producers. The Chinese government has had an aggressive policy toward the pro- motion of its REE industry, and during the 1990s development of Chinese REE deposits was apparently not impeded by normal market considerations, leading to significant overproduction of REE in the early 2000s. In 2003 the Chinese Government announced that it would assert control over its REE industry and restrict REE exports. Recent price increases for some REE commodities indicate that this has taken place. Although the bastnasite produced at Mountain Pass has relatively low thorium (approximately 100 ppm), chemical processing was suspended by the California Environmental Protection Agency in 1998, mostly due to radioactive element content of waste involved in a spill incident. Between 2001 and the present, REE commodities were sold from stockpile, and imported REE commodities were tested. The future use of REE is expected to increase, especially in automotive pollution catalysts, fluid cracking catalysts, and permanent magnets. Future growth is also forecast for REE used in lasers, fiber optics, and medical applications. Demand is expected to decline over the next decade for REE phosphors used in CRTs as flat panel display use increases. REE use in recharge- able nickel-hydride batteries may decline as lithium ion batteries gain wider use. Long-term growth is fore- cast for REE utilized in magnetic refrigeration alloys and other high technology uses, but such trends are difficult to predict with surety. World REE reserves are probably sufficient to meet forecast international demand well into the 21st century. Several world-class REE deposits in Australia and China have yet to be fully developed, and contain substantial reserves. World REE markets are expected to continue to be very competitive in response to China’s large resources, competitive prices, low-cost labor, inexpensive utilities, and minimal environmental and permitting requirements. China is expected to remain the world’s principal REE supplier. Economic growth in several developing countries will provide new and potentially large markets in Southeast Asia and Eastern Europe.

### 2AC CP

#### Counterplan Text: The United States Federal Government should offer substantial competitive power purchase agreements for electricity from small modular nuclear reactors near military bases in the United States.

#### Plan: The United States Federal Government should offer substantial competitive power purchase agreements for electricity from small modular nuclear reactors on military bases in the United States.

#### No impact and workarounds solve

GAO 2001 (June 11, 2001, “DOD Lacks a Comprehensive Plan to Manage Encroachment on Training Ranges,” http://www.gpo.gov/fdsys/pkg/GAOREPORTS-GAO-02-614/html/GAOREPORTS-GAO-02-614.htm)

DOD?s quarterly readiness reports to the Congress also identify few problems¶ from encroachment. DOD is required to report quarterly to Congress¶ describing readiness problems. We reviewed all reports submitted between¶ April 1999 and December 2001 and found two citations: in the April- June¶ 1999 report, the Navy expressed concerns that encroachment was precluding¶ employment of high- altitude delivery tactics at the Naval Strike Air¶ Warfare Center, Fallon, Nevada; in the OctoberDecember 2000 report, DOD¶ noted that the Senior Readiness Oversight Council had convened in June 2000¶ to address encroachment issues. There was no further mention of encroachment¶ as a readiness problem in reports submitted through December 2001.¶ A full assessment of the effects of encroachment on readiness will be¶ limited without better information on the services? training range¶ requirements and on the range resources available to support those¶ requirements. The information is needed to establish a baseline for¶ measuring losses or shortfalls. Each service has, to varying degrees,¶ assessed its training range requirements. But none of them has¶ comprehensively reviewed available range resources to determine whether¶ assets are adequate to meet needs, and none has incorporated an assessment¶ of the extent that other types of training, such as virtual or constructive¶ training, 21 could help offset shortfalls. A DOD report on training lands¶ recognizes the importance of incorporating both approaches to training in¶ their plans. 22

### 2AC Cal Tech K

#### Nuclear solves

Nordhaus and Shellenberger 2011 (Ted Nordhaus, chairman of the Breakthrough Instiute, and Michael Shellenberger, president of the Breakthrough Insitute, MA cultural anthropology from University of California, Santa Cruz, February 25, 2011, http://thebreakthrough.org/archive/the\_long\_death\_of\_environmenta)

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

#### Alt fails-

#### Human nature

Barnhizer 2006 (David Barnhizer, Professor of Law at Ohio State University, Articles Editor of the Ohio State Law Journal and then served as a Reginald Heber Smith Community Lawyer Fellow in Colorado Springs Legal Services Office, a Ford Urban Law Fellow, and a Clinical Teaching Fellow at the Harvard Law School, Senior Advisor to the International Program of the Natural Resources Defense Council, a Senior Fellow for Earth Summit Watch, and General Counsel for the Shrimp Tribunal. He has served as Executive Director of The Year 2000 Committee, 2006 “waking from sustainability’s “impossible dream”” Georgetown environmental law review)

Devotees of sustainability pin their hopes on an awakening by an enlightened populace that will rise up and insist that business and government behave in ways that reflect the idea that "[a] sustainable society is one that can persist over generations, one that is far-seeing enough, flexible enough, and wise enough not to undermine either its physical or its social systems of support."81 This awakening is not going to happen. There will never be a populist revolution in the way humans value the environment, social justice, and other matters of moral consequence. We frequently "talk the talk," but rarely "walk the walk."82 This discrepancy is partly an individual failure, but it is even more a result of the powerful forces that operate within our culture. Residents of Western cultures are shaped by the system in which they live. They will never possess either the clarity of agenda or the political will essential to a coherent and coordinated shift in behavior due to a combination of ignorance, greed, sloth, and inundation by political and consumerist propaganda. This combination means there will be no values shift welling up from the people and demanding the transformation of our systems of production and resource use.

#### Management key to prevent extinction

Levy 1999 (Dr Neil Levy, fellow of the Centre for Applied Philosophy and Public Ethics at Charles Sturt University, 1999“Discourses of the Environment” p. 215)

If the ‘technological fix’ is unlikely to be more successful than strategies of limitation of our uses of resources, we are nevertheless unable to simply leave the environment as it is. There is a real and pressing need for more, and more accurate, technical and scientific information about the non-human world. For we are faced with a situation in which the processes we have already set in train will continue to impact upon that world, and therefore us, for centuries. It is therefore necessary, not only to stop cutting down the rain forests, but to develop real, concrete proposals for action, to reverse, or at least limit, the effects of our previous interventions. Moreover, there is another reason why our behaviour towards the non-human cannot simply be a matter of leaving it as it is, at least in so far as our goals are not only environmental but also involve social justice. For if we simply preserve what remains to us of wilderness, of the countryside and of park land, we also preserve patterns of very unequal access to their resources and their consolations (Soper 1995: 207). In fact, we risk exacerbating these inequalities. It is no us, but the poor of Brazil, who will bear the brunt of the misery which would result form a strictly enforced policy of leaving the Amazonian rain forest untouched, in the absence of alternative means of providing for their livelihood. It is the development of policies to provide such ecologically sustainable alternative which we require, as well as the development of technical means for replacing our current greenhouse gas-emitting sources of energy. Such policies and proposals for concrete action must be formiulated by ecologists, environmentalist, people with expertise concerning the functioning of ecosystems and the impacts which our actions have upon them. Such proposals are, therefore, very much the province for Foucault’s specific intellectual, the one who works ‘within specific sectors, at the precise points where their won conditions of life or work situate them’ (Foucault 1980g: 126). For who could be more fittingly described as ‘the strategists of life and death’ than these environmentalists? After the end of the Cold War, it is in this sphere, more than any other, that man’s ‘politics places his existence as a living being in question’ (Foucault 1976: 143). For it is in facing the consequences of our intervention in the non-human world that the fate of our species, and of those with whone we share this planet, will be decided.

#### Human life is inherently valuable

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

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

### 2AC Fiscal Cliff

#### No impact to fiscal cliff- Their ev exaggerates

Mulligan 2012 (Casey B. Mulligan, professor of Economics at the University of Chicago, August 29, 2012, “Is the Fiscal Cliff a Big Deal?,” New York Times, http://economix.blogs.nytimes.com/2012/08/29/is-the-fiscal-cliff-a-big-deal/?ref=federalbudgetus)

With their Keynesian analysis, the Congressional Budget Office and others have exaggerated the effects of the “fiscal cliff” on the labor market and the economy.¶ Come January, current law provides for significant cuts in federal spending and for tax increases – and thereby significant federal budget-deficit reduction. These provisions have been collectively described as the “fiscal cliff,” which emerged when Democratic and Republican leaders could not agree on plans on spending and taxes.¶ The Congressional Budget Office has warned that the fiscal cliff will cause a double-dip recession, but its analysis for 2013 is based on the Keynesian proposition that anything that shrinks the federal budget deficit shrinks the economy, and the more the deficit is reduced the more the economy is reduced.¶ In many circumstances, the Keynesian proposition reaches the wrong conclusions about economic activity, because deficits do not necessarily expand the economy or prevent it from shrinking. For example, reducing the deficit by cutting unemployment insurance – it’s one of the programs that would be cut in January – would shrink the economy in the C.B.O.’s view.¶ But in reality, cutting unemployment insurance would increase employment, as it would end payments for people who fail to find work and would reduce the cushion provided after layoffs.¶ Helping people who are out of work may be intrinsically valuable because it’s the right thing to do, but the Congressional Budget Office is incorrect to conclude that it also grows the economy or prevents it from shrinking. Paying people for not working is no way to put them to work.¶ The Keynesian proposition about budget deficits ignores incentives of all kinds, so its incorrect conclusions about the fiscal cliff are not limited to unemployment insurance. Another example: the fiscal cliff would put millions of Americans on the alternative minimum tax, which Keynesian analysis said would shrink the economy solely because it collected more revenue.¶ Yet economists who have studied the alternative minimum tax have found that its effects on incentives to work and produce are essentially neutral, compared with the ordinary federal personal income tax.¶ (The Congressional Budget Office does not use pure Keynesian analysis for its long-term projections, which include labor-supply incentive effects of tax rates, but apparently has decided that incentives’ effects can be safely neglected in the short term.)

#### Econ resilient

Fareed Zakaria (editor of Newsweek International) December 2009 “The Secrets of Stability,” http://www.newsweek.com/id/226425/page/2]

One year ago, the world seemed as if it might be coming apart. The global financial system, which had fueled a great expansion of capitalism and trade across the world, was crumbling. All the certainties of the age of globalization—about the virtues of free markets, trade, and technology—were being called into question. Faith in the American model had collapsed. The financial industry had crumbled. Once-roaring emerging markets like China, India, and Brazil were sinking. Worldwide trade was shrinking to a degree not seen since the 1930s. Pundits whose bearishness had been vindicated predicted we were doomed to a long, painful bust, with cascading failures in sector after sector, country after country. In a widely cited essay that appeared in The Atlantic n this May, Simon Johnson, former chief economist of the International Monetary Fund, wrote: "The conventional wisdom among the elite is still that the current slump 'cannot be as bad as the Great Depression.' This view is wrong. What we face now could, in fact, be worse than the Great Depression." Others predicted that these economic shocks would lead to political instability and violence in the worst-hit countries. At his confirmation hearing in February, the new U.S. director of national intelligence, Adm. Dennis Blair, cautioned the Senate that "the financial crisis and global recession are likely to produce a wave of economic crises in emerging-market nations over the next year." Hillary Clinton endorsed this grim view. And she was hardly alone. Foreign Policy ran a cover story predicting serious unrest in several emerging markets. Of one thing everyone was sure: nothing would ever be the same again. Not the financial industry, not capitalism, not globalization. One year later, how much has the world really changed? Well, Wall Street is home to two fewer investment banks (three, if you count Merrill Lynch). Some regional banks have gone bust. There was some turmoil in Moldova and (entirely unrelated to the financial crisis) in Iran. Severe problems remain, like high unemployment in the West, and we face new problems caused by responses to the crisis—soaring debt and fears of inflation. But overall, things look nothing like they did in the 1930s. The predictions of economic and political collapse have not materialized at all. A key measure of fear and fragility is the ability of poor and unstable countries to borrow money on the debt markets. So consider this: the sovereign bonds of tottering Pakistan have returned 168 percent so far this year. All this doesn't add up to a recovery yet, but it does reflect a return to some level of normalcy. And that rebound has been so rapid that even the shrewdest observers remain puzzled. "The question I have at the back of my head is 'Is that it?' " says Charles Kaye, the co-head of Warburg Pincus. "We had this huge crisis, and now we're back to business as usual?"This revival did not happen because markets managed to stabilize themselves on their own. Rather, governments, having learned the lessons of the Great Depression, were determined not to repeat the same mistakes once this crisis hit. By massively expanding state support for the economy—through central banks and national treasuries—they buffered the worst of the damage. (Whether they made new mistakes in the process remains to be seen.) The extensive social safety nets that have been established across the industrialized world also cushioned the pain felt by many. Times are still tough, but things are nowhere near as bad as in the 1930s, when governments played a tiny role in national economies. It's true that the massive state interventions of the past year may be fueling some new bubbles: the cheap cash and government guarantees provided to banks, companies, and consumers have fueled some irrational exuberance in stock and bond markets. Yet these rallies also demonstrate the return of confidence, and confidence is a very powerful economic force. When John Maynard Keynes described his own prescriptions for economic growth, he believed government action could provide only a temporary fix until the real motor of the economy started cranking again—the animal spirits of investors, consumers, and companies seeking risk and profit. Beyond all this, though, I believe there's a fundamental reason why we have not faced global collapse in the last year. It is the same reason that we weathered the stock-market crash of 1987, the recession of 1992, the Asian crisis of 1997, the Russian default of 1998, and the tech-bubble collapse of 2000. The current global economic system is inherently more resilient than we think. The world today is characterized by three major forces for stability, each reinforcing the other and each historical in nature.

#### No war

Thomas P.M. Barnett (senior managing director of Enterra Solutions LLC and a contributing editor/online columnist for Esquire magazine) August 2009 “The New Rules: Security Remains Stable Amid Financial Crisis” http://www.aprodex.com/the-new-rules--security-remains-stable-amid-financial-crisis-398-bl.aspx

When the global financial crisis struck roughly a year ago, the blogosphere was ablaze with all sorts of scary predictions of, and commentary regarding, ensuing conflict and wars -- a rerun of the Great Depression leading to world war, as it were. Now, as global economic news brightens and recovery -- surprisingly led by China and emerging markets -- is the talk of the day, it's interesting to look back over the past year and realize how globalization's first truly worldwide recession has had virtually no impact whatsoever on the international security landscape. None of the more than three-dozen ongoing conflicts listed by GlobalSecurity.org can be clearly attributed to the global recession. Indeed, the last new entry (civil conflict between Hamas and Fatah in the Palestine) predates the economic crisis by a year, and three quarters of the chronic struggles began in the last century. Ditto for the 15 low-intensity conflicts listed by Wikipedia (where the latest entry is the Mexican "drug war" begun in 2006). Certainly, the Russia-Georgia conflict last August was specifically timed, but by most accounts the opening ceremony of the Beijing Olympics was the most important external trigger (followed by the U.S. presidential campaign) for that sudden spike in an almost two-decade long struggle between Georgia and its two breakaway regions. Looking over the various databases, then, we see a most familiar picture: the usual mix of civil conflicts, insurgencies, and liberation-themed terrorist movements. Besides the recent Russia-Georgia dust-up, the only two potential state-on-state wars (North v. South Korea, Israel v. Iran) are both tied to one side acquiring a nuclear weapon capacity -- a process wholly unrelated to global economic trends. And with the United States effectively tied down by its two ongoing major interventions (Iraq and Afghanistan-bleeding-into-Pakistan), our involvement elsewhere around the planet has been quite modest, both leading up to and following the onset of the economic crisis: e.g., the usual counter-drug efforts in Latin America, the usual military exercises with allies across Asia, mixing it up with pirates off Somalia's coast). Everywhere else we find serious instability we pretty much let it burn, occasionally pressing the Chinese -- unsuccessfully -- to do something. Our new Africa Command, for example, hasn't led us to anything beyond advising and training local forces. So, to sum up: \* No significant uptick in mass violence or unrest (remember the smattering of urban riots last year in places like Greece, Moldova and Latvia?); \* The usual frequency maintained in civil conflicts (in all the usual places); \* Not a single state-on-state war directly caused (and no great-power-on-great-power crises even triggered); \* No great improvement or disruption in great-power cooperation regarding the emergence of new nuclear powers (despite all that diplomacy); \* A modest scaling back of international policing efforts by the system's acknowledged Leviathan power (inevitable given the strain); and \* No serious efforts by any rising great power to challenge that Leviathan or supplant its role. (The worst things we can cite are Moscow's occasional deployments of strategic assets to the Western hemisphere and its weak efforts to outbid the United States on basing rights in Kyrgyzstan; but the best include China and India stepping up their aid and investments in Afghanistan and Iraq.) Sure, we've finally seen global defense spending surpass the previous world record set in the late 1980s, but even that's likely to wane given the stress on public budgets created by all this unprecedented "stimulus" spending. If anything, the friendly cooperation on such stimulus packaging was the most notable great-power dynamic caused by the crisis. Can we say that the world has suffered a distinct shift to political radicalism as a result of the economic crisis? Indeed, no. The world's major economies remain governed by center-left or center-right political factions that remain decidedly friendly to both markets and trade. In the short run, there were attempts across the board to insulate economies from immediate damage (in effect, as much protectionism as allowed under current trade rules), but there was no great slide into "trade wars." Instead, the World Trade Organization is functioning as it was designed to function, and regional efforts toward free-trade agreements have not slowed. Can we say Islamic radicalism was inflamed by the economic crisis? If it was, that shift was clearly overwhelmed by the Islamic world's growing disenchantment with the brutality displayed by violent extremist groups such as al-Qaida. And looking forward, austere economic times are just as likely to breed connecting evangelicalism as disconnecting fundamentalism. At the end of the day, the economic crisis did not prove to be sufficiently frightening to provoke major economies into establishing global regulatory schemes, even as it has sparked a spirited -- and much needed, as I argued last week -- discussion of the continuing viability of the U.S. dollar as the world's primary reserve currency. Naturally, plenty of experts and pundits have attached great significance to this debate, seeing in it the beginning of "economic warfare" and the like between "fading" America and "rising" China. And yet, in a world of globally integrated production chains and interconnected financial markets, such "diverging interests" hardly constitute signposts for wars up ahead. Frankly, I don't welcome a world in which America's fiscal profligacy goes undisciplined, so bring it on -- please! Add it all up and it's fair to say that this global financial crisis has proven the great resilience of America's post-World War II international liberal trade order. Do I expect to read any analyses along those lines in the blogosphere any time soon? Absolutely not. I expect the fantastic fear-mongering to proceed apace. That's what the Internet is for.

#### Deal inevitable- Political self-preservation

Forsyth 10/26 (Randall Fosyth, “A Cliff Too Steep, Even for D.C.,” Barron’s, http://online.barrons.com/article/SB50001424053111904034104578066614142096702.html?mod=BOL\_hpp\_mag#articleTabs\_article%3D1)

Even the dysfunctional crew in D.C. won't let the economy go over the cliff and into the abyss of a self-inflicted recession, goes the conventional wisdom, owing not to their great wisdom and statesmanship, but to their finely honed instinct for self-preservation. Indeed, some have likened the hand-wringing over the fiscal cliff to the hysteria over Y2K; computers supposedly were going to crash around the globe when the clock hit midnight on Jan. 1, 2000. It didn't happen, of course, but that was largely because of the warnings that came years in advance and the massive boom in technology spending during the dot-com bubble that put antiquated equipment out to pasture.

#### PC not key Congress outweighs

Raju 10/23 (Manu Raju, “Fiscal cliff casts shadow over 2014,” Politico, http://www.politico.com/news/stories/1012/82794.html)

Even though the votes haven’t been counted for the 2012 election, senators who are both involved in fiscal cliff negotiations and up for election in 2014 are aware that the tough decisions they make now will linger into the next cycle.¶ “If there’s a political price to be paid, if there’s capital that needs to be expended in order to save the country, I and my colleagues, I believe are willing to do that,” Sen. John Cornyn, the likely next No. 2 Senate Republican who faces reelection in 2014, told POLITICO.¶ How a deal looks obviously depends on whether Mitt Romney or Barack Obama wins — and on the party leadership in control of the next Senate and House. If Obama wins, Republicans fear they’ll be backed into a corner by an emboldened president to push through higher taxes on families earning more than $250,000. But if Romney wins, Congress will have to engineer a short-term agreement with Senate Democratic Leader Harry Reid and House Speaker John Boehner — which is no small task in and of itself — giving the new president time to develop a budget deal of his own.¶ But the winner of the race for the White House only has so much power — especially over a divided Congress and a Senate that could be tied up by filibusters. That means there must be a bipartisan compromise, a prospect certain to force endangered senators to cast votes with electoral ramifications.

#### And it’s academically bankrupt

Dickinson2009 (Matthew Dickinson, professor of political science at Middlebury College and taught at Harvard University, where he also received his Ph.D., “Sotomayor, Obama and Presidential Power” May, google)

What is of more interest to me, however, is what her selection reveals about the basis of presidential power. Political scientists, like baseball writers evaluating hitters, have devised numerous means of measuring a president’s influence in Congress. I will devote a separate post to discussing these, but in brief, they often center on the creation of legislative “box scores” designed to measure how many times a president’s preferred piece of legislation, or nominee to the executive branch or the courts, is approved by Congress. That is, how many pieces of legislation that the president supports actually pass Congress? How often do members of Congress vote with the president’s preferences? How often is a president’s policy position supported by roll call outcomes? These measures, however, are a misleading gauge of presidential power – they are a better indicator of congressional power. This is because how members of Congress vote on a nominee or legislative item is rarely influenced by anything a president does. Although journalists (and political scientists) often focus on the legislative “endgame” to gauge presidential influence – will the President swing enough votes to get his preferred legislation enacted? – this mistakes an outcome with actual evidence of presidential influence. Once we control for other factors – a member of Congress’ ideological and partisan leanings, the political leanings of her constituency, whether she’s up for reelection or not – we can usually predict how she will vote without needing to know much of anything about what the president wants. (I am ignoring the importance of a president’s veto power for the moment.) Despite the much publicized and celebrated instances of presidential arm-twisting during the legislative endgame, then, most legislative outcomes don’t depend on presidential lobbying. But this is not to say that presidents lack influence. Instead, the primary means by which presidents influence what Congress does is through their ability to determine the alternatives from which Congress must choose. That is, presidential power is largely an exercise in agenda-setting – not arm-twisting. And we see this in the Sotomayer nomination. Barring a major scandal, she will almost certainly be confirmed to the Supreme Court whether Obama spends the confirmation hearings calling every Senator or instead spends the next few weeks ignoring the Senate debate in order to play Halo III on his Xbox. That is, how senators decide to vote on Sotomayor will have almost nothing to do with Obama’s lobbying from here on in (or lack thereof). His real influence has already occurred, in the decision to present Sotomayor as his nominee.

#### This is in the context of Obama’s actual strategy- Obama is NOT using PC- letting the GOP hang themselves gives him leverage inevitably

Klein 10/18 (Ezra Klein, October 18, 2012, “Obama’s plan: Push Republicans off the fiscal cliff,” Washington Post, http://www.washingtonpost.com/blogs/ezra-klein/wp/2012/10/18/obamas-plan-push-republicans-off-the-fiscal-cliff/)

In a way, the Obama administration’s plan for a second term is much like their plan for the first term: Make a deal with Republicans. Get a big bipartisan solution to our problems. But the means are almost precisely the opposite. Where in the first term, the hope was that they could reach out, talk through the issues, and come to an agreement, the plan for the second is to push the Republican Party off the fiscal cliff, and then force them to reach out in order to get pulled back up.

**DOD means no link**

Davenport 2012 (Coral Davenport, February 10, 2012, “White House Budget to Expand Clean-Energy Programs Through Pentagon,” National Journal, http://www.nationaljournal.com/2013-budget/white-house-budget-to-expand-clean-energy-programs-through-pentagon-20120210)

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

**Election victory gives Obama tons of capital- Overwhelms the plan**

**Lillis 9/29** (Mike Lillis, September 29, 2012, “Democrats lay out second-term wish list for President Obama,” http:// thehill.com/homenews/campaign/259253-dems-lay-out-wish-list-for-a-second-obama-term)

An Obama victory in November would lend the president a new **fistful of political capital** as he confronts Republican leaders over how to avoid the fiscal cliff and steer the polarized country through the next four years. More than a month before November's elections, his allies in the House are already offering tips for how to spend it.¶ “He's got to continue to concentrate on jobs,” Rep. Bill Pascrell said last week as the House was leaving town for a long, pre-election recess.¶ “I'm hoping he'll do immigration reform,” said Rep. Henry Cuellar (D-Texas).¶ “We should get back to an energy policy – one that acknowledges that climate change is real,” said Rep. Peter Welch (D-Vt.).¶ “The critical issues will be revenue generation … and … a concerted push on immigration reform,” said Rep. Raul Grijalva (D-Ariz.).¶ “I think he'd want his administration to start on healthcare,” said Rep. Mike Honda (D-Calif.).¶ The remarks highlight the sheer variety of issues the Democrats are hoping to address after two years in the House minority – and foreshadow the degree of pressure a reelected Obama would be under to satisfy his allies after a bruising campaign season.¶ The quotations also suggest some rising confidence among Democrats.¶ The presidential contest remains a close one, but recent polls showing Obama with a growing lead in the key battleground states of Ohio and Florida are indication that GOP contender Mitt Romney has a hard road ahead to unseat the incumbent. National polls this week also showed Obama with a growing lead, while Republican criticism of Romney has intensified.¶ Although the Republicans are expected to keep control of the House, an Obama win amid a lingering jobs crisis would – at least in the eyes of Democrats – validate some of the policies the president has adopted on the campaign trail and pressure Republicans to reach deals on them. Indeed, some leading Republicans have said an Obama victory would be “a referendum” for raising taxes on the country's highest earners, one of Obama's top priorities.¶ The power of post-election momentum was evident four years ago when Obama was swept into the White House in a wave of Democratic victories that allowed the party to secure the early passage of their controversial economic stimulus package and paved the way for the enactment of sweeping healthcare reforms the following year.¶ Although voter enthusiasm toward Obama waned, reelection would give the president **new** – if fleeting – **leverage** in his negotiations with GOP leaders over a range of issues.

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