# 1NC

## Topicality

A. Nuclear power is electricity from fission

EIA 06 US Energy Information Administration 2006 Glossary http://www.eia.gov/tools/glossary/index.cfm?id=N

Nuclear electric power (nuclear power): Electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.

Nuclear fuel: Fissionable materials that have been enriched to such a composition that, when placed in a nuclear reactor, will support a self-sustaining fission chain reaction, producing heat in a controlled manner for process use.

Nuclear reactor: An apparatus in which a nuclear fission chain reaction can be initiated, controlled, and sustained at a specific rate. A reactor includes fuel (fissionable material), moderating material to control the rate of fission, a heavy-walled pressure vessel to house reactor components, shielding to protect personnel, a system to conduct heat away from the reactor, and instrumentation for monitoring and controlling the reactor's systems.

#### B. Reprocessing only creates fuel for nuclear reactors, not electricity

#### C. Vote neg on limits – they could read an aff about any part of the nuclear cycle – uranium mining or just solving waste – the neg doesn’t get energy Das which are core of the topic

#### Effectual topicality is an independent voter – they don’t mandate electricity production, at best it results from burning reprocessed fuel.

## Rare Earth

#### The rare earth market is stable now – future mines will meet growing demand

Kuepper 2/8

Justin Kuepper, financial journalist, chief editor of The OTC Investor, an investment news site that provides market news and stock highlights, 2/8/13, “Understanding China's Rare Earth Metals Market: What Changing Regulations Could Mean”, http://commodityhq.com/2013/inside-chinas-rare-earth-metal-industry/ //jchen

Rare earth metals are a vital component of many critical technologies, ranging from renewable energy to defense applications. While China has been a quintessential provider since the 1990s, REE reserves are starting to pop up in many other major world markets, after the communist country imposed export restrictions that wreaked havoc on the market in 2010.

Moving forward, China appears ready to continue its crackdown on the rare earth metals industry, putting pressure on global supply and helping boost prices. But, the opposing supply coming online from other markets around the world could help offset these trends and ultimately stabilize the market with a more robust supply to meet growing demand.

#### Short term energy investment skyrockets rare earth prices – devastates manufacturers and deters innovation across all industries.

Epstein 12 [Nicholas Epstein, Chicago Policy Review, Medium Rare: What’s Cooking in the Rare Earth Element Market? Evaluating Rare Earth Element Availability: A case with Revolutionary Demand From Clean Technologies Elisa Alonso, Andrew M. Sherman, Timothy J. Wallington, Mark P. Everson, Frank R. Field, Richard Roth, and Randolph E. Kirchain Environmental Science & Technology. 2012.Jul 12th, 2012 http://chicagopolicyreview.org/2012/07/12/medium-rare-whats-cooking-in-the-rare-earth-element-market/]

REE supplies are vulnerable for several reasons. Most importantly, one nation, China, controls 98 percent of the world’s REE production. Further, REEs are found together in geological formations. As a result, REEs are co-mined, so production is highly concentrated geographically. Lastly, Rare Earth extraction has negative environmental impacts and China’s poor labor standards add social concerns to the supply market. The authors identify circumstances under which REEs may experience revolutionary demand, that is, when new sudden technological innovations sharply increase the demand for REEs. They explain that **revolutionary demand changes can lead to supply and price instability** in the materialsmarket. This effect is **harmful to manufacturers**, who depend on a consistent supply-chain, and **deters additional innovation.**

#### Nuclear plants require rare earth – plan creates a resource crisis.

Zyga 11 [Lisa Zyga, PhysOrg.com, Why nuclear power will never supply the world's energy needs May 11, 2011 http://phys.org/news/2011-05-nuclear-power-world-energy.html]

The 440 commercial nuclear reactors in use worldwide are currently helping to minimize our consumption of fossil fuels, but how much bigger can nuclear power get? In an analysis to be published in a future issue of the Proceedings of the IEEE, Derek Abbott, Professor of Electrical and Electronic Engineering at the University of Adelaide in Australia, has concluded that nuclear power cannot be globally scaled to supply the world’s energy needs for numerous reasons. The results suggest that we’re likely better off investing in other energy solutions that are truly scalable. Ads by Google Short Films on Energy - Watch the Energy Film Series That Will Change the Energy Conversation - RationalMiddle.com As Abbott notes in his study, global power consumption today is about 15 terawatts (TW). Currently, the global nuclear power supply capacity is only 375 gigawatts (GW). In order to examine the large-scale limits of nuclear power, Abbott estimates that to supply 15 TW with nuclear only, we would need about 15,000 nuclear reactors. In his analysis, Abbott explores the consequences of building, operating, and decommissioning 15,000 reactors on the Earth, looking at factors such as the amount of land required, radioactive waste, accident rate, risk of proliferation into weapons, uranium abundance and extraction, and the exotic metals used to build the reactors themselves. “A nuclear power station is resource-hungry and, apart from the fuel, **uses many rare metals in** its **construction,”** Abbott told PhysOrg.com. “The dream of a utopia where the world is powered off fission or fusion reactors is simply unattainable. Even a supply of as little as 1 TW stretches resources considerably.” His findings, some of which are based on the results of previous studies, are summarized below. Land and location: One nuclear reactor plant requires about 20.5 km2 (7.9 mi2) of land to accommodate the nuclear power station itself, its exclusion zone, its enrichment plant, ore processing, and supporting infrastructure. Secondly, nuclear reactors need to be located near a massive body of coolant water, but away from dense population zones and natural disaster zones. Simply finding 15,000 locations on Earth that fulfill these requirements is extremely challenging. Lifetime: Every nuclear power station needs to be decommissioned after 40-60 years of operation due to neutron embrittlement - cracks that develop on the metal surfaces due to radiation. If nuclear stations need to be replaced every 50 years on average, then with 15,000 nuclear power stations, one station would need to be built and another decommissioned somewhere in the world every day. Currently, it takes 6-12 years to build a nuclear station, and up to 20 years to decommission one, making this rate of replacement unrealistic. Ads by Google Zenni Optical® Glasses - Shop 5600+ Styles Starting At $6.95 Top Quality Rx Lenses, Order Now! - www.zennioptical.com Nuclear waste: Although nuclear technology has been around for 60 years, there is still no universally agreed mode of disposal. It’s uncertain whether burying the spent fuel and the spent reactor vessels (which are also highly radioactive) may cause radioactive leakage into groundwater or the environment via geological movement. Accident rate: To date, there have been 11 nuclear accidents at the level of a full or partial core-melt. These accidents are not the minor accidents that can be avoided with improved safety technology; they are rare events that are not even possible to model in a system as complex as a nuclear station, and arise from unforeseen pathways and unpredictable circumstances (such as the Fukushima accident). Considering that these 11 accidents occurred during a cumulated total of 14,000 reactor-years of nuclear operations, scaling up to 15,000 reactors would mean we would have a major accident somewhere in the world every month. Proliferation: The more nuclear power stations, the greater the likelihood that materials and expertise for making nuclear weapons may proliferate. Although reactors have proliferation resistance measures, maintaining accountability for 15,000 reactor sites worldwide would be nearly impossible. Uranium abundance: At the current rate of uranium consumption with conventional reactors, the world supply of viable uranium, which is the most common nuclear fuel, will last for 80 years. Scaling consumption up to 15 TW, the viable uranium supply will last for less than 5 years. (Viable uranium is the uranium that exists in a high enough ore concentration so that extracting the ore is economically justified.) Uranium extraction from seawater: Uranium is most often mined from the Earth’s crust, but it can also be extracted from seawater, which contains large quantities of uranium (3.3 ppb, or 4.6 trillion kg). Theoretically, that amount would last for 5,700 years using conventional reactors to supply 15 TW of power. (In fast breeder reactors, which extend the use of uranium by a factor of 60, the uranium could last for 300,000 years. However, Abbott argues that these reactors’ complexity and cost makes them uncompetitive.) Moreover, as uranium is extracted, the uranium concentration of seawater decreases, so that greater and greater quantities of water are needed to be processed in order to extract the same amount of uranium. Abbott calculates that the volume of seawater that would need to be processed would become economically impractical in much less than 30 years. Exotic metals: The nuclear containment vessel is made of a variety of exotic rare metals that control and contain the nuclear reaction: hafnium as a neutron absorber, beryllium as a neutron reflector, zirconium for cladding, and niobium to alloy steel and make it last 40-60 years against neutron embrittlement. Extracting these metals raises issues involving cost, sustainability, and environmental impact. In addition, these metals have **many competing industrial uses**; for example, hafnium is used in microchips and beryllium by the semiconductor industry. If a nuclear reactor is built every day, the global supply of these exotic metals needed to build nuclear containment vessels would **quickly run down and create a mineral resource crisis**. This is a new argument that Abbott puts on the table, which places resource limits on all future-generation nuclear reactors, whether they are fueled by thorium or uranium. As Abbott notes, many of these same problems would plague fusion reactors in addition to fission reactors, even though commercial fusion is still likely a long way off. Of course, not many nuclear advocates are calling for a complete nuclear utopia, in which nuclear power supplies the entire world’s energy needs. But many nuclear advocates suggest that we should produce 1 TW of power from nuclear energy, which may be feasible, at least in the short term. However, if one divides Abbott’s figures by 15, one still finds that 1 TW is barely feasible. Therefore, Abbott argues that, if this technology cannot be fundamentally scaled further than 1 TW, perhaps the same investment would be better spent on a fully scalable technology. “Due to the cost, complexity, resource requirements, and tremendous problems that hang over nuclear power, our investment dollars would be more wisely placed elsewhere,” Abbott said. “Every dollar that goes into nuclear power is dollar that has been diverted from assisting the rapid uptake of a safe and scalable solution such as solar thermal.”

#### China will respond by cutting off rare earth supply – collapses relations

Cohen 7 [David Cohen, New Scientist, 5-23-7 “Earth's natural wealth: an audit” http://environment.newscientist.com/channel/earth/mg19426051.200-earths-natural-wealth-an-audit.html]

These may sound like drastic solutions, but as Graedel points out in a paper published last year (Proceedings of the National Academy of Sciences, vol 103, p 1209), "Virgin stocks of several metals appear inadequate to sustain the modern 'developed world' quality of life for all of Earth's people under contemporary technology." And **when resources run short, conflict is often not far behind**. It is widely acknowledged that one of the key motives for civil war in the Democratic Republic of the Congo between 1998 and 2002 was the riches to be had from the country's mineral resources, including tantalum mines - the biggest in Africa. The war coincided with a surge in the price of the metal caused by the increasing popularity of mobile phones (New Scientist, 7 April 2001, p 46). Similar **tensions over supplies of other rare metals are not hard to imagine**. The Chinese government is supplementing its natural deposits of rare metals by investing in mineral mines in Africa and buying up high-tech scrap to extract metals that are key to its developing industries. The US now imports over 90 per cent of its so-called "rare earth" metals from China, according to the US Geological Survey. If China decided to cut off the supply, that would create a **big risk of conflict**, says Reller.

#### That erodes economic interdependence—causes nuclear war.

White 11 [Mr. Hugh White is professor of strategic studies at the Australian National University in Canberra and a visiting fellow at the Lowy Institute in Sydney. The Obama Doctrine WSJ, 11/25/11 http://online.wsj.com/article/SB10001424052970204452104577057660524758198.html]

One risk is that escalating strategic competition will disrupt the vital economic relationship between the U.S. and China. Many hope that the two countries' deep interdependence will prevent their rivalry getting out of hand. But that will only happen if both sides are willing to forgo strategic objectives to protect their economic cooperation. With the Obama Doctrine, the President has declared that he has no intention of doing that. Why should we expect the Chinese to act any different? So it is more likely that escalating rivalry will soon start to erode economic interdependence between the two nations, at great cost to both. The other risk is the growing chance of conflict. A war with China over Taiwan or the Spratly Islands is simple to start but hard to end, and could **very easily escalate**. China is a nuclear-armed power capable of destroying American cities, and the **threshold** for nuclear exchanges in a U.S.-China clash **might be dangerously unclear and disastrously low.**

## Natural Gas DA

#### Natural gas prices are increasing because of rising demand – the trend will continue

Wall Street Journal 3/21

Wall Street Journal 3/21/13, http://online.wsj.com/article/SB10001424127887324373204578374773681881796.html

Natural-gas prices rose above $4 a million British thermal units during intraday trading on Thursday and are up 73% from a year ago. After watching prices of the heating fuel fall for more than four years, some commodities traders are getting bullish on natural gas. A chilly start to spring brought natural-gas stockpiles nationwide closer in line with average levels for this time of year. Further stoking the rally, traders and investors said, are signs that the boom in U.S. gas output is slowing, which could trim supplies even more. When natural gas was languishing below $2 last year, the lowest price in a decade, some analysts expected prices to go even lower because companies were producing so much that a supply glut resulted. Now, there is evidence that producers have finally started to pull back. While that is good news for bullish investors, higher natural-gas prices could threaten U.S. economic growth if the rally keeps roaring. Manufacturers tend to be the biggest industrial users and have benefited from the lower gas costs. Households have, too. "There are cracks in this production boom we've had," said Kent Bayazitoglu, an analyst at energy consulting firm Gelber & Associates in Houston. He said that has been a big factor in the recent price gains. Nevertheless, many investors are bracing for a rough ride in the historically volatile gas market. After rising to $4.025 a million British thermal units, the highest intraday level since September 2011, gas prices pared gains and ended the day down 2.5 cents, or 0.6%, to $3.9350. Setting the stage for the recent gains was an increase in demand from utilities, which over the past year have upped their consumption of cleaner-burning gas and cut their use of coal for power generation. To be sure, any drop in utilities' gas consumption could weigh on prices. And with natural gas trading near $4, there is less incentive for electricity producers to switch, said Greg Sharenow, a portfolio manager at Pacific Investment Management Co.'s $20 billion Pimco Commodity Real Return Strategy Fund. Still, Mr. Sharenow said slowing U.S. gas output has bolstered the outlook for prices over the longer term. Less drilling "is definitely part of the equation," he said. The number of rigs drilling for natural gas stood at 431 last week, down 35% from a year earlier, according to oil-field-services company Baker Hughes Inc. BHI +1.30% The Department of Energy forecasts that the nation's gas output will rise 0.7% this year, the smallest increase since 2005. Some analysts said there is a good chance output could even start declining. Analysts at Barclays BARC.LN -0.88% surveyed 52 North American gas producers, including 20 of the largest firms operating in the region. Based on the results of the survey, the analysts estimate that those companies' output would decline 0.4% this year. Cold weather and slowing output growth are cutting into U.S. stockpiles. The amount of gas held in underground storage totals 1.876 trillion cubic feet, down about 21% in the past year, according to the latest Department of Energy data. Just a few months ago, most analysts expected gas supplies at the end of the winter to stand above two trillion cubic feet heading into the summer months when gas usage falls. Now, several more weeks of withdrawals from storage are anticipated. Rich Ilczyszyn, a trader and chief market strategist at iiTrader.com, said forecasts made in February for chillier temperatures prompted him to bet on rising prices last month, when futures were near $3.30. "I wish I'd had more on," he said. Mr. Ilczyszyn isn't the only one making bullish bets. Last week, bets on higher natural-gas prices outstripped those on lower prices among hedge funds and other money managers, according to the Commodity Futures Trading Commission. That is the first time since November that speculative investors have held net bullish positions.

**Alternative energy sources trade off with natural gas, lowering prices**

**Chen 05** (Allan, “Controlling Natural Gas Prices: Energy Efficiency to the rescue,” Science at Berkeley Lab, http://www.lbl.gov/Science-Articles/Archive/sabl/2005/February/natural-gas.html)

A new study by researchers at Lawrence Berkeley National Laboratory suggests that renewable energy and energy efficiency can help keep natural gas price increases in check. The study, titled Easing the Natural Gas Crisis: Reducing Natural Gas Prices through Increased Deployment of Renewable Energy and Energy Efficiency, was written by Ryan Wiser, Mark Bolinger, and Matt St. Clair of Berkeley Lab's Environmental Energy Technologies Division."Our report shows that renewable energy and energy efficiency can displace gas-fired electricity generation, reducing gas demand and putting downward pressure on natural gas prices and bills," says Wiser. They based their findings on a review and analysis of recent modeling studies that evaluate the effects of renewable energy and greater energy efficiency on reducing gas prices. "The 13 studies and 20 specific analyses that we review consistently show that increased use of renewable energy and energy efficiency can begin to reduce natural gas prices," says Bolinger.

#### The US won’t export natural gas now – but sustained low prices will lead to mass exports

Plumer 12

Brad Plumer, reporter at the Washington Post writing about domestic policy, particularly energy and environmental issues, 12/6/12, Washington Post, <http://www.washingtonpost.com/blogs/wonkblog/wp/2012/12/06/natural-gas-exports-could-boost-u-s-economy-but-will-anyone-even-buy-the-stuff/>

That was one interesting takeaway from a big new report by the Department of Energy, released on Wednesday. The report found that natural gas exports could, in theory, boost the U.S. economy by up to $47 billion in 2020. Those gains would likely outweigh the costs from higher domestic energy prices. Yet the report also suggested that large-scale exports might not materialize at all. One reason is cost. Natural gas is relatively easy to transport by pipeline across land. But it’s not quite as simple to ship overseas. The methane has to be liquefied first, chilled to -260°F so that its volume shrinks and it can be transported in giant ocean tankers. This technology is already widespread. But it can be quite pricey. Natural gas that sells for $3.70 per million BTU in the United States can cost $10 or $11 per million BTU once it’s liquefied and transported abroad. Now, exports might still be worthwhile even at that higher cost — after all, natural gas prices in Japan are currently around $17 per million BTU. That looks like an obvious trade opportunity. But a lot depends on how the global market develops in the coming years. If America’s natural gas ends up being less plentiful than assumed, or if, say, countries in Eastern Europe start exploiting their own shale gas supplies, then U.S. exports will look less appealing. Indeed, as Michael Levi points out, the Energy Department’s baseline projection right now is that U.S. gas exports won’t grow at all, given the current outlook for global demand. For truly large-scale exports to emerge, a number of things would have to fall into place — U.S. prices would have to stay low, while Japan would need to shut down its nuclear program entirely and bolster its appetite for natural gas. (If, for some reason, South Korea shut down its nuclear program, that could boost demand further.)

#### US LNG exports kill the Russian economy

Choi and Robertson 13

Tom Choi, Natural Gas Market Leader, Deloitte MarketPoint LLC, and Peter J. Robertson, Independent Senior Advisor, Oil & Gas, Deloitte LLP, 13, Exporting the American Renaissance Global impacts of LNG exports from the United States, http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/Energy\_us\_er/us\_er\_GlobalImpactUSLNGExports\_AmericanRenaissance\_Jan2013.pdf

Russia, the leading gas exporter to Europe, appears to be especially hard hit by U.S. LNG exports. Because of its huge volumes of gas exports, primarily to Europe, and their high cost to markets, Russia is vulnerable to supply competition. In Figure 3.4, Russian supplies are estimated to be the high-cost source into European markets and therefore Russian contract supplies above the minimum-take volumes would be the first to be displaced by incremental lower cost supply. With current slack European demand, there is already some displacement of Russian imports, as flexible volumes indexed to oil price have not been utilized by European buyers. U.S. LNG exports to Europe are projected to obviate the need for Russian and some other oil-indexed flexible supplies. Maintaining market share and oil-indexed prices are major concerns for Russia. Russia holds the world’s largest natural gas reserves and was the largest producer until the U.S. overtook it in 2011 with the growth in U.S. shale gas production. Gas export is vital to the Russian economy, contributing about $64 billion in revenues in 2011. 7 Russia has jealously guarded its European market share through control of its pipeline transit capacities. By restricting access to its transit pipelines, Russia is able to prevent supplies from other countries, such as Turkmenistan which holds an estimated 500 Tcf of proved reserves, from reaching lucrative European markets and competing with Russian supplies. The strategy was working well until several years ago when economic recession caused European gas demand to stagnate and at the same time more LNG supplies, particularly from Qatar, became available. Qatar had increased its LNG liquefaction capacity in anticipation of exports to the U.S., but its plans were stymied by U.S. shale gas production which eliminated the need for imports. As a consequence, European prices fell and Russians were pressured to offer more competitive prices than the contractual oil-indexed prices. During the past year, several European companies successfully renegotiated their contracts and extracted discounts from Russia. U.S. LNG exports will likely apply greater pressure on Russia and other gas exporters to transition to competitively set prices.

#### Russian economic decline causes nuclear war—miscalc, disintegrating military C&C, and civil war.

Oliker and Charlick-Paley 02

Olga Oliker, senior international policy analyst at the RAND Corporation. Before coming to RAND in 1999, Oliker worked as an independent consultant and held positions in the U.S. Departments of Defense and Energy and Tanya Charlick-Paley, 02,

Assessing Russia's Decline: Trends and Implications for the United States and the U.S. Air Force, www.rand.org/content/dam/rand/pubs/monograph\_reports/2007/MR1442.pdf

What challenges does today’s Russia pose for the U.S. Air Force and the U.S. military as a whole? Certainly Russia cannot present even a fraction of the threat the Soviet monolith posed and for which the United States prepared for decades. Yet, if certain negative trends continue, they may create a new set of dangers that can in some ways prove even more real, and therefore more frightening, than the far-off specter of Russian attack ever was. As a weak state, Russia shares some attributes with “failed” or “failing” states, which the academic literature agrees increase the likelihood of internal and interstate conflict and upheaval. Tracing through the specifics of these processes in Russia reveals a great many additional dangers, both humanitarian and strategic. Moscow’s efforts to reassert central control show that much control is already lost, perhaps irretrievably. This is manifested both in center-periphery relations and in the increasing failure of law and order throughout the country, most clearly seen in the increasing institutionalization of corruption and crime. Although Russia’s weakened armed forces are unlikely, by temperament and history, to carry out a coup, real concerns exist that the forces may grow less inclined to go along with aspects of government policy, particularly if they are increasingly used as instruments of internal control as in Chechnya. Moreover, the fact that the Russian military is unlikely to attempt to take power does not mean that it will not seek to increase its influence over policymaking and policy-makers. The uncertainties of military command and control threaten the possibility of accidental (or intentional) nuclear weapon use, while deterioration in the civilian nuclear sector increases the risk of a tragic accident. Russia’s demographic trajectory of ill health and male mortality bodes ill for the nation’s ability to resolve its economic troubles (given an increasingly graying population) and creates concerns about its continued capacity to maintain a fighting force even at current levels of effectiveness. Finally, the fact that economic, political, and demographic declines affect parts of Russia very differently, combined with increased regional political autonomy over the course of Russian independence and continuing concerns about interethnic and interregional tension, creates a danger that locality and/or ethnicity could become rallying cries for internal conflict. While some might argue that Russia’s weakness, or even the potential for its eventual collapse, has little to do with the United States, the truth is that a range of U.S. interests is directly affected by Russia’s deterioration and the threats that it embodies. The dangers of proliferation or use of nuclear or other weapons of mass destruction (WMD), heightened by Russian weakness, quite directly threaten the United States and its vital interests. Organized crime in Russia is linked to a large and growing multinational network of criminal groups that threatens the United States and its economy both directly and through links with (and support of) global and local terrorist organizations. Russia is also a major energy producer and a transit state for oil and gas from the Caspian at a time when the U.S. government has identified that region, and energy interests in general, as key to its national security. Washington’s allies, closer to Russia physically, are not only the customers for much of this energy but are also the likely victims of any refugee flows, environmental crises, or potential flare-ups of violence that Russian decline may spur. Finally, recent history suggests a strong possibility that the Untied States would play a role in seeking to alleviate a humanitarian crisis on or near Russian soil, whether it was caused by epidemic, war, or a nuclear/industrial catastrophe.

## Politics

#### Immigration reform has momentum and it’s Obamas top priority, PC is key

Fifield 3-20

Anna Fifield, Financial Times, March 20, 2013, “Immigration: Pressure mounts on Obama to overhaul citizenship requirements” http://www.ft.com/intl/cms/s/0/9235c2aa-8ad4-11e2-b1a4-00144feabdc0.html#axzz2O7I5qCku

Emboldened by his resounding reelection, Mr Obama has put reform at the top of his legislative agenda this year, urging Congress to pass a “common sense” bill that would create a pathway to citizenship for illegal immigrants and provide more visas for highly skilled workers. If it passes, the bill will mark the most profound immigration changes in a generation, not just for the US but for Mexico, too. About two-thirds of the estimated 11m undocumented people living in the US are Mexican and giving them the opportunity to earn US citizenship would have a significant impact on their earning power. Latin American immigrants who became citizens during the Reagan-era reforms in 1986 enjoyed wage increases in the range of 6 to 13 per cent, according to a report from the libertarian Cato Institute. If immigration reform includes a guest worker programme, that would benefit Mexico by allowing more seasonal workers to come and go as needed. But these are big ifs. Immigration reform is a tricky political issue at any time and especially so amid continuing economic malaise. Opponents of reform say that giving papers to unauthorised immigrants “rewards” them and allows them to take jobs away from Americans. Some even say it will precipitate a flood of new arrivals over the Mexican border. Some of the strongest advocates still put the prospects for reform passing this year at 50-50, citing opposition from conservative “Tea Party” members in the Republican-controlled House of Representatives. Bob Goodlatte, the Republican chairman of the House of Representatives judiciary committee, has argued against creating a pathway to citizenship for undocumented immigrants. “People have a pathway to citizenship right now: It's to abide by the immigration laws and if they have a family relationship, if they have a job skill that allows them to do that, they can obtain citizenship,” Mr Goodlatte said last month. Despite such rhetoric, there is cause for optimism. There has been new consensus between groups usually on opposite sides of the issue – the labour unions and big business lobbies – to push for reform, adding to pressure to overhaul the system. A bipartisan “gang of eight” senators has put forward a blueprint and similar efforts are under way in the House. But the biggest factor is simple demographics. Hispanic voters comprise the fastest growing part of the electorate and their share of the US population is forecast to rise from 17 per cent now to 29 per cent by 2050. The pressure group Voto Latino puts that in context, noting that there are 50,000 Hispanic Americans turning 18, the voting age, every month. The Hispanic electorate as a bloc has long tended to support Democrats. In last year’s election, 71 per cent backed Mr Obama, to Republican Mitt Romney’s 27 per cent. This was in large part because of Mr Romney’s hostile language during the Republican campaign, when he said that, if president, he would make conditions so bad for illegal immigrants that they would choose to “self-deport”. As they try to avoid further alienating the Hispanic electorate, some Republicans are eager to remove the issue of immigration from the table before the midterm elections at the end of next year. Influential conservatives have been expressing newfound support for reform and that could help its passage through Congress. Republicans have long insisted that security on the border needs to be tightened but the Obama administration’s increased enforcement – including the use of drones to monitor movement – and a record number of deportations has helped slow the flow of people entering the US illegally. The continued weakness in the US job market – and the relative health of the Mexican economy – has helped cut numbers, too. The Pew Hispanic Center last year suggested that the net flow of immigrants from Mexico to the US had actually ground to a halt. Mr Obama is keeping the pressure on Congress. “Send me a comprehensive immigration reform bill in the next few months and I will sign it right away,” he said in his State of the Union address last month. The president knows the clock is ticking. If reforms are not passed by September, the opportunity will pass. And that means immigration would be put back in the too-hard basket for a few more years.

#### Congress opposes expanding the program – budget cuts prove

Fuchs 12 Katherine Fuchs, Program Director. ANA and Tom Clements, Nonproliferation Policy Director, ANA, (Alliance for Nuclear Accountability) June 06, 2012 Fortenberry Amendment Protects Real Nonproliferation Priorities, Signals Growing Oversight of Troubled Plutonium Fuel (MOX) Program <http://www.ananuclear.org/PressRoom/ANAPressReleases> /tabid/115/articleType/ArticleView/articleId/557/Default.aspx

Today, the House of Representatives overwhelmingly passed an amendment offered by Rep. Fortenberry (R-NE). Members of the House from both sides of the aisle spoke in favor of Rep. Fortenberry’s amendment, which moved $17 million from the Mixed Oxide Plutonium Fuel (MOX) Program to the Global Threat Reduction Initiative (GTRI). The amendment, which passed with a vote of 328 to 89, was offered during discussion of appropriations for Department of Energy funding.

The passage of the amendment is a clear indication that congressional oversight of the MOX program is increasing. The amendment comes on the heels of an earlier cut of $152 million from the MOX program by the House Appropriations Committee.

The Global Threat Reduction Initiative is the front line of defense in our nation’s fight to prevent nuclear bomb materials from falling into the hands of terrorists. Rep. Fortenberry’s amendment brings funding for this critical program up to the President’s requested level.

Immigration reforms key to the economy

Beadle 12-10

Amanda Peterson Beadle, Think Progress, Dec 10, 2012, “Top 10 Reasons Why The U.S. Needs Comprehensive Immigratio

n Reform” http://thinkprogress.org/justice/2012/12/10/1307561/top-10-reasons-why-the-us-needs-comprehensive-immigration-reform-that-includes-a-path-to-citizenship/

Legalizing the 11 million undocumented immigrants in the United States would boost the nation’s economy. It would add a cumulative $1.5 trillion to the U.S. gross domestic product—the largest measure of economic growth—over 10 years. That’s because immigration reform that puts all workers on a level playing field would create a virtuous cycle in which legal status and labor rights exert upward pressure on the wages of both American and immigrant workers. Higher wages and even better jobs would translate into increased consumer purchasing power, which would benefit the U.S. economy as a whole. 2. Tax revenues would increase. The federal government would accrue $4.5 billion to $5.4 billion in additional net tax revenue over just three years if the 11 million undocumented immigrants were legalized. And states would benefit. Texas, for example, would see a $4.1 billion gain in tax revenue and the creation of 193,000 new jobs if its approximately 1.6 million undocumented immigrants were legalized. 3. Harmful state immigration laws are damaging state economies. States that have passed stringent immigration measures in an effort to curb the number of undocumented immigrants living in the state have hurt some of their key industries, which are held back due to inadequate access to qualified workers. A farmer in Alabama, where the state legislature passed the anti-immigration law HB 56 in 2011, for example, estimated that he lost up to $300,000 in produce in 2011 because the undocumented farmworkers who had skillfully picked tomatoes from his vines in years prior had been forced to flee the state. 4. A path to citizenship would help families access health care. About a quarter of families where at least one parent is an undocumented immigrant are uninsured, but undocumented immigrants do not qualify for coverage under the Affordable Care Act, leaving them dependent on so-called safety net hospitals that will see their funding reduced as health care reforms are implemented. Without being able to apply for legal status and gain health care coverage, the health care options for undocumented immigrants and their families will shrink. 5. U.S. employers need a legalized workforce. Nearly half of agricultural workers, 17 percent of construction workers, and 12 percent of food preparation workers nationwide lacking legal immigration status. But business owners—from farmers to hotel chain owners—benefit from reliable and skilled laborers, and a legalization program would ensure that they have them. 6. In 2011, immigrant entrepreneurs were responsible for more than one in four new U.S. businesses. Additionally, immigrant businesses employ one in every 10 people working for private companies. Immigrants and their children founded 40 percent of Fortune 500 companies, which collectively generated $4.2 trillion in revenue in 2010—more than the GDP of every country in the world except the United States, China, and Japan. Reforms that enhance legal immigration channels for high-skilled immigrants and entrepreneurs while protecting American workers and placing all high-skilled workers on a level playing field will promote economic growth, innovation, and workforce stability in the United States. 7. Letting undocumented immigrants gain legal status would keep families together. More than 5,100 children whose parents are undocumented immigrants are in the U.S. foster care system, according to a 2011 report, because their parents have either been detained by immigration officials or deported and unable to reunite with their children. If undocumented immigrants continue to be deported without a path to citizenship enabling them to remain in the U.S. with their families, up to 15,000 children could be in the foster care system by 2016 because their parents were deported, and most child welfare departments do not have the resources to handle this increase. 8. Young undocumented immigrants would add billions to the economy if they gained legal status. Passing the DREAM Act—legislation that proposes to create a roadmap to citizenship for immigrants who came to the United States as children—would put 2.1 million young people on a pathway to legal status, adding $329 billion to the American economy over the next two decades. 9. And DREAMers would boost employment and wages. Legal status and the pursuit of higher education would create an aggregate 19 percent increase in earnings for young undocumented immigrants who would benefit from the DREAM Act by 2030. The ripple effects of these increased wages would create $181 billion in induced economic impact, 1.4 million new jobs, and $10 billion in increased federal revenue. 10. Significant reform of the high-skilled immigration system would benefit certain industries that require high-skilled workers. Immigrants make up 23 percent of the labor force in high-tech manufacturing and information technology industries, and immigrants more highly educated, on average, than the native-born Americans working in these industries. For every immigrant who earns an advanced degree in one of these fields at a U.S. university, 2.62 American jobs are created.

#### That causes nuclear war—collapses multilateral institutions and increases aggression.

Merlini, Senior Fellow – Brookings, 11

 [Cesare Merlini, nonresident senior fellow at the Center on the United States and Europe and chairman of the Board of Trustees of the Italian Institute for International Affairs (IAI) in Rome. He served as IAI president from 1979 to 2001. Until 2009, he also occupied the position of executive vice chairman of the Council for the United States and Italy, which he co-founded in 1983. His areas of expertise include transatlantic relations, European integration and nuclear non-proliferation, with particular focus on nuclear science and technology. A Post-Secular World? DOI: 10.1080/00396338.2011.571015 Article Requests: Order Reprints : Request Permissions Published in: journal Survival, Volume 53, Issue 2 April 2011 , pages 117 - 130 Publication Frequency: 6 issues per year Download PDF Download PDF (~357 KB) View Related Articles To cite this Article: Merlini, Cesare 'A Post-Secular World?', Survival, 53:2, 117 – 130]

Two neatly opposed scenarios for the future of the world order illustrate the range of possibilities, albeit at the risk of oversimplification. The first scenario entails the premature crumbling of the post-Westphalian system. One or more of the acute tensions apparent today evolves into an open and traditional conflict between states, perhaps even involving the use of nuclear weapons. The crisis might be triggered by a collapse of the global economic and financial system, the vulnerability of which we have just experienced, and the prospect of a second Great Depression, with consequences for peace and democracy similar to those of the first. Whatever the trigger, the unlimited exercise of national sovereignty, exclusive self-interest and rejection of outside interference would likely be amplified, emptying, perhaps entirely, the half-full glass of multilateralism, including the UN and the European Union. Many of the more likely conflicts, such as between Israel and Iran or India and Pakistan, have potential religious dimensions. Short of war, tensions such as those related to immigration might become unbearable. Familiar issues of creed and identity could be exacerbated. One way or another, the secular rational approach would be sidestepped by a return to theocratic absolutes, competing or converging with secular absolutes such as unbridled nationalism

## CP

#### The Department of Energy should use dedicated nuclear reactors to produce tritium. The reactors should be limited to this purposes and should not generate commercialized electricity.

## Solvency

#### **No world nuclear renaissance**

Mez, ’12, Lutz Mez, Department of Political and Social Sciences, Freie Universitat Berlin, 5-7-12, “Nuclear Energy—Any Solution for Sustainability and Climate Protection?”, http://www.sciencedirect.com/science/article/pii/S0301421512003527,

Is the entire world really building nuclear power plants? By no means. According to the IAEA, 63 blocks with a rating of 61,032 MW are currently under construction (see Table 1). The building projects are spread out among fourteen countries: China (26), Russia (10), India (6), South Korea (5), the Ukraine (2), Japan (2), Slovakia (2), Bulgaria (2) and Taiwan (2) and one block each in Argentina, Brazil, Finland, France, and the USA. The World Nuclear Association (WNA) only lists 61 reactors under construction, but another 156 reactors in the category ‘planned.’ Actual development of nuclear technology teaches us, however, that planned reactors by no means automatically move into the category of ‘under construction.’ In 1979, before the Three Mile Island accident in Harrisburg, there were 233 reactors under construction in the world, and over 100 cancellations followed (Schneider, Froggatt, Thomas, 2011). In view of these facts, the metaphor ‘renaissance of nuclear power’ must be viewed as an ideological weapon. Examined more closely, it would appear that nuclear power has even taken a nose-dive in the Western industrialized countries. In the European Union there were 177 reactors in 1989, whereas the IAEA only lists 134 operational reactors in February 2012. Of the 192 members of the United Nations, only 31 countries had nuclear power plants in operation at the beginning of 2012. Three countries (Italy, Kazakhstan and Lithuania) have in the meantime closed down their nuclear power plants, while in Austria a reactor was built in Zwentendorf but never connected to the grid. A similar reactor project is the completed but never fueled Bataan Nuclear Power Plant in the Philippines. The six biggest countries operating nuclear power plants (USA, France, Japan, Russia, Germany and South Korea) include several countries possessing nuclear weapons (USA, France and Russia) and produce three-fourths of total nuclear power. In 2009 nuclear power plants only produced 13.4 percent of electrical power worldwide. This corresponds to 5.8 percent of Total Primary Energy Supply and a little more than two percent of global final energy consumption. In comparison to nuclear power, the potential contribution of renewable energies to easing the strain on the environment and tackling climate change is much higher because they account for 19.5 percent of global power production and more than 12 percent of primary energy production (IEA, 2011). The United States has the most nuclear capacity and generation among the 31 countries in the world that have commercial nuclear power plants. There are currently 104 operational nuclear reactors at 65 nuclear sites in 31 states. Most of the commercial reactors are located east of the Mississippi River, near water sources. Illinois has 11 reactors and the most nuclear capacity. Since 1990, the nuclear power share of the total electricity generation has averaged about 20%. Nuclear generation of electricity has roughly tracked the growth in total electricity output. Between 1985 and 1996, 34 reactors were connected to the grid. In addition, nuclear generation has increased as a result of higher utilization of existing capacity and from technical modifications to increase nuclear plant capacity. In 2007 the American construction site Watts Bar-2 overtook first place for years as far as delays in construction were concerned, replacing the Bushehr nuclear power plant in Iran, for which cement was first poured on 1 May 1975. The construction of Watts Bar-2 began 40 years ago on 1 December 1972, with the project then being frozen in 1985. The company which owns the plant, the Tennessee Valley Authority (TVA), announced in October 2007 that it would complete the reactor at a cost of US-$ 2.5 billion. Connection to the electricity grid is scheduled for August 2012. In August 2009, the U.S. Nuclear Regulatory Commission (NRC) issued an Early Site Permit for two new reactors at Southern Nuclear's Vogtle site. The two new units are the reference plant for the Westinghouse AP1000 pressurized water reactor design. In February 2010, President Obama announced that the DOE had offered a loan guarantee up to 80% of the project estimated cost of $14.5 billion. Southern Nuclear will only have to pay a credit subsidy fee for the $11.6 billion loan. On February 9, 2012, the Nuclear Regulatory Commission (NRC) voted 4 to 1 to issue the Combined Operating License for Vogtle units 3 and 4. This is the first license to be approved in the United States in over 30 years. In the European Union thirteen out of the twenty-seven member states do not produce any nuclear power themselves or have abolished this technology for technical or economic reasons following political decisions. Fourteen EU member states are currently using nuclear energy, while three countries have shut down their nuclear power plants. Two countries decided after Fukushima to phase-out nuclear power and the remaining countries do not have a nuclear energy program. Eight high-risk reactors were closed down in the new accession countries in the expansion of the EU to Eastern Europe, with the EU and other Western donor countries contributing more than one billion Euros to meet the costs of closure. Four reactors are labeled “under construction” in all of Eastern Europe at present, although a series of new nuclear power plants are being planned. In spite of liberalization and partial privatization of the electrical power sector, the completion or construction of new nuclear power plants constitutes a virtually insurmountable financing problem. Looking at the historical development, there were still a total of 134 nuclear power blocks in operation in Europe in February 2012–116 of them in Western Europe and, following the closure of Ignalina nuclear power plant in Lithuania, a total of 18 in Central and Eastern European countries. According to the IAEA, there are two reactor blocks under construction in Western Europe: one in Finland and since December 2007 one in France. Construction of the first so-called European Pressurized Reactor (EPR) with a rating of 1,600 MW began in Olkiluoto, Finland on 12 August 2005. Since then the project has been overshadowed by exploding costs and delays: originally slated for 2009, commercial operation will probably not take place before August 2013 and instead of the originally planned € 3.2 billion, the reactor will cost almost € 6 billion. An EPR is also being built in France. Construction officially commenced on 3 December 2007 and it was expected that it would take 54 months to complete the plant, i.e. by May 2012. According to inspection reports from the supervisory authority ASN, a host of problems have also cropped up here. As a result, the ambitious time schedule cannot be met and connection to the grid is now scheduled for the end of 2016. The three biggest emerging market countries—India, China and Brazil—embarked on their nuclear energy programmes decades ago, but have only partially achieved their goals. Nuclear energy only accounts for a small percentage of electrical power production and the energy supply in these countries. The People's Republic of China has the most ambitious plans for expanding nuclear power, operating sixteen nuclear power plants at present generating 71 TWh, which accounted for 1.8 percent of power production in 2010. As of February 2012, 26 additional nuclear power reactors are under construction. China had an estimated total installed electricity generating capacity of over 1,000 GW at the end of 2011 and will expand to 1,600 GW by 2020. According to China's National Development and Reform Commission the installed nuclear capacity shall be 80 GW (6%) by 2020 and a further increase to 200 GW (16%) by 2030. But following the Fukushima accident, the State Council announced that it would suspend approval for new nuclear power stations and halted work on four approved units. “The announcement marked a significant policy change” (Green-Weiskel, 2011). Nuclear has remained a small fraction of China's total energy mix, because government has given priority to solar and wind for future energy growth. While China has invested the equivalent of about $10 billion per year into nuclear power in recent years, in 2010 it spent twice as much on wind energy alone and some $54.5 billion on all renewables combined. There are several reasons for China to shelve its nuclear industry. China's energy sector is competing with agriculture for water, and the country is not immune to a temblor-triggered disaster. In India 20 smaller reactors are in operation, meeting 2.9 percent of electricity needs, with six more under construction. In Brazil two reactors are in operation, producing 3.2 percent of electrical power, with one additional reactor block under construction. A closer look shows, however, that twelve out of the 63 reactors under construction (see Table 1) were already included in the statistics with the status of “under construction” more than 20 years ago. Construction of the reactor blocks Khmelnitski 3 and 4, for instance, began in the Ukraine as far back as 1986 and 1987. These blocks are listed under the category of “planned” in the WNA statistics, however. Three out of the ten Russian nuclear power plant construction projects also began in 1985 and 1986—recently completed after 25 years under construction was Kalinin 4 in November 2011. The Atucha-2 nuclear power plant in Argentina has been under construction since 1981 and still no date has been set for its commissioning. Construction of both of the blocks in Belene, Bulgaria, began in 1987 and no dates are scheduled when they will be connected to the grid. And construction at Mochovce 3 and 4 in the Slovak Republic started in 1987, with commercial operation scheduled for 2013. This shows that the statistics contain a whole host of unfinished plants. In view of all these facts, it is erroneous to speak of any “global renaissance,” all the more so because such long building periods lead to exorbitant cost overruns which scarcely any bank would finance—unless the financial risk is assumed by a government. The complexity of the licensing procedure as well as the risks involved in a building project of this type should at any rate not be underestimated (Mez et al., 2009).

#### Fuel costs for reprocessing are ten times higher than the once-through fuel cycle

David Biello 10, Associate Editor for Scientific American, 4/15/10, “Is Reprocessing the Answer to Eliminating Fissile Materials from Bombs and Nuclear Waste?,” <http://www.scientificamerican.com/article.cfm?id=is-reprocessing-the-answer-to-eliminating-fissile-materials>

Reprocessing is also expensive. The French spend roughly an extra 800 million euros ($1.1 billion) per year for reprocessed fuel compared to conventional uranium fuel rods and the National Research Council estimated in 1996 that reprocessing existing U.S. spent nuclear fuel would cost at least $100 billion. "The power produced from MOX fuel costs 2 cents more than that produced from uranium fuel," Makhijani says. "It is tenfold higher than the underlying resource cost."

#### Not enough people for nuclear reactor operation

John Ahearne, Executive Director Emeritus at Sigma Xi Scientific Research Society, Fmr. Chairman of the Nuclear Regulatory Commission, 2011 (“Prospects for nuclear energy” Energy Economics 33.4 July 2011)

Building and operating a nuclear plant requires skilled workers and competent personnel. A U.S. utility executive, Art Stall of Florida Power & Light, said, “The euphoria surrounding the nuclear renaissance has been slowed by the realities of the challenges to be faced in building new nuclear power plants…. One of the biggest challenges is finding qualified people…to support construction and operation” (quoted in Power Engineering, “The Nuclear Renaissance's Future,” August 2007). A 2008 review of what is needed to revive nuclear power in the United States found that “potential bottlenecks in constructing a nuclear plant include…shortages of skilled trades people for plant construction and skilled personnel to design and operate plants safely and efficiently” (MacFarlane et al., 2008). The member countries of the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development have expressed concern about human resources in the nuclear field: Recent studies have shown that nuclear education and training have been suffering declines in various degrees. If no action is taken on this issue, the nuclear sector risks facing a shortage of qualified manpower to ensure the appropriate regulation and operation of existing nuclear facilities as well as the construction of new ones in those countries wishing to do so.11 Concern also was expressed in a 2008 U.S. report, which “draws attention to critical shortages in the U.S. nuclear workforce and to problems in maintaining relevant educational modalities and facilities for training new people” (American Physical Society Panel on Public Affairs, 2008, p. 4). Finally, another recent report on the energy sector as a whole states, “The Task Force believes the United States is facing a critical shortage of trained professionals” (National Commission on Energy Policy, 2009, p. 3).

## Russia Advantage

1. Cooperation is guided by self interest, not spillover from cooperation in other area

Working Group 12 Working Group on the Future of U.S.-Russia Relations The Working Group on the Future of U.S.-Russia Relations convenes rising experts from leading American and Russian institutions to tackle the thorniest issues in the bilateral relationship. / June 2012 Survey of Developments in U.S.-Russia Relations http://us-russiafuture.org/publications/monthly-survey/june-2012/

Simultaneously, all the major areas of cooperation between Russia and the U.S. that have developed over the past three years, continued and even in some instances intensified. Relations hardly collapsed and the U.S.-Russian cooperative agenda was in no way diminished. Moscow made it clear that it would continue to cooperate with the United States, where it coincides with the national interests of Russia and Moscow pragmatically, asserted that it will not cease cooperation in any area due to disagreements in another.

#### 2. All their evidence is about a 123 agreement, not PMDA. The 123 agreement with Russia went into force in 2011

Danichev 12 Alexey Danichev, RIA Novosti 26/06/2012 Russia plans to convert two nuclear research reactors to low-enriched uranium fuel MOSCOW, June 26 (RIA Novosti) <http://en.ria.ru/russia/20120626/174248257.html>

The long-stalled U.S.-Russian Agreement for Cooperation in the Field of Peaceful Uses of Nuclear Energy, also known as the U.S.-Russia 123 Agreement, signed for 30 years, came into force on January 11, 2011. It lays the legal framework for cooperation in nuclear research, production and trade, and both sides see it as an important contribution to the non-proliferation regime.

#### 3. Other nuclear cooperation exists – for example the Science initiative

GSN 12 Global Security Newswire June 27, 2012 Russia, U.S. Discuss Atomic Protection Initiatives

http://www.nti.org/gsn/article/russia-us-announce-collaborative-atomic-protection-initiatives/

A U.S.-Russian deal on atomic power science initiatives is slated to be finalized in September, according to Poneman and Kiriyenko. Activities anticipated to be covered by the agreement would include collaborative projects on engineering potential atomic systems and operating substances.

"We continue to believe that the proposed activities will give additional momentum to establishing long-term and large-scale cooperation between Russia and the United States in civil nuclear energy and in nuclear security," the U.S. deputy energy secretary stated (Vladimir Isachenkov, Associated Press/Seattle Times, June 26).

#### 4. Plutonium reliance hurts Russias economy

Center for Safe Energy 2K Center for Safe Energy, a project of  Earth Island Institute. July 3, 2000 Letter to Heads of State of Nations of the G-8 Anti-Plutonium International Movement <http://www.earthisland.org/eiproject/index.php/cse/Publications/letter-to-heads-of-state-of-nations-of-the-g-8/>

Second, there could be negative consequences for the Russian economy with corresponding negative impacts on the rest of the world. By subsidising a plutonium fuel infrastructure in Russia, you would be encouraging Minatom's plans to build more nuclear reactors, including breeder reactors which are not the most economic way to generate electricity.

#### 5. Positive cooperation is impossible – NATO, other pipelines, influence.

Deudney and Ikenberry 9 [Daniel, Associate Professor of Political Science at Johns Hopkins University, and John, professor of Politics and International Affairs in the Woodrow Wilson School of Public and International Affairs at Princeton University, The Unravelling of the Cold War Settlement, Survival, Volume 51, Issue 6 December 2009 , pages 39 - 62]

The basic reason for Russian antagonism toward the United States is the widespread Russian perception that Washington has encroached upon legitimate and historical Russian national and security interests, which were accommodated in the settlement. Three issues dominate this narrative: two decades of NATO expansion into former Warsaw Pact and post-Soviet areas, and the prospect that Georgia and Ukraine could join as well; the termination of the Anti-Ballistic Missile (ABM) Treaty and George W. Bush administration plans for deployment of missile-defence systems in Eastern Europe; and American efforts to orchestrate oil-pipeline routes from the Caspian Basin that circumvent Russia. These American moves underscore and exacerbate the deeper Russian malaise stemming from lost status and diminished influence. Meanwhile, shortfalls on the Russian side, particularly Prime Minister Vladimir Putin's neo-authoritarian tendencies, have undermined America's forbearance toward Moscow and helped justify America's retreat from the principles of the Cold War settlement. It is not today's policy differences but the **shadow of the past that most plagues the US-Russian relationship.**

#### 6. Relations are impossible—domestic Russian politics.

Sestanovich 3/13/13, Stephen Sestanovich, George F. Kennan Senior Fellow for Russian and Eurasian @CFR, “

 What can be done to improve relations between the United States and Russia, given recent problems with the “reset”?” http://www.cfr.org/russian-fed/can-done-improve-relations-between-united-states-russia-given-recent-problems-reset/p30202

The main driver of hostility to the United States is Russian domestic politics. Last year's crowds protesting the results of Russia's legislative elections have disappeared, but opposition to his rule still clearly worries Putin. Baiting the United States has proved politically popular in Russia.

With so many areas of disagreement, a "Grand Bargain"—some big package of trade-offs—will be difficult to accomplish. A single-issue deal on nuclear cuts or trade and investment is possible, but hard to achieve because of overall bad feeling. Most importantly: Putin will not take a different tack in dealing with the United States unless he is satisfied that it makes domestic political sense.

#### No arctic conflict or escalation.

Axe 11 [David, Wired, How the U.S. Wins the Coming Arctic War \* January 11, 2011 | \* 2:38 pm | \* Categories: Navy http://www.wired.com/dangerroom/2011/01/how-the-u-s-wins-the-coming-arctic-war/?utm\_source=feedburner&utm\_medium=feed&utm\_campaign=Feed%3A+WiredDangerRoom+%28Blog+-+Danger+Room%29&utm\_content=Google+Reader]

The story always starts and ends the same way. Up top, how global climate change will, by 2015 or so, result in ice-free Arctic summers — allowing shipping and oil and natural-gas extraction. At the bottom, how the U.S. isn’t doing enough to secure its slice of the Arctic pie. I should know: in weaker moments, I’ve written this tale, too. But these tales, my versions included, usually omit two vital points: that **Arctic conflict is unlikely to occur** at all; and even if it does, the U.S. will have an **overwhelming advantage** over any rival. The Washington Post was the latest to repeat the Arctic-war theme, in a story published yesterday. “The Arctic is believed to hold nearly a quarter of the world’s untapped natural resources and a new passage could shave as much as 40 percent of the time it takes for commercial shippers to travel from the Atlantic to the Pacific,” Jacquelyn Ryan wrote. But, she added, “government and military officials are concerned the United States is not moving quickly enough to protect American interests in this vulnerable and fast-changing region.” Specifically, the U.S. does not have enough icebreakers or permanent bases on the Alaskan north slope. Canada and Russia, by contrast, are buying ice-hardened Arctic ships and building new facilities to enforce their Arctic claims, Ryan pointed out. The thing is, it’s not icebreakers and patches of wind-blasted tarmac that would really matter in some future North Pole showdown. In the Arctic, as in any sea battle, American nuclear attack submarines — quiet, versatile and lethal — would make all the difference. U.S. subs have been sneaking around under the Arctic ice, and occasionally surfacing, for decades. Today, they even carry geologists and other scientists in order to help map Arctic mineral deposits. “In addition to being more heavily armed than most foreign boats, U.S. submarines generally have superior quieting and combat systems, better-trained crewmen, and much more rigorous maintenance standards,” Bob Work wrote in 2008, before becoming Navy undersecretary. “As a result, the U.S. submarine force has generally been confident that **it could defeat any** potential undersea **opponent, even if** significantly **outnumbered.”** But in the Arctic, facing only the Canadians, Russians, Danes and Norwegians — none of whom have large or healthy sub fleets — the U.S. Navy’s 50 Los Angeles-, Seawolf- and Virginia-class subs would be more numerous as well as more powerful. And besides, an Arctic war is highly unlikely, at best. “Militarized conflict over the Arctic is unlikely, and regional disputes are unlikely to cause an overall deterioration in relations between or among polar nations,” the Carnegie Endowment for International Peace concluded in a 2009 conference. “Security issues should not be sensationalized in order to attract attention towards the Arctic.” But it’s rare anyone writes stories about how we’ve got enough weapons — and don’t really need them, besides. After all, it’s the sensational stories about shortages and looming disaster that sell newspapers.

#### International dispute settlement checks.

Baker 8 [Betsy, prof. International Law @ Vermont Law School Arctic Mapping and the Law of the Sea, 9-14-08” http://arctic-healy-baker-2008.blogspot.com/2008/09/conflict-in-arctic-tenacity-of-media.html]

Just hours after I returned, a week ago, from my trip to the Arctic Ocean, I was dismayed to open the New York Times and find on its editorial page hyperbole verging on that which other media sources use to perpetuate the myth of "fierce disputes over territory and natural resources" in the Arctic. ("Arctic in Retreat", September 8, 2008). As the sea-ice retreats, states are turning **not to arms** but to **existing legal structures** and a **tradition of scientific and and diplomatic cooperation** to address common problems as well as disagreements. Immediately after transporting our mapping crew to shore last week, The Healy turned right around and began breaking ice for a Canadian icebreaker, the Louis Saint Laurent. This month-long joint mission to map parts of the Arctic Ocean floor is scientific and diplomatic cooperation at its international best. Like the Russian mapping the NYT mentions in its editorial, the US and Canada are gathering data in preparation not for conflict but for submission in a staid and stable legal process designed to provide certainty for all states involved. The Law of the Sea Convention establishes this orderly mechanism of rigorous scientific vetting for states seeking to extend their authority over larger portions of the continental shelf. The United States is the only Arctic state not party to the Convention but is nonetheless mapping for its potential shelf extension in keeping with procedures agreed by the international community.

#### WTO accession solves.

Aslund 10 [Anders, Peterson Institute for International Economics10 Reasons Why the Russian Economy Will Recover Op-ed in the Moscow Times November 25, 2010 http://www.piie.com/publications/opeds/oped.cfm?ResearchID=1712]

Russia is finally about to accede to the World Trade Organization (WTO) within a year, which would be a **game changer**. The best available studies predict **enormous gains** for the country. Economists Jesper Jensen, Thomas Rutherford, and David Tarr estimate in a World Bank study that Russia should gain about 3.3 percent of GDP annually in the medium term and 11 percent of GDP in the long term. The gains would mainly come from increased foreign direct investment and services. International integration and convergence will **drive the country's growth for a couple of decades.**

## HE-3 Advantage

#### No nuclear terror.

Chapman 12 [Stephen, columnist and editorial writer for the Chicago Tribune, CHAPMAN: Nuclear terrorism unlikely May 22, 2012 6:00 AM http://www.oaoa.com/articles/chapman-87719-nuclear-terrorism.html]

Given their inability to do something simple — say, shoot up a shopping mall or set off a truck bomb — it’s reasonable to ask whether they have a chance at something much more ambitious. Far from being plausible, argued Ohio State University professor John Mueller in a presentation at the University of Chicago, “the likelihood that a terrorist group will come up with an atomic bomb seems to be **vanishingly small.”** The events required to make that happen comprise a multitude of Herculean tasks. First, a terrorist group has to get a bomb or fissile material, perhaps from Russia’s inventory of decommissioned warheads. If that were easy, one would have already gone missing. Besides, those devices are probably no longer a danger, since weapons that are not maintained quickly become what one expert calls “radioactive scrap metal.” If terrorists were able to steal a Pakistani bomb, they would still have to defeat the arming codes and other safeguards designed to prevent unauthorized use. As for Iran, no nuclear state has ever given a bomb to an ally — for reasons even the Iranians can grasp. Stealing some 100 pounds of bomb fuel would require help from rogue individuals inside some government who are prepared to jeopardize their own lives. Then comes the task of building a bomb. It’s not something you can gin up with spare parts and power tools in your garage. It requires millions of dollars, a safe haven and advanced equipment — plus people with specialized skills, lots of time and a willingness to die for the cause. Assuming the jihadists vault over those Himalayas, they would have to deliver the weapon onto American soil. Sure, drug smugglers bring in contraband all the time — but seeking their help would confront the plotters with possible exposure or extortion. This, like every other step in the entire process, means expanding the circle of people who know what’s going on, multiplying the chance someone will blab, back out or screw up. That has heartening implications. If al-Qaida embarks on the project, it has **only a minuscule chance** of seeing it bear fruit. Given the formidable odds, **it** probably **won’t bother.**

#### Can’t solve terrorism—don’t have detection systems all over.

#### Prefer conventional weapons.

Craig 11 [Campbell, professor of international relations at the University of Southampton Special Issue: Bringing Critical Realism and Historical Materialism into Critical Terrorism Studies Atomic obsession: nuclear alarmism from Hiroshima to al-Qaeda Critical Studies on Terrorism Volume 4, Issue 1, 2011, April, pages 115-124]

Let us address each of his claims, in reverse order. Mueller suggests that the risk of an act of major nuclear terrorism is **exceptionally small**, along the lines of an asteroid hitting the earth. Drawing upon his powerful book against terrorism alarmism, Overblown (2006), he shows that serious anti-Western terrorist groups are today **widely scattered and disorganized** – precisely the wrong kind of arrangement for the sustained and centralized project of building an atomic bomb. Looking for immediate results, terrorist groups are likely to go with what works today, rather than committing to a long-term and likely futile project. He points out, as have other authors, that so-called ‘rogue’ nations, even if they obtain a bomb, are never going to hand it over to terrorists: to do so would utterly negate everything they had worked so hard for. A nation such as Iran that somehow decided to give its bomb to al-Qaeda (leaving aide their completely different objectives) would not only be handing over a weapon that it had spent years and billions to build, and giving up the prestige and deterrence the bomb supposedly confers, it would also be putting itself at acute risk of being on the receiving end of a retaliatory strike once the terrorists did their work. By what rationale would any leader make such a move? The potential costs would be astronomical, the benefits non-existent.

#### 1— Proliferation is slow and stable. Their authors exaggerate. Iran proves.

Mueller ’12, [John Mueller, PhD, is a Senior Research Scientist with the Mershon Center for International Security Studies where he is also the Woody Hayes Chair of National Security Studies, Senior Fellow at the Cato Institute, professor of political science at Ohio State University and the author of Atomic Obsession, “Old fears cloud Western views on Iran's nuclear posturing,” 2-18 http://www.smh.com.au/opinion/politics/old-fears-cloud-western-views-on-irans-nuclear-posturing-20120217-1te94.html]

Alarmism about nuclear proliferation is fairly common coin in the foreign policy establishment. And of late it has been boosted by the seeming efforts of Iran or its friends to answer covert assassinations, apparently by Israel, with attacks and attempted attacks of their own in India, Georgia and Thailand.¶ A non-hysterical approach to the Iran nuclear issue is entirely possible. It should take several considerations into account. If the rattled and insecure Iranian leadership is lying when it says it has no intention of developing nuclear weapons, or if it undergoes a conversion from that position (triggered perhaps by an Israeli air strike), it will find, like all other nuclear-armed states, that the bombs are essentially useless and a considerable waste of time, effort, money and scientific talent.¶ Nuclear weapons have had a tremendous influence on our agonies and obsessions since 1945, inspiring desperate rhetoric, extravagant theorising, wasteful expenditure and frenetic diplomatic posturing. However, they have been of little historic consequence. And they were not necessary to prevent a third world war or a major conflict in Europe: each leak from the archives suggests that the Soviet Union never seriously considered direct military aggression against the US or Europe. That is, there was nothing to deter.¶ Moreover, there never seem to have been militarily compelling – or even minimally sensible – reasons to use the weapons, particularly because of an inability to identify targets that were both suitable and could not be effectively attacked using conventional munitions.¶ Iran would most likely "use" any nuclear capacity in the same way all other nuclear states have: for prestige (or ego‑stoking) and to deter real or perceived threats. Historical experience strongly suggests that new nuclear countries, even ones that once seemed hugely threatening, like communist China in the 1960s, are content to use their weapons for such purposes.¶ Indeed, as strategist (and Nobel laureate) Thomas Schelling suggests, deterrence is about the only value the weapons might have for Iran. Such devices, he points out, "would be too precious to give away or to sell" and "too precious to waste killing people" when they could make other countries "hesitant to consider military action".¶ The popular notion that nuclear weapons furnish a country with the capacity to "dominate" its area has little or no historical support – in the main, nuclear threats since 1945 have either been ignored or met with countervailing opposition, not timorous acquiescence. It thus seems overwhelmingly likely that, if a nuclear Iran brandishes its weapons to intimidate others or get its way, it will find that those threatened, rather than capitulating or rushing off to build a compensating arsenal of their own, will ally with others, including conceivably Israel, to stand up to the intimidation – rather in the way an alliance of convenience coalesced to oppose Iraq's invasion of Kuwait in 1990.¶ Iran's leadership, though hostile and unpleasant in many ways, is not a gaggle of suicidal lunatics. Thus, as Schelling suggests, it is exceedingly unlikely it would give nuclear weapons to a group like Hezbollah to detonate, not least because the rational ones in charge would fear that the source would be detected, inviting devastating retaliation.¶ Nor is an Iranian bomb likely to trigger a cascade of proliferation in the Middle East, as many people insist. Decades of alarmist predictions about proliferation chains, cascades, dominoes, waves, avalanches, epidemics and points of no return have proven faulty. The proliferation of nuclear weapons has been far slower than routinely expected because, insofar as most leaders of most countries, even rogue ones, have considered acquiring the weapons, they have come to appreciate several defects: the weapons are dangerous, distasteful, costly and likely to rile the neighbours. And the nuclear diffusion that has transpired has had remarkably limited, perhaps even imperceptible, consequences. As Professor Jacques Hymans has shown, the weapons have also been exceedingly difficult to obtain for administratively dysfunctional countries like Iran.

#### 2—New arsenals not destabilizing—small arsenals, no aggression, and deterrence solves

Forsyth ’12 [James Wood Forsyth Jr., PhD, currently serves as professor of national security studies, USAF School of Advanced Air and Space Studies, Maxwell AFB, Alabama. He earned his PhD at the Josef Korbel School of International Studies, University of Denver. He has written on great-power war, intervention, and nuclear issues, “The Common Sense of Small Nuclear Arsenals,” Summer, Strategic Studies Quarterly, http://www.au.af.mil/au/ssq/2012/summer/forsyth.pdf]

Whatever its logical shortcomings, it is important to stress that deterrence worked—it kept the Cold War “cold” and allowed international life to go on without a catastrophic nuclear war. After 70 years, **most analysts agree** on the basic dynamics of deterrence, and the contemporary debate regarding deterrence, when not addressing the problem of nonstate actors, tends to pivot on force structure considerations. 19 Here, the behavior of states with small nuclear arsenals is instructive. As previously mentioned, most states with nuclear arsenals have not acquired large numbers of nuclear weapons. Instead, they appear content with a relatively small arsenal **capable** **of** warding off an attack as well as dissuading others from interfering in their internal and external affairs. But of the two roles nuclear weapons seem to play—deterrence and dissuasion—is one more important than another? For India and Pakistan, nuclear weapons play a decidedly deter­ rent role. But if one were to free Britain of its NATO obligations, who exactly would Britain be deterring today? What about France? Neither of these countries is as hard-pressed in the security arena as India or Pakistan, yet both hold on to nuclear weapons. While nuclear weapons still “hold power at bay,” one must wonder whose power is being held at bay and how. It is important not to overinterpret this. Nuclear weapons serve a purpose. How else can one explain why nine states have them, while others appear to want them? But what purpose do they serve, in general? To answer that question, one must look at what nuclear weapons do for states. Among other things, nuclear weapons socialize leaders **to the dangers of adventurism and**, in effect, halt them from behaving or responding recklessly **to provocation**. 20 Statesmen may not want to be part of an international system that constrains them, but that is the system that results among nuclear powers. Each is socialized to the capabilities of the other, and the relationship that emerges is one tempered by caution **despite** the composition, goals, or **desires** of its leaders. In short, nuclear weapons deter and dissuade.

#### 3—Proliferation solves conventional great power war.

Waltz ’12, Kenneth Waltz, Professor of Political Science at UC Berkeley, Kenneth Waltz, Professor of Political Science (Emeritus) at UC Berkeley, “A conversation with Kenneth Waltz,” <http://www.annualreviews.org/doi/full/10.1146/annurev-polisci-020511-174136>

**JF:** So what does that imply about polarity and the role of power that has traditionally been a central concern in the realist school?¶ **KW:** Well, nuclear weapons have abolished war among their possessors or those who enjoy their protection. I mean, never once—this is the kind of statement you can almost never make in a social science—never once has there been a war between countries both of whom possess nuclear weapons.¶ **JF:** I'm in general on board with you here; but for the heck of it, what do you think about Kargil? The Kargil War was a spat [between India and Pakistan in 1999]—¶ **KW:** Well, yeah. As I've always said, and I think quite a few people agree, you can fight minor wars in peripheral areas even if you have nuclear weapons. I mean, the test does not lie at the periphery. It lies at the center, as both Pakistani and Indian commentators have said subsequently.

#### 4—Best data proves – proliferation is the cause of great power peace

Tepperman ‘9 ( 9/7/2009 (John - journalist based in New York Cuty, Why obama should learn to love the bomb, Newsweek, p.lexis)

**A growing and compelling body of research** suggests that nuclear weapons may not, in fact, make the world more dangerous, as Obama and most people assume. The bomb may actually make us safer. In this era of rogue states and transnational terrorists, that idea sounds so obviously wrongheaded that few politicians or policymakers are willing to entertain it. But that's a mistake. Knowing the truth about nukes would have a profound impact on government policy. Obama's idealistic campaign, so out of character for a pragmatic administration, may be unlikely to get far (past presidents have tried and failed). But it's not even clear he should make the effort. There are more important measures the U.S. government can and should take to make the real world safer, and these mustn't be ignored in the name of a dreamy ideal (a nuke-free planet) that's both unrealistic and possibly undesirable. The argument that nuclear weapons can be agents of peace as well as destruction rests on two deceptively simple observations. First, nuclear weapons have not been used since 1945. Second, there's never been a nuclear, or even a nonnuclear, war between two states that possess them. Just stop for a second and think about that: it's hard to overstate how remarkable it is, especially given the singular viciousness of the 20th century. As Kenneth Waltz, the leading "nuclear optimist" and a professor emeritus of political science at UC Berkeley puts it, "We now have 64 years of experience since Hiroshima. It's striking and against all historical precedent that for that substantial period, there has not been any war among nuclear states." To understand why--and why the next 64 years are likely to play out the same way--you need to start by recognizing that all states are **rational on some basic level**. Their leaders may be stupid, petty, venal, even evil, but they tend to do things only when they're **pretty sure they can get away with them**. Take war: a country will start a fight only when it's almost certain it can get what it wants at an acceptable price. Not even Hitler or Saddam waged wars they didn't think they could win. The problem historically has been that leaders often make the **wrong gamble and underestimate** the other side--and millions of innocents pay the price. Nuclear weapons change all that by making the costs of war **obvious**, inevitable, **and unacceptable**. Suddenly, when both sides have the ability to turn the other to ashes with the push of a button--and everybody knows it--the basic math shifts. Even the **craziest tin-pot dictator** is forced to accept that war with a nuclear state is **unwinnable** and thus not worth the effort. As Waltz puts it, "**Why fight if you can't win and might lose everything**?" Why indeed? **The iron logic of deterrence** and mutually assured destruction is so compelling, it's led to what's known as the nuclear peace: the virtually unprecedented stretch since the end of World War II in which all the world's major powers have avoided coming to blows. They did fight proxy wars, ranging from Korea to Vietnam to Angola to Latin America. But these never matched the furious destruction of full-on, great-power war (World War II alone was responsible for some 50 million to 70 million deaths). And since the end of the Cold War, such bloodshed has declined precipitously. Meanwhile, the nuclear powers have scrupulously avoided direct combat, and there's very good reason to think they always will. There have been some near misses, but a close look at these cases is fundamentally reassuring--because in each instance, very different **leaders all came to the same safe conclusion**. Take the mother of all nuclear standoffs: the Cuban missile crisis. For 13 days in October 1962, the United States and the Soviet Union each threatened the other with destruction. But both countries soon stepped back from the brink when they recognized that a war would have **meant curtains** for everyone. As important as the fact that they did is the reason why: Soviet leader Nikita Khrushchev's aide Fyodor Burlatsky said later on, "It is impossible to win a nuclear war, and both sides realized that, maybe for the first time." The record since then shows the same pattern repeating: nuclear-armed enemies slide toward war, **then pull back**, always for the same reasons. The best recent example is India and Pakistan, which fought three bloody wars after independence before acquiring their own nukes in 1998. Getting their hands on weapons of mass destruction didn't do anything to lessen their animosity. But it did **dramatically mellow their behavior**. Since acquiring atomic weapons, the two sides have never fought another war, despite severe provocations (like Pakistani-based terrorist attacks on India in 2001 and 2008). They have skirmished once. But during that flare-up, in Kashmir in 1999, both countries were careful to keep the fighting limited and to avoid threatening the other's vital interests. Sumit Ganguly, an Indiana University professor and coauthor of the forthcoming India, Pakistan, and the Bomb, has found that on both sides, officials' thinking was strikingly similar to that of the Russians and Americans in 1962. The prospect of war brought Delhi and Islamabad face to face with a nuclear holocaust, and leaders in each country did what they had to do to avoid it.

#### 5—Proliferation frees the US from extended deterrence, preventing global escalation

Layne ’96, Christopher Layne, fellow of the Center For Science and International Affairs at Harvard, “Minimal Realism in East Asia,” The National Interest, Spring, 1996, p. 72-73

This is doubly true when the potential aggressor is a nuclear power because, as Charles de Gaulle reasoned well, rational states will not risk suicide to save their allies. For both pro­tector and protected, extended nuclear deter­rence raises constant and ultimately insoluble dilemmas of credibility and reassurance. The conditions that contributed to suc­cessful extended nuclear deterrence in Cold War Europe do not exist in post-Cold War East Asia. Unlike the situation that prevailed in Europe between 1948 and 1990—which was fundamentally stable and static—East Asia is a volatile region in which all the major players— Japan, China, Korea, Russia, Vietnam—are candidates to become involved in large-scale war. There is no clear and inviolable status quo. The lines of demarcation between spheres of influence are already blurred and may well become more so as Chinese and Japanese influence expand simultaneously, increasing the number and unpredictability of regional rivalries. The status of Taiwan, ten­sion along the 38th Parallel in Korea, conflict­ing claims to ownership of the Spratly Islands, and the Sino-Japanese territorial dispute over the Senkaku Islands are only a few of the flash-points that could ignite a great power war in East Asia. Washington will clearly exercise far less control over the policies of East Asian powers than it exercised over Americas European allies during the Cold War. Hence, the risk of being chain-ganged into a nuclear conflict are much higher for the United States in post-Cold War East Asia if it maintains or extends nuclear guarantees to any of the region’s major states. Even more important, post-Cold War East Asia simply does not have the same degree of strategic importance to the United States as did Europe during the Cold War. Would the United States risk a nuclear con­frontation to defend Taiwan, the Spratlys, or Senkaku? Knowing that they would not con­stitute the same kind of threat to U.S. interests that the Soviet Union did, future revisionist East Asian powers would probably be more willing to discount America’s credibility and test its resolve. The presence of American forces in the region may indeed have the perverse effect of failing to preserve peace while simultaneously ensuring the United States would be drawn automatically into a future East Asian war. They could constitute the wrong sort of tripwire, tripping us rather than deterring them. Notwithstanding current con­ventional wisdom, the United States should encourage East Asian states—including Japan—to resolve their own security dilem­mas, even if it means acquiring great power, including nuclear, military capabilities. Reconfiguring American security policies anywhere in the world in ways that, in effect, encourage nuclear proliferation is widely seen as irresponsible and risky. This is not neces­sarily the case. Nuclear proliferation and extended deterrence are generally believed to be flip sides of the same coin, in the sense that providing the latter is seen to discourage the former. Nearly all maximalists are simultane­ously proliferation pessimists (believing that any proliferation will have negative security implications) and extended nuclear deterrence optimists (believing that extended nuclear deterrence “works”). But this formulation comes apart from both ends in East Asia: Potential nuclear powers in the region are unlikely to act irresponsibly and, as suggested above, the U.S. nuclear umbrella is of uncer­tain credibility in post-Cold War circum­stances in which the Soviet Union no longer exists and strains in the U.S.-Japanese relationship are manifest. Even selective proliferation by stable, non-rogue states admittedly raises important political, strategic, organizational, and doctri­nal issues. But so does relying on America’s nuclear extended deterrence strategy in changed circumstances. The need at hand is to weigh the dangers imbedded in an extended deterrence strategy against those posed by the possibility of nuclear proliferation, and here the Japanese case provides the most important and sobering illustration.

#### 10—Must allow extended deterrence to fail now – commitment—Must allow extended deterrence to fail now – commitments cause East Asian nuclear war.

Schreer ’12, [Benjamin Schreer, senior Lecturer in SDSC's Graduate Studies in Strategy & Defence Program and managing editor of the journal Security Challenges. He received a PhD in Political Science from Kiel University, working on Australia's strategic policy. He also received a Master of Political Science from Kiel University, and studied international relations and security studies at Coventry University, 10/1/2012, “Abandonment, entrapment, and the future of US conventional extended deterrence in East Asia (Parts I and II)]

Traditionally, US conventional deterrence for its East Asian allies has relied on ‘direct defence’, i.e. deterrence by denial through the unmatched ability to defeat any conventional attack against its forward deployed forces and/or allied territory. Up to now that’s been a credible strategy. But today China has embarked on a long-term trajectory to contest US naval supremacy in the ‘first island chain’, which includes Taiwan and parts of the seas surrounding Japan. While the People’s Liberation Army (PLA) still has lots of catching up to do, the gap is slowly closing. Already, American fixed targets (bases) in Japan and South Korea are in striking range of China’s growing missile arsenals. The PLA is also developing systems to pose a threat to high-value moving targets (US carrier strike groups). The aim is to make it too costly for the United States to intervene in a future regional crisis between China and its neighbours.¶ This development has important ramifications for the American deterrent posture. By raising the stakes, China makes it hard for the United States to militarily coerce it in a future regional crisis unless major strategic interests are at stake. Consequently, the Pentagon seems to putting a stronger emphasis on deterrence by punishment, which relies on distant strike-capabilities and putting a greater portion of its forces out of the PLA’s missile range. In addition, recent US force posture reports stress the need for Japan and South Korea to invest more in their own denial capabilities. And a growing number of US commentators argue that America’s ability to defend its ‘de facto’ ally Taiwan might become too costly (PDF) as its interests are merely associated with ‘reputational risk’; notwithstanding good reasons why Taiwan also matters geostrategically to the US and its allies.¶ However, this invokes a classical alliance dilemma of ‘abandonment’ and ‘entrapment’. A vague commitment to defend its East Asian allies in a conflict of lesser interest to Washington not only contributes to fears of abandonment on the part of allies, it might also encourage Chinese risk-taking. A strong commitment, however, might increase allies’ risk-taking during crisis and raises the spectre of ‘entrapment’ in an unwanted conflict with China. The crisis over the Senkaku islands is a case in point. Washington has urged both parties to exercise restraint, knowing that Tokyo would expect it to come to its defence should the conflict spiral out of control. Failure to do so would deal a mortal blow to American credibility and could lead to even greater cycles of armament in the region. Yet, the Japanese government seems ambivalent about US commitment; it is unsure of what exactly the US would be willing to bring to the fight.¶ Any move to provide China with greater strategic breathing space as its power grows thus raises critical questions about US extended deterrence relationships with its allies: how can deterrence by punishment be credible in territorial conflicts which are vital for allies but not for the US, particularly if it involves the risk of nuclear escalation with China? What will be the ‘tripwire’ for US military engagement in such regional conflicts between China and its allies? Or will there come a time when the US will signal to its allies and partners that they are essentially on their own when it comes to certain disputes with China?¶ Deterrence depends significantly on capability and credible communication to both allies and adversaries. In East Asia, the US needs a balanced mix of both ‘denial’ and ‘punishment’ capabilities. Greater investments in long-range strike have to be combined with increased efforts to strengthen direct defence of forward deployed troops and allied territory. More needs to be done to assist Taiwan’s capacity to withstand a PLA opening attack. Greater cooperation with Japan to harden bases and to further strengthening ballistic missile defence is a welcome sign.¶ Second, and probably much more important, is communication. Obama’s ‘pivot’ announcement was a good start but it is not a strategy that sets out how the United States aims to ‘shape’ Chinese and allied behaviour, including through extended deterrence. It’s odd that the last US East Asia Strategy Report dates back to 1998. Uncertainty also surrounds the ‘AirSea Battle’ operational concept, which has allies wondering if it is more about reducing US footprint in the region than reassuring them. Just as in Western Europe during the Cold War, the United States should clearly communicate its willingness to put forward deployed forces in East Asia in harm’s way. No serious Chinese planner could assume that an attack on US forward deployed forces, fixed or moving, would be left unanswered. Finally, the US needs to clarify whether the defence of Taiwan or territorial dispute between its allies and China are really only of reputational interest. Ambiguity is not only counterproductive to crisis stability since it could invite Chinese miscalculations about America’s intentions and will to fight, it also puts into question the fundamental principle of solidarity on which any alliance rests.¶ This matters to Australia for at least three reasons. First, Australia’s prosperity is critically dependent on peace and stability in East Asia. Second, over time the same deterrence dilemma will also affect US alliances and security partnership in Southeast Asia, a region much closer to home. And thirdly, American shifts in deterrent posture have direct implications for Australia, which will be discussed in part II.¶ Last week, I identified some of the [possible dilemmas for US conventional deterrence in East Asia](http://www.aspistrategist.org.au/abandonment-entrapment-and-the-future-of-us-conventional-extended-deterrence-in-east-asia-part-i/%22%20%5Ct%20%22_blank), so it’s now worth looking in more detail what this might mean for Australia. At least four points can be made:¶ First, as the United States shifts its conventional deterrence strategy towards greater strategic depth in the Asia–Pacific and a greater reliance on long-range strike, Australia and Japan become much more important allies from an American perspective, for both political and geostrategic reasons. The recent [CSIS report](http://csis.org/publication/pacom-force-posture-review%22%20%5Ct%20%22_blank) on the future American force posture in East Asia makes this amply clear. Using Australian airfields in the north for long-range strike provides US planners with additional options to complicate Chinese planning in the event of a major crisis. Indeed, in a future Asia–Pacific strategic order, Australia might become the latest in a line of America’s ‘[unsinkable aircraft carriers](http://en.wikipedia.org/wiki/Unsinkable_aircraft_carrier%22%20%5Ct%20%22_blank).’ But this also means that in a future contested Asia–Pacific, Australia’s heightened relevance in US operational planning will make such installations a potential target of Chinese strikes in the event of a war. Burden-sharing within ANZUS will thus (again) take on a new quality, similar to the Cold War when Australian defence planners were worried about Soviet strikes against joint US–Australian facilities at Pine Gap and elsewhere. In that case, investing in defensive systems to prepare for such a scenario would move up the priority order of [Defence’s core capabilities](http://www.aspistrategist.org.au/what-are-defences-core-capabilities/%22%20%5Ct%20%22_blank).¶ Second, the US military is already looking at options to strengthen its conventional deterrence by exploiting China’s geostrategic weaknesses. While China might be able to deny US carrier group freedom of manoeuvre in some parts of the Western Pacific, it won’t be able to exert sea control itself. And it certainly won’t be able to dominate its own sea lines of communication in Southeast Asia and the Indian Ocean for decades to come. Therefore, one key element of the new US [AirSea Battle](http://www.csbaonline.org/publications/2010/05/airsea-battle-concept/%22%20%5Ct%20%22_blank) operational concept is threatening China with a ‘distant blockade’ of maritime chokepoints in Southeast Asia and parts of the Indian Ocean. Given [Australia’s geostrategic location and the ADF’s planned modernisations of air and maritime capabilities](http://www.aspi.org.au/publications/publication_details.aspx?ContentID=307" \t "_blank), the US expects us to play a key role in this and (if this is not already happening) we need to have thorough discussion with Washington about the political, strategic and operational implications.¶ Third, over time China’s growing power projection capabilities will pose a similar dilemma for the US extended deterrence in Southeast Asia as in East Asia. Will Washington be willing to intervene in a territorial dispute between China and the Philippines or China and Vietnam? If so, what will it expect from its Australian ally? If not, will the regional strategic balance tip in favour of China or will its neighbours choose to balance by increasing their own military modernisation programs and by looking to secure the support of additional external players, including Australia? Obviously, Australia has a key strategic interest in preventing Southeast Asia from being dominated by a potentially hostile power. If the South China Sea becomes even more volatile than [it already is (PDF)](http://csis.org/files/publication/twq12springbuszynski.pdf%22%20%5Ct%20%22_blank), Australia might need to increase its strategic engagement to secure its interests. In this context, its long-standing commitment to the Five Powers Defence Arrangements (FDPA) could be used as a framework for increased air and maritime activities, including through forward-deployed strike aircraft.

#### 7—First strikes are unsustainable. Proliferation deters any consideration of an attack

Waltz ’03, Kenneth Waltz, The Spread of Nuclear Weapons: A Debate Renewed, 2003, p. 121

Students of organizations rightly worry about complex and tightly-coupled systems because they are susceptible to damaging accidents. They wrongly believe that conflicting nuclear states should be thought of as a tightly-coupled system. Fortunately, nuclear weapons loosen the coupling of states by lessening the effects of proximity and by cutting through the complexities of conventional confrontations. Organizational theorists fail to distinguish between the technical complexities of nuclear-weapons systems and the simplicity of the situations they create. Sagan points out that the survival of Indian and Pakistani forces cannot be guaranteed. But neither can their complete destruction, and that is what matters. Oddly, many pessimists believe that countries with small and technologically limited nuclear forces may be able to accomplish the difficult feat of making a successful first strike but not the easy one of making their own nuclear force appear to be invulnerable. They overlook a basic nuclear truth: If some part of a force is invulnerable, all of the force is invulnerable**. Destroying even a major portion** of a nuclear force **does no good because of the damage a small number of surviving warheads can do**. Conventional weapons put a premium on striking first to gain the initial advantage and set the course of the war. Nuclear weapons eliminate this premium. The initial advantage is insignificant if the cost of gaining it is half a dozen cities.

2NC
DTIRP 12 DEFENSE TREATY INSPECTION READINESS PROGRAM 2012 Plutonium Management and Disposition Agreement (PMDA) <http://dtirp.dtra.mil/tic/synopses/pmda.aspx>

The Plutonium Management and Disposition Agreement (PMDA), [long title: Agreement Between the Government of The United States Of America and the Government of The Russian Federation Concerning the Management and Disposition of Plutonium Designated as no Longer Required for Defense Purposes and Related Cooperation] is designed to make arms reductions irreversible by ensuring that the United States and Russia transparently dispose of weapons-grade plutonium from their respective defense programs and, thereby, prevent the plutonium from ever being reused for weapons or any other military purpose.

Under the PMDA the United States and Russia each agreed to dispose of no less than 34 metric tons of weapons-grade plutonium by converting it into fuel for use in civil reactors that produce electricity. Combined, this represents enough material for approximately 17,000 nuclear weapons. The PMDA also provides that additional weapons-grade plutonium declared in excess as arms reductions go forward should be disposed of under the same or comparable transparency terms.

In 2006, Russia announced its nuclear energy strategy. This strategy was incompatible with the 2000 PMDA. In 2007, Russia provided clarification of its preferred approach to the disposition of weapons-grade plutonium. This clarification served as the basis for updating the PMDA via the protocol signed on April 13, 2010 by U.S. Secretary of State Hillary Clinton and Russian Foreign Minister Sergey Lavrov. The 2010 protocol enables each party to proceed with completing and operating the facilities needed to depose of weapons-grade plutonium. These facilities will use the plutonium to produce electricity for civilian purposes.

In December 2010, the U.S. Deputy Secretary of Energy and the Russian Director General for the State Corporation "Rosatom” issued the Joint Statement on the Results of the Nuclear Energy and Nuclear Security Working Group Meeting, including the intent to create milestones by February 2011 for bringing the PMDA into force. On May 20, 2011, Russia's State Duma ratified the PMDA and its Protocols. Russian President Dmitry Medvedev approved the amendments to the PMDA on June 7, 2011. On July 13, 2011, Secretary Clinton and Foreign Minister Lavrov exchanged diplomatic notes in Washington, D.C., bringing the PMDA and its Protocols into force.

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## Rare Earth Metal DA

#### Rare earth market is stable now – future supply is expanding to meet status quo demand. The plan is a sharp rise in demand that current mines cannot keep up with. That’s Kuepper

#### Supply will match demand over the long run – but clean tech causes a short term market crunch

World Politics Review 11/21

Greg Caramenico, journalist and analyst covering finance, science and energy policy, as well as Italy, Iran and the Levant. He has a master's degree in history from Vanderbilt University, 11/21/12, “China's Rare Earth Metals Clampdown Drives New Trade, Mining Ties”, http://www.worldpoliticsreview.com/articles/12517/chinas-rare-earth-metals-clampdown-drives-new-trade-mining-ties //jchen

Over the long run, the ramp-up in global production of rare earths will likely meet the strategic needs of manufacturers. In the nearer term, the risk of shortages varies by country, but the growing need for “clean” technology might further increase demand. One of the key applications for rare earth metals is the use of dysprosium in powering permanent magnets, which are essential to electric motors and, by extension, electric cars. China's tightening of supplies indicates they hope to keep more essential rare earth elements within their domestic supply chain, in order to sell domestically produced electric cars, rather than supply foreign manufacturers with rare earths.

One could also imagine a scenario in which cellphones and other existing products received most of the rare earth reserves during a temporary supply stoppage. This possibility worried some automobile manufacturers enough that they began to research alternative materials for clean engines. Indeed, Toyota began this research before China cut access to its rare earth supplies. Nevertheless, it remains uncertain how long it would take for such research to bear fruit.

#### Vote neg on presumption if they win a supply crunch is inevitable – means NO solvency because the turbines/panels cannot be built

#### [\*\*\*\*]Their arguments that other countries will mine solves this – it proves that over the long run, supply will come online and meet future demand. The problem is what happens in the SHORT TERM.

#### And, the risk is linear – the plan uniquely makes a crunch more likely and faster

Trigaux 12 [David, A thesis submitted in partial fulfillment of the requirements of the University Honors Program University of South Florida St. Petersburg May 2nd 2012 Thesis Director: Thomas Smith Ph. D. Director of the Honors Program and Associate Professor of Political Science Committee Member: Dr. Ty Solomon, Visiting Assistant Professor of Political Science “The U.S., China and Rare Earth Metals” The Future Of Green Technology, Military Tech, and a Potential Achilles‟ Heel to American Hegemony. http://dspace.nelson.usf.edu/xmlui/bitstream/handle/10806/4632/David%20Trigaux%20Honors%20Thesis%5B1%5D.pdf?sequence=1]

Given the world‟s total energy production, alternative energy still constitutes a small fraction of the whole. In terms of rare earth metals, supply has at least reasonably met demand, but this is rapidly changing. As more technologies become commercially viable, and more nations join the green revolution, this demand is sure to skyrocket. Corresponding increases in supply are much more questionable, especially considering export restrictions and political implications, as well as overall extraction and refinement rates. 57

#### And, MARKET STABILITY is the framing issue– demand is high but not out of control now. Only a RADICAL change like the plan is perceived

Even if renewable growth is inevitable, its slow – that gives supply enough time to expand in the status quo. The plan is a MASSIVE CHANGE in renewable policy and supply/demand calculations, which triggers the link. That’s Kuepper

#### If renewables are inevitable there's no reason to do the aff – vote neg to avoid short term risk of China war.

#### Alternative REE supplies is a negative argument – it proves that over the long run, other sources will enter the market and stabilize demand. The aff causes a short term crunch because it takes decades for these mines to come online. That’s Kuepper

#### Mining difficulties mean sources take years to come online

World Politics Review 11/21

Greg Caramenico, journalist and analyst covering finance, science and energy policy, as well as Italy, Iran and the Levant. He has a master's degree in history from Vanderbilt University, 11/21/12, “China's Rare Earth Metals Clampdown Drives New Trade, Mining Ties”, http://www.worldpoliticsreview.com/articles/12517/chinas-rare-earth-metals-clampdown-drives-new-trade-mining-ties //jchen

China's restriction of global access to its deposits of rare earth elements starting in 2010 changed the status of these materials in the global economy, creating new diplomatic alliances across Asia and increasing the importance of mining in trade agreements. A series of trade agreements in Central and Southeast Asia, announced over the past month, reveal the ways manufacturers and mining conglomerates are coping with potential shortages two years after China's rare earth consolidation. Nevertheless, difficulties inherent to extraction and processing mean that delays will hamper access to new sources of rare earth supplies even when supported by strong investments.

#### Environment and cost concerns delay opening for a decade

Kuepper 2/8

Justin Kuepper, financial journalist, chief editor of The OTC Investor, an investment news site that provides market news and stock highlights, 2/8/13, “Understanding China's Rare Earth Metals Market: What Changing Regulations Could Mean”, http://commodityhq.com/2013/inside-chinas-rare-earth-metal-industry/ //jchen

Environmental Concerns Arise

China’s two-mile wide Baiyun Obo is home to the world’s biggest mine and the single largest source of rare earth metals in the world. While the mine has certainly helped create jobs and build wealth, the operation comes at an enormous environmental cost, with toxic runoff from the refining process and poisoned lakes where rocks are kept before processing.

Daily Mail’s Richard Jones reported in 2010 that workers regularly experienced acid burns, while some “had trouble breathing” after completing a 12-hour shift, due to the sulfur-filled air.

But in the end, it’s the relaxed health and safety laws in China that may be keeping rare earth metal prices low. These low prices discourage other operations from starting up in countries like Australia or the United States, since they would be unable to compete on price. Additionally, even if a new plant was opened, it could take some five to 10 years to come online.

#### Other countries won’t mine – environmental costs.

Shimatsu 12 [Yoichi Shimatsu, former associate editor of Pacific News Service, is an environmental writer and consultant based in Hong Kong. The New Opium War: China's Rare Earth Minerals New America Media, News Analysis, Yoichi Shimatsu, Posted: Mar 15, 2012 http://newamericamedia.org/2012/03/the-new-opium-war-chinas-rare-earth.php]

Beijing limited foreign shipments due to shortages caused by “environmental issues” and “health hazards” to miners, according to news reports. The toxic threats of water contamination and air pollution are serious enough for other countries with rare-earth resources to block plans for extraction. In Malaysia’s Pahang state, for instance, thousands of villagers are now protesting the planned $230 million refining plant by Australian-owned Lynas, the first new rare-earth operation outside of China. Local residents claim that the open-pit mine releases radioactive dust and carcinogenic wastewater. The problem of downstream contamination – and not the lack of potential mining sites – is the reason that China has been left with a near-monopoly on rare earth mining. Before 1990, before other nations suspended their mining operations, China produced less than 30 percent of the world supply.

#### Plan causes the rare earth market prices to go through the roof –

#### An unexpected energy policy by the federal government changes global supply/demand expectations overnight. Any sharp new demand for REEs lead to supply and price instability – that’s Epstein

#### Perception magnifies the link – investors are on the brink of panic

Reuters 12

Eric Onstad, 9/19/12, “Analysis: Rare earth prices to erode on fresh supply, China”, http://www.reuters.com/article/2012/09/19/us-rareearths-outlook-idUSBRE88I0O020120919 //jchen

HEAVIES

The price outlook is stronger for so-called heavy rare earths, which are scarcer and expected to see rising demand in applications such as high performance magnets and energy efficient lighting.

Terbium oxide, mainly used in phosphors for compact fluorescent and LED lighting, has shed slightly over half its value since the peak to $1,750 a kg, FOB China, and Otto expects the long-term price to dip slightly to $1,500/kg.

More volatility is expected as developments could buffet the sector, such as any breakthrough in efforts by industrial consumers such as Toyota Motor Corp (7203.T) to find substitutes for rare earths.

If recent tensions between China and Japan escalate and Beijing retaliates by cutting off rare earth supply to Tokyo, prices could spike again.

Another wild card is the outcome of a World Trade Organization complaint filed in March by the European Union, the United States and Japan, saying China was unfairly choking off exports of rare earth metals.

"It isn't a pretty or happy place at the moment," said a London trader who specializes in exotic metals. "There's no blind panic out there, either to buy or sell, but people are very uncertain about what the future will hold and rightly so."

#### Rare earth shortage collapses US-China relations – mineral scarcities exacerbate all tensions and force escalating economic rivalry, empirically proven with conflict in the DRC – that’s White and Cohen

#### China war outweighs – immediate nuclear use is based on perception, while solvency takes decades.

#### It’s the biggest war impact – outweighs all other scenarios

Washington Times 11

Eli Lake staff writer, article is about James Clapper Director of National Intelligence, 3/10/11, “China deemed biggest threat to U.S.: Russia second, DNI chief says”, <http://www.washingtontimes.com/news/2011/mar/10/china-deemed-biggest-threat-to-us/?page=all> //jchen

China’s nuclear arsenal poses the most serious “mortal threat” to the United States among nation states, Director of National Intelligence James Clapper told the Senate on Thursday.

In candid testimony before the Senate Armed Services Committee, Mr. Clapper said he considered China the most significant threat among nation states, with Russia posing the second-greatest threat. He later clarified the comments by saying he did not assess that China or Russia had the intention to launch an attack on the United States.

The testimony contrasts with statements by Obama administration officials who have sought to highlight the dangers of Iran and North Korea while paying less attention to China and Russia.

Mr. Clapper said he does not assess that North Korea and Iran pose greater strategic threats because they lack the forces that Russia and China have that could deliver a nuclear attack on the United States.

North Korea has tested at least twice a multistaged long-range missile capable of hitting the United States. On Tuesday, Sen. James M. Inhofe, Oklahoma Republican, told a conference in Washington that analysts estimate that Iran would be able to deliver a payload by missile to the U.S. East Coast by 2015.

Asked by Sen. Joe Manchin III, West Virginia Democrat, what country he viewed as the greatest adversary of the United States, Mr. Clapper said: “Probably China, if the question is pick one nation state.”

He added, “We have a treaty, the New START treaty, with the Russians. I guess I would rank them a little lower because we don’t have such a treaty with the Chinese.”

China, according to successive Pentagon reports to Congress, is building up its strategic nuclear forces and has spurned offers from the administration to begin talks on nuclear arms, missile defenses, space and cyberweapons, as well as an international agreement to limit the production of fissile material.

#### Perception of any shortage triggers a US crackdown on China – destroys relations

Parthemore 11 (Christine Parthemore, Fellow at the Center for a New American Security (CNAS), where she directs the Natural Security Program and the Natural Security Blog, prolific author, former journalist writing for The Washington Post, Roll Call, and the Atlanta Journal-Constitution, MA from Georgetown University's Security Studies Program, June 2011, “ELEMENTS OF SEUCURITY: MITIGATING THE RISKS OF U.S. DEPENDENCE ON CRITICAL MINERALS,” Center for a New American Security, <http://www.cnas.org/files/documents/publications/CNAS_Minerals_Parthemore_1.pdf>)

Minerals are a subject of much contention. On one hand, the United States remains less prepared for supply disruptions, price spikes and trade disagreements related to the global minerals trade than most experts realize. On the other hand, public concern over reliable access to the minerals required in key sectors of the U.S. economy, in particular those needed to produce military equipment, is growing. Too frequently, however, such concerns are based on inaccurate assumptions. A sober and informed analysis suggests there are real vulnerabilities, which place critical national security and foreign policy interests at risk. In worst-case scenarios, supplies of minerals that the United States does not produce domestically may be disrupted, creating price spikes and lags in delivery. Even short of major supply disruptions, supplier countries can exert leverage over the United States by threatening to cut off certain key mineral supplies. The United States may also lose ground strategically if it continues to lag in managing mineral issues, as countries that consider assured access to minerals as far more strategically important are increasingly setting the rules for trade in this area. China’s rising dominance is at the heart of this growing public debate. Its 2010 cutoff of rare earth elements2 – a unique set of minerals that are difficult to process yet critical to many hightech applications – attracted particular attention. After Japan detained a Chinese trawler captain over a skirmish in the East China Sea, Japanese companies reported weeks of stalled shipments of rare earths from China amid rumors of an official embargo. This may sound like a minor trade dispute, but China currently controls production of about 95 percent of the world’s rare earths, which are critical to building laser-guidance systems for weapons, refining petroleum and building wind turbines. Coinciding with possessing this incredible leverage over the rest of the world, China has also reduced its export quotas for these minerals. For its part, the Chinese government contended that it did not put any formal export embargo in place, and that its plans to reduce exports simply reflect the need to meet growing domestic demand for rare earths. Japan-China relations experienced further strain in their already tense relationship. In the United States, many reporters, policy analysts and decision makers did not foresee this challenge. Feeling blindsided, some in the United States characterized the situation in a manner that demonized China rather than using the opportunity to better understand the true nature of U.S. supply chain vulnerabilities. The 2010 rare earths case and others are increasing interest in critical minerals among U.S. policymakers. Congress held hearings on the strategic importance of minerals between 2007 and 2010, and the 2010 National Defense Authorization Act required DOD to study and report on its dependence on rare earth elements for weapons, communications and other systems.3 During a 2009 hearing on minerals and military readiness, Republican Representative Randy Forbes of Virginia called minerals, “one of those things that no one really talks about or worries about until something goes wrong. It’s at that point – the point where we don’t have the steel we need to build MRAPs [Mine Resistant Ambush Protected vehicles] or the rhenium we need to build a JSF [Joint Strike Fighter] engine that the stockpile becomes critically important.”4 In October 2010, Secretary of State Hillary Rodham Clinton stated that it would be “in our interests commercially and strategically” to find additional sources of supply for rare earth minerals, and stated that China’s recent cuts to rare earth exports “served as a wakeup call that being so dependent on only one source, disruption could occur for natural disaster reasons or other kinds of events could intervene.”5 In January 2011, Sen. Mark Begich, D-Alaska, Sen. Lisa Murkowski, R-Alaska, and Rep. Mike Coffman, R-Colo., wrote a letter to Defense Secretary Robert Gates expressing concern for minerals required for producing defense equipment such as Joint Direct Attack Munitions (JDAMs), which stated, “Clearly, rare earth supply limitations present a serious vulnerability to our national security. Yet early indications are that DOD has dismissed the severity of the situation to date.”6 Additionally, the Department of Energy (DOE) launched a multiyear effort to explore potential vulnerabilities in supply chains for minerals that will be critical to four distinct areas of energy technology innovation. While concern is growing, the media and policymakers often focus too narrowly on what may seem the most compelling indicators – usually import dependence or scarcity – in prescribing solutions to reduce U.S. vulnerabilities, in particular to supply disruptions in critical minerals such as rare earths. This focus is sparking protectionist attitudes, with some worrying that import dependence poses an inherent risk to the U.S. economy. Discussion of minerals also frequently focuses on supply scarcity and resource depletion in absolute terms. However, both the rhenium and rare earth minerals disruptions of the past five years were triggered by deliberate decisions made by political leaders to leverage their positions of strength, not by market forces, disorder or scarcities of these minerals. Countries often revert to hoarding, pressuring suppliers and [continued, no omissions] otherwise behaving as if scarcities are present even when they are not, based solely on concerns that shortages are likely in the near term. In fact, neither scarcity nor import dependence alone is sufficient to signal vulnerability, and a combination of factors including concentration of suppliers is most often required for mineral issues to become security or foreign policy problems. This report, based on two years of research, site visits and discussions with stakeholders, explores how the supply, demand and use of minerals can impair U.S. foreign relations, economic interests and defense readiness. It examines cases of five individual minerals – lithium, gallium, rhenium, tantalum and niobium – and rare earth elements, such as neodymium, samarium and dysprosium, as a sixth group in order to show the complexity of addressing these concerns. Each of these minerals is critical for defense technologies and U.S. economic growth plans. They share characteristics with minerals that have caused important political or economic concerns for the United States in the past. Additionally, lithium is frequently cited in the media and in discussions of how clean energy supply chains are critical to meeting America’s future economic, energy and environmental goals. Within the past five years, two of these cases – rhenium and rare earth minerals – have involved supply disruptions or important threats of disruptions for the United States and its allies. Each of these minerals will require federal government attention in the coming years. Pg. 6-10

#### Strategic distrust will undermine cooperation. Lack of dialogue guarantees nuclear escalation

Kulacki 12

Gregory Kulacki, senior analyst and China project manager in the Global Security Program at the Union of Concerned Scientists (UCS). He is a respected expert on international educational exchanges with the People's Republic of China. Dr. Kulacki lived and worked in China for more than twelve years developing and administering a wide variety of exchange programs between China and the United States. Prior to joining UCS in 2002 he served as the director of Academic Programs in China for the Council on International Educational Exchange, as an associate professor and the director of the Sino-American Center for Environmental Education at Green Mountain College, and most recently as the director of External Studies for Pitzer College, where he established a ground-breaking program in Chinese Media Studies in cooperation with Peking University, China project manager and Senior Analyst, Union of Concerned Scientists, Huffington Post, “The Risk of Nuclear War with China”, http://www.huffingtonpost.com/gregory-kulacki/the-risk-of-nuclear-war-w\_b\_1903336.html //jchen

It is disturbing, therefore, that both the United States and China have failed to find a productive way to discuss the risks of nuclear war, much less begin to take steps to mitigate those risks. The Chinese government appears trapped in a psychology of political and military insecurity that fosters a strategic dependency on secrecy and deception as its "trump card" in a potential conflict with the United States. The U.S. government, as Jeffrey Lewis points out in a recent essay in Foreign Policy, is held captive by "the illusion of the winning move" that "holds out the prospect of fighting and winning a nuclear war against China." U.S. unwillingness to admit it is vulnerable to a Chinese nuclear attack is driving a slow motion arms race, reminiscent of the Cold War, where each new U.S. effort to find the winning move is checked by the latest Chinese advance in military technology.

On the edges of the official competition, misanthropes in both nations spread sensational and frightening disinformation that poisons public discussion, making steps towards dialog and cooperation more difficult for political leaders to take. In the face of growing strategic distrust, neither government seems willing to accept the risks for peace that are necessary to minimize the risks of war, which, while still small, continue to grow.

#### Link turns the case – immediate price shocks crush the energy industry because companies haven’t accounted for a huge cost increase in the materials market chain – that’s Epstein

#### Changes to the cost-curve crush the energy industry.

Pell 11 [Ezra, Environmental Finance | Mon, 12 December 2011, Rare Earth Shortages - A Ticking Timebomb for Renewables? http://oilprice.com/Alternative-Energy/Renewable-Energy/Rare-Earth-Shortages-A-Ticking-Timebomb-For-Renewables.html]

A global scarcity of rare earth metals over the next five years could be **“a ticking timebomb”** for renewables and clean-tech, according to consultancy PwC. Hybrid cars, rechargeable batteries and wind turbines are among the sectors which could be affected by a shortage of these metals, which include cobalt, lithium and platinum, says PwC’s report Minerals and metals scarcity in manufacturing: A ‘ticking timebomb’. Rare earth metals are a key element for producing gearless wind turbines using permanent magnet generators, said Daniel Guttmann, London-based director for renewables and clean-tech at PwC. Manufacturers favour gearless turbines increasingly as they are more reliable than geared turbines, which are heavier and have more moving parts. “This is a **real headache** for the industry and may **negatively impact the cost-curve** of offshore wind,” he said. Guttman added that two ways that automotive manufacturers expect to meet tightening emission regulations are electric vehicles and reducing vehicle weight, and rare earth metals are required to construct batteries of the right cost, weight and size. “Scarce supply and the associated price implications could make it more difficult for [manufacturers] to keep pushing emissions down cost effectively,” he said.

#### Drives companies out of business.

Pappagallo 12 [Linda, Masters Student at Columbia University - School of International and Public Affairs, Writer at Green Prophet and US Ambassador for Carboun - Author/ Researcher for an infographic chapter on Ecology and the Environment in the Middle East. Rare Earth Metals Limits Clean Technology’s Future August 5th, 2012 http://www.greenprophet.com/2012/08/rare-earth-metal-peak/]

As the world moves toward greater use of zero- carbon energy sources, the supply of certain key metals needed for such clean-energy technologies may dry up, inflating per unit costs and **driving the renewable energy market out of business.** We’ve talked about peak phosphorus for food; now consider that rare earth metals like neodymium which are used in magnets to help drive wind energy turbines, and dysprosium needed for electric car performance are becoming less available on the planet.

#### Scares off investors – mere PERCEPTION of a shortage kills business confidence

Trigaux 12 [David, A thesis submitted in partial fulfillment of the requirements of the University Honors Program University of South Florida St. Petersburg May 2nd 2012 Thesis Director: Thomas Smith Ph. D. Director of the Honors Program and Associate Professor of Political Science Committee Member: Dr. Ty Solomon, Visiting Assistant Professor of Political Science “The U.S., China and Rare Earth Metals” The Future Of Green Technology, Military Tech, and a Potential Achilles‟ Heel to American Hegemony. http://dspace.nelson.usf.edu/xmlui/bitstream/handle/10806/4632/David%20Trigaux%20Honors%20Thesis%5B1%5D.pdf?sequence]

Additional concern should be placed on the effects that this has on the economy. As mentioned above, rare earth metals are **necessary in virtually every important sector of the economy**, from health and energy to commercial electronics and aerospace and other high-tech manufacturing. Shortages of rare earth metals make every one of these products more expensive, as the cost of the materials will invariably trickle down to the consumers. Cost increases could make some of these industries unprofitable, causing layoffs. More importantly, the **perception** of a shortage in these areas could be equally as devastating as an actual shortage. The free market economy is very susceptible to the manipulations of government-based corporations in China. A proposed solution-to refer China to the WTO-is unlikely to settle economic jitters, and could even worsen the situation because of retaliation from China. 92 The shift of many industries that use rare earth metals to China creates a structural barrier to long-term US economic health and competitiveness. 93 The traditional narrative to explain American economic prosperity is the entrepreneurial spirit, creating the products of tomorrow. If the companies responsible for doing this leave the United States, then this recipe for success will no longer be viable. 94 The current economic climate, complicated by the European debt crisis caused by Greece, Spain, Italy and others, economic stagnation in Japan, and instability in the oil markets and the Middle East, has put people on edge, and introduced great volatility into the stock markets, the confidence of investors, and everyday consumers. Some executives are **even more worried** about the rare earth shortage than the debt crisis, seeing it as a structural issue that doesn‟t have any easy or immediately foreseeable solution. 95

#### Turns tech diffusion – if developing countries say they can’t afford green tech now, they certainly won’t get on board when energy technologies become even more expensive.

#### China relations key – they're the biggest emitter of greenhouse gases. Failure to get them on board makes U.S. efforts useless

#### Nuclear war turns warming – it causes massive forest fires which destroy key carbon sinks and accelerate positive feedback cycles

#### Takes a decade to solve – no open mines or processing infrastructure

Berry 12 [Dr. Michael Berry served as a professor of investments at the Colgate Darden Graduate School of Business Administration at the University of Virginia from 1982-1990, during which time he published a book, Managing Investments: A Case Approach. He has managed small- and mid-cap value portfolios for Heartland Advisors and Kemper Scudder. His publication, Morning Notes, analyzes emerging geopolitical, technological and economic trends. He travels the world with his son, Chris, looking for discovery opportunities for his readers. Chris Berry, with a lifelong interest in geopolitics and the financial issues that emerge from these relationships, founded House Mountain Partners in 2010. The firm focuses on the evolving geopolitical relationship between emerging and developed economies, the commodity space and junior mining and resource stocks positioned to benefit from this phenomenon. Chris holds an MBA in finance with an international focus from Fordham University, and a BA in international studies from The Virginia Military Institute. Solving Critical Rare Earth Metal Shortages Commodities / Metals & Mining Jan 11, 2012 - 07:30 AM http://www.marketoracle.co.uk/Article32560.html]

Michael Berry: It's just now starting to dawn on Washington that **we don't have a stockpile.** We had a stockpile through World War I and World War II (WWII) that was necessary to our national security. The U.S. was the biggest producer of rare earth elements (REEs) in the 1970s and 1980s. But then we allowed China to undercut our prices and we shut down the Mountain Pass mine, which was one of the largest if not the largest producer of rare earths in the world. We lost not only production and access to REEs, which are critical for weapons systems, automobiles, alternative energy and a number of other applications, but we lost the processing chain that actually integrates and creates the metal, creates the alloy and magnets, and integrates it into material. China now controls these markets. There are four or five pieces of legislation pending in Washington, but it will take a decade or more to replace and rebuild these crucial supply chains.

## Prolif Turn

#### Prolif solves conflict – group it.

#### Millions of people die as a result of conventional wars and conventional arms races because there is no incentive to de-escalate conflict.

#### Prolif is the only way to end conflict – states inevitably miscalculate and have incentives for entering conventional conflict because there’s a limit to their risk. Nukes push the limit to infinity – no one is going to go “all-in” when every hand is a guaranteed loss. That’s Karl and Waltz.

#### Worst climate impacts take decades to arrive and don’t assume adaptation

Robert O. Mendelsohn 9, the Edwin Weyerhaeuser Davis Professor, Yale School of Forestry and Environmental Studies, Yale University, June 2009, “Climate Change and Economic Growth,” online: http://www.growthcommission.org/storage/cgdev/documents/gcwp060web.pdf

The heart of the debate about climate change comes from numerous warnings from scientists and others that give the impression that human- induced climate change is an immediate threat to society (IPCC 2007a, 2007c; Stern 2006). Millions of people might be vulnerable to health effects (IPCC 2007a), crop production might fall in the low latitudes (IPCC 2007a), water supplies might dwindle (IPCC 2007a), precipitation might fall in arid regions (IPCC 2007a), extreme events will grow exponentially (Stern 2006), and between 20 and 30 percent of species will risk extinction (IPCC 2007a). Even worse, there may be catastrophic events such as the melting of Greenland or Antarctic ice sheets, causing severe sea-level rise, which would inundate hundreds of millions of people (Dasgupta and others 2009). Proponents argue that there is no time to waste. Unless greenhouse gases are cut dramatically today, economic growth and well-being may be at risk (Stern 2006). These statements are largely alarmist and misleading. Although climate change is a serious problem that deserves attention, society’s immediate behavior has an extremely low probability of leading to catastrophic conse- quences. The science and economics of climate change are quite clear that emissions over the next few decades will lead to only mild consequences. The severe impacts predicted by alarmists require a century (or two, accord- ing to Stern 2006) of no mitigation. Many of the predicted impacts assume that there will be no or little adaptation. The net economic impacts from climate change over the next 50 years will be small regardless. Most of the more severe impacts will take more than a century or even a millennium to unfold, and many of these “potential” impacts will never occur because people will adapt. It is not at all apparent that immediate and dramatic policies need to be developed to thwart long-range climate risks. What is needed are long-run balanced responses.

#### We're past the tipping point – scientific consensus

Solomon et al 10

Susan Solomon et. Al, Chemical Sciences Division, Earth System Research Laboratory, National Oceanic and Atmospheric Administration, Ph.D. in Climotology University of California, Berkeley, Nobel Peace Prize Winner, Chairman of the IPCC, Gian-Kasper Plattner, Deputy Head, Director of Science, Technical Support Unit Working Group I, Intergovernmental Panel on Climate Change Affiliated Scientist, Climate and Environmental Physics, Physics Institute, University of Bern, Switzerland, John S. Daniel, research scientist at the National Oceanic and Atmospheric Administration (NOAA), Ph.D. in physics from the University of Michigan, Ann Arbor, Todd J. Sanford, Cooperative Institute for Research in Environmental Science, University of Colorado Daniel M. Murphy, Chemical Sciences Division, Earth System Research Laboratory, National Oceanic and Atmospheric Administration, Boulder Gian-Kasper Plattner, Deputy Head, Director of Science, Technical Support Unit Working Group I, Intergovernmental Panel on Climate Change, Affiliated Scientist, Climate and Environmental Physics, Physics Institute, University of Bern, Switzerland Reto Knutti, Institute for Atmospheric and Climate Science, Eidgenössiche Technische Hochschule Zurich and Pierre Friedlingstein, Chair, Mathematical Modelling of Climate Systems, member of the Science Steering Committee of the Analysis Integration and Modeling of the Earth System (AIMES) programme of IGBP and of the Global Carbon Project (GCP) of the Earth System Science Partnership (ESSP), 8/31/2010, “Persistence of climate changes due to a range of greenhouse gases,” PNAS vol. 107, no. 43, http://www.pnas.org/content/107/43/18354.full.pdf+html //vkoneru

Carbon dioxide, methane, nitrous oxide, and other greenhouse gases increased over the course of the 20th century due to human activities. The human-caused increases in these gases are the primary forcing that accounts for much of the global warming of the past fifty years, with carbon dioxide being the most important single radiative forcing agent (1). Recent studies have shown that the human-caused warming linked to carbon dioxide is nearly irreversible for more than 1,000 y, even if emissions of the gas were to cease entirely (2–5). The importance of the ocean in taking up heat and slowing the response of the climate system to radiative forcing changes has been noted in many studies (e.g., refs. 6 and 7). The key role of the ocean’s thermal lag has also been highlighted by recent approaches to proposed metrics for comparing the warming of different greenhouse gases (8, 9). Among the observations attesting to the importance of these effects are those showing that climate changes caused by transient volcanic aerosol loading persist for more than 5 y (7, 10), and a portion can be expected to last more than a century in the ocean (11–13); clearly these signals persist far longer than the radiative forcing decay timescale of about 12–18 mo for the volcanic aerosol (14, 15). Thus the observed climate response to volcanic events suggests that some persistence of climate change should be expected even for quite short-lived radiative forcing perturbations. It follows that the climate changes induced by short-lived anthropogenic greenhouse gases such as methane or hydrofluorocarbons (HFCs) may not decrease in concert with decreases in concentration if the anthropogenic emissions of those gases were to be eliminated. In this paper, our primary goal is to show how different processes and timescales contribute to determining how long the climate changes due to various greenhouse gases could be expected to remain if anthropogenic emissions were to cease. Advances in modeling have led to improved AtmosphereOcean General Circulation Models (AOGCMs) as well as to Earth Models of Intermediate Complexity (EMICs). Although a detailed representation of the climate system changes on regional scales can only be provided by AOGCMs, the simpler EMICs have been shown to be useful, particularly to examine phenomena on a global average basis. In this work, we use the Bern 2.5CC EMIC (see Materials and Methods and SI Text), which has been extensively intercompared to other EMICs and to complex AOGCMs (3, 4). It should be noted that, although the Bern 2.5CC EMIC includes a representation of the surface and deep ocean, it does not include processes such as ice sheet losses or changes in the Earth’s albedo linked to evolution of vegetation. However, it is noteworthy that this EMIC, although parameterized and simplified, includes 14 levels in the ocean; further, its global ocean heat uptake and climate sensitivity are near the mean of available complex models, and its computed timescales for uptake of tracers into the ocean have been shown to compare well to observations (16). A recent study (17) explored the response of one AOGCM to a sudden stop of all forcing, and the Bern 2.5CC EMIC shows broad similarities in computed warming to that study (see Fig. S1), although there are also differences in detail. The climate sensitivity (which characterizes the long-term absolute warming response to a doubling of atmospheric carbon dioxide concentrations) is 3 °C for the model used here. Our results should be considered illustrative and exploratory rather than fully quantitative given the limitations of the EMIC and the uncertainties in climate sensitivity. Results One Illustrative Scenario to 2050. In the absence of mitigation policy, concentrations of the three major greenhouse gases, carbon dioxide, methane, and nitrous oxide can be expected to increase in this century. If emissions were to cease, anthropogenic CO2 would be removed from the atmosphere by a series of processes operating at different timescales (18). Over timescales of decades, both the land and upper ocean are important sinks. Over centuries to millennia, deep oceanic processes become dominant and are controlled by relatively well-understood physics and chemistry that provide broad consistency across models (see, for example, Fig. S2 showing how the removal of a pulse of carbon compares across a range of models). About 20% of the emitted anthropogenic carbon remains in the atmosphere for many thousands of years (with a range across models including the Bern 2.5CC model being about 19 4% at year 1000 after a pulse emission; see ref. 19), until much slower weathering processes affect the carbonate balance in the ocean (e.g., ref. 18). Models with stronger carbon/climate feedbacks than the one considered here could display larger and more persistent warmings due to both CO2 and non-CO2 greenhouse gases, through reduced land and ocean uptake of carbon in a warmer world. Here our focus is not on the strength of carbon/climate feedbacks that can lead to differences in the carbon concentration decay, but rather on the factors that control the climate response to a given decay. The removal processes of other anthropogenic gases including methane and nitrous oxide are much more simply described by exponential decay constants of about 10 and 114 y, respectively (1), due mainly to known chemical reactions in the atmosphere. In this illustrative study, we do not include the feedback of changes in methane upon its own lifetime (20). We also do not account for potential interactions between CO2 and other gases, such as the production of carbon dioxide from methane oxidation (21), or changes to the carbon cycle through, e.g., methane/ozone chemistry (22). Fig. 1 shows the computed future global warming contributions for carbon dioxide, methane, and nitrous oxide for a midrange scenario (23) of projected future anthropogenic emissions of these gases to 2050. Radiative forcings for all three of these gases, and their spectral overlaps, are represented in this work using the expressions assessed in ref. 24. In 2050, the anthropogenic emissions are stopped entirely for illustration purposes. The figure shows nearly irreversible warming for at least 1,000 y due to the imposed carbon dioxide increases, as in previous work. All published studies to date, which use multiple EMICs and one AOGCM, show largely irreversible warming due to future carbon dioxide increases (to within about 0.5 °C) on a timescale of at least 1,000 y (3–5, 25, 26). Fig. 1 shows that the calculated future warmings due to anthropogenic CH4 and N2O also persist notably longer than the lifetimes of these gases. The figure illustrates that emissions of key non-CO2 greenhouse gases such as CH4 or N2O could lead to warming that both temporarily exceeds a given stabilization target (e.g., 2 °C as proposed by the G8 group of nations and in the Copenhagen goals) and remains present longer than the gas lifetimes even if emissions were to cease. A number of recent studies have underscored the important point that reductions of non-CO2 greenhouse gas emissions are an approach that can indeed reverse some past climate changes (e.g., ref. 27). Understanding how quickly such reversal could happen and why is an important policy and science question. Fig. 1 implies that the use of policy measures to reduce emissions of short-lived gases will be less effective as a rapid climate mitigation strategy than would be thought if based only upon the gas lifetime. Fig. 2 illustrates the factors influencing the warming contributions of each gas for the test case in Fig. 1 in more detail, by showing normalized values (relative to one at their peaks) of the warming along with the radiative forcings and concentrations of CO2, N2O, and CH4. For example, about two-thirds of the calculated warming due to N2O is still present 114 y (one atmospheric lifetime) after emissions are halted, despite the fact that its excess concentration and associated radiative forcing at that time has dropped to about one-third of the peak value. Two factors contribute to the differences between decreases in concentrations of greenhouse gases and persistence of the resulting warming, discussed further below: (i) Radiative forcing may not simply follow concentration because of optical depth effects (for CO2 and CH4), and (ii) warming may not match decreases in radiative forcing because of climate inertia, particularly due to the ocean. Climate Change Persistence: (I) Optical Depth Effects. The physics of absorption spectroscopy dictate that radiative forcing will be linearly related to concentration changes for those gases whose atmospheric optical depth is thin, whereas nonlinear forcing occurs for thicker optical depths (24). Because CO2 absorption is not optically thin, the fractional increase in radiative forcing per parts per million by volume of CO2 increase becomes smaller for larger CO2 concentrations. Fig. 2 shows how this factor acts in the reverse sense during relaxation from a peak, enhancing the CO2 radiative forcing relative to the calculated concentration decrease. For example, for a 535 ppmv peak (as in the calculation in Fig. 1), the excess CO2 concentration above the preindustrial value of 278 ppmv remaining in the year 2200 is about 55% of the peak value, whereas the fractional radiative forcing remaining in that year is about 63% of the peak value (i.e., the relative change in forcing is greater than the relative change in concentration by about 14%). Nonlinear optical effects grow as the concentration change grows. For example, for a peak of CO2 of 1,200 ppmv in the 21st century followed by a stop of emissions, the relative change in forcing compared to the relative change in concentration in the year 3000 is about 30%. Thus nonlinear spectroscopy, although not the dominant factor, contributes to rendering the warming from CO2 nearly irreversible, especially for larger values of peak concentration. Methane also displays significant nonlinearities in its radiative absorption, whereas these effects are very small for N2O (Fig. 2). HFCs and perfluorocarbons absorb in the atmospheric window and are optically thin over the full range of plausible future concentrations; therefore, these gases display no nonlinear optical absorption. We find that nonlinear spectral effects exceed 10% contributions to the persistence of warming only for carbon dioxide and methane, and not for any of the other anthropogenic greenhouse gases. Climate Change Persistence: (II) Physical Processes. Climate change is linked to a range of phenomena displaying varying timescales (see, e.g., ref. 28). The atmosphere, clouds, and water vapor respond within a few months following a change in radiative forcing (29). The transfer of heat from the atmosphere to the ocean’s mixed layer (top 100 m or so) is thought to occur on timescales on the order of a decade or less (30), whereas multiple centuries are required to warm or cool the deep ocean (31), and changes in the great ice sheets and vegetation coverage may occur over many thousands of years (4). Much of the energy that has been added to the Earth’s climate system in the 20th century through net radiative forcing has been taken up by the ocean (32). However, a large fraction of the energy that could be trapped due to the impact of radiative forcing has not been added to the climate system at all but rather has been lost to space, because the Earth has already warmed and therefore must radiate more energy. Observations and models both suggest that about two-thirds of the net radiative forcing (warming by anthropogenic greenhouse gases less cooling by stratospheric and tropospheric aerosols) of the past half century has been radiated to space, while about one-third has been absorbed by the ocean (33–35). If anthropogenic radiative forcing were to be stabilized, atmospheric warming would continue for many centuries as the components of the climate system reach a balance. On the other hand, if such forcing were to abruptly cease, some energy would be expected to be lost rapidly through radiation to space, while some would be lost more slowly as the coupled ocean mixed layer/atmosphere system adjusts. Some of the energy loss would occur over centuries depending mainly upon the amount of heat that has been stored in the deep ocean. These processes are linked both to transient climate response and ocean heat uptake, and the uncertainties in these parameters are of order 50% between current state-of-the-art AOGCMs (4, 35). Ocean heat uptake and changes in ocean circulation are not well characterized by observations and contribute to the differences in future climate responses between models (3, 4, 31). Carbon cycle processes that may slowly release carbon back to the atmosphere in a warming world (e.g., through changes in forest cover and soil carbon dynamics) also affect the long-term behavior of warming and differ from model to model (3, 36). Understanding the warming persistence from various forcing agents with different lifetimes and radiative forcing histories is aided by considering energy balance for a time horizon long enough for the Earth to return to its original temperature. The energy balance equation can be written as N ¼ F − λΔTsurface; [1] where F is the added energy due to anthropogenic radiative forcing, N is the net heat flux, and λΔTsurface is the energy radiated to space by a warmer Earth. Earth loses energy via a surface and atmosphere that are warmer than their equilibrium values. The quantity λ expresses how much energy is lost per unit rise in temperature. In the long term, it is the inverse of the climate sensitivity because, at a new steady state, N becomes zero and ΔTsurface ¼ F∕λ. If emissions are stopped and treturn is a time in the future when the Earth has returned to its initial temperature (including the average temperature of the oceans), then <equation1.jpg> Integrating both sides of Eq. 1 for this time interval and making the additional assumption that the radiative response is independent of time and the rate of warming over this timescale (i.e., λ is approximately constant, or uncorrelated with the forcing), then <equation2.jpg> The left-hand integral is just the energy trapped by the radiative forcing. Eq. 3 states that the time-integrated warming is approximately proportional to the integrated forcing, because the only way the Earth can get rid of trapped energy is to radiate it to outer space. Ocean heat uptake delays and spreads the warming out in time, and also defines the warming that must continue after emissions cease, i.e., the amount of time-integrated warming that must eventually occur before the Earth returns to its original temperature. Consequences for climate change, ecosystems, and people can depend on the time history: A long, modest increase in temperature is likely to be less harmful than a short pulse of extreme warming. In practice, Eq. 3 is less useful for gases such as CO2 and SF6 that have such long lifetimes that the time horizon for their forcing to decay to zero and the Earth to return to an equilibrium temperature is many millennia. In those cases, a simplified way to view future warming persistence is that emissions of CO2 and a handful of other extremely long-lived gases imply warming that is essentially irreversible on human timescales without geoengineering or active sequestration. All shorter-lived gases and aerosols imply a transient warming whose time integral is approximately determined simply by the time integral of the forcing and the equilibrium climate sensitivity. Fig. 3 shows how the energy budget of the earth–atmosphere system in the Bern 2.5CC EMIC would behave in response to increases in radiative forcing over 100 y followed by a stop of emissions for a greenhouse gas with a 10 or 100 y lifetime. The peak forcing in both cases is 1 W∕m2. A linear increase is assumed for the first 10 y followed by a 2%per year increase from that time until year 100. After the peak, the forcing decays with the assumed lifetime. Of particular interest is the behavior of ocean heat uptake (Fig. 3, Left) as well as the atmospheric temperature and sea level rise (Fig. 3, Right). In the case of a gas with a 10-y lifetime, for example, energy is slowly stored in the ocean during the period when concentrations are elevated, and this energy is returned to the atmosphere from the ocean after emissions cease and radiative forcing decays, keeping atmospheric temperatures somewhat elevated for several decades. Elevated temperatures last longer for a gas with a 100-y lifetime because, in this case, radiative forcing and accompanying further ocean heat uptake continue long after emissions cease. As radiative forcing decays further, the energy is ultimately restored from the ocean to the atmosphere. Fig. 3 shows that the slow timescale of ocean heat uptake has two important effects. It limits the transfer of energy to the ocean if emissions and radiative forcing occur only for a few decades or a century. However, it also implies that any energy that is added to the ocean remains available to be transferred back to the atmosphere for centuries after cessation of emissions. Fig. 4 further illustrates how the computed warmings due to a broader range of specific different greenhouse gases would evolve assuming an idealized 21st century ramp of emissions to 1 W∕m2 in 100 y (as in Fig. 3), followed by cessation of emissions in the Bern 2.5CC model. If the rate of radiative forcing were to increase at 2% per year (about the average value observed over the past several decades for CO2), the computed warming or “realized” warming (33) in the Bern 2.5CC model is about 60% of the quasi-equilibrium value, similar to that of the range of models recently assessed (4). Put differently, the climate system response under increasing radiative forcing (even on the timescale of a century) will be smaller than the response would be if the forcing were maintained at a constant level and the system were to largely equilibrate. The smaller response is related to the transient climate response and to the considerations indicated above regarding the partitioning of energy flow between the ocean and loss to space under increasing forcing. The simulations presented in Fig. 4 illustrate the importance of realized warming versus quasi-equilibrium warming. For a gas such as CF4 with a very long lifetime of about 50,000 y, concentrations and forcing remain essentially constant for more than 1,000 y following cessation of emissions (Fig. 4, Upper). But the warming due to CF4 ’s radiative forcing continues to increase slowly as the ocean and atmosphere adjust over centuries, reaching a quasi-equilibrium atmospheric warming that is about 60% larger than the transient value obtained when emissions stopped in this model for the test case considered here (and this value is approximately the inverse of the realized warming noted above). The same behavior would be expected if, for example, atmospheric concentrations of any gas were to be stabilized but, for shorter-lived gases, stabilization requires continued emission (in contrast to CF4). Carbon dioxide concentrations display an initial fast decay for several decades in carbon cycle models after cessation of emissions, followed by a much slower subsequent decline (see Fig. S2), but temperatures remain nearly constant throughout as shown in Fig. 4. The above discussion of CF4 illuminates a key reason for this behavior. The near-irreversibility of the CO2-induced warming after emissions cease and concentrations peak is linked mainly to a near balance between concentration changes (which slowly decrease to a value that is about 40% of the peak of excess concentration above preindustrial, see Fig. 4) and the fact that the ratio of quasi-equilibrium to transient warming is about 1.6 in this model (compare the range of about 1.3–2.3 across models in ref. 4). Thus the decrease in CO2 concentration is roughly compensated by the way that the transient warming evolves to a near equilibrium warming (i.e., the warming is realized over time), together with a significant but lesser contribution due to the nonlinear dependence of radiative forcing on CO2 concentration. These long-term changes in both CO2 concentration and warming are robust across a broad range of coupled carbon/ climate models (3, 4) and are both linked to the slow timescales of transport in the ocean. For forcing agents shown in Fig. 4 with lifetimes of years to centuries, some forcing due to these gases will continue even as concentrations decay, leading to some persistence of the induced warming. Fig. 4 illustrates the persistence for HFC152a, CH4, and N2O, and Fig. S3 shows the behavior calculated in the Bern 2.5CC model for a range of halocarbons with lifetimes ranging from years to centuries. An important qualitative conclusion of Fig. 4 is that the warming induced by even a very shortlived gas such as HFC-152a can persist longer than the gas itself and its associated forcing (see also Figs. 3 and 4). The extent to which warming is prolonged is linked to the competition between decay of the radiative forcing and ocean heat uptake and will also depend on the carbon cycle feedback; the carbon cycle feedback and ocean heat uptake will differ somewhat among models. Persistence of the induced climate change should be expected to be larger for gases with lifetimes long enough to transfer more heat to the ocean, i.e., several decades to centuries or more, and much smaller for gases with short lifetimes of a year to a decade. Similarly, the persistence of the warming will be greater if radiative forcing is maintained over longer periods through sustained anthropogenic emissions (17, 27); i.e., the longer humans continue to emit greenhouse gases, the longer the climate memory of that emission will become, even for very short-lived substances, due to ocean thermal inertia (9). This paper focuses on emissions over a century.

Moratorium on new licenses now

Reuters 9/6/12, “NRC staff to review nuclear reactor waste storage rules,” <http://www.reuters.com/article/2012/09/06/us-utilities-nrc-waste-idUSBRE88515T20120906>

(Reuters) - The U.S. Nuclear Regulatory Commission (NRC) directed its staff on Thursday to start an environmental review into the temporary storage of spent nuclear fuel, following a court ruling that led the agency to stop issuing new reactor licenses.¶ The NRC did not say when it would start issuing new reactor licenses again.¶ The NRC has more than a dozen reactor operating license renewal applications and a dozen new reactor license applications pending.¶ The NRC said it told its staff to develop an environmental impact statement and a revised waste confidence decision and to rule on the temporary storage of spent nuclear fuel.¶ The environmental statement and rule, which are in response to a June 8 ruling of the U.S. Court of Appeals for the District of Columbia Circuit, are to be completed within 24 months, the NRC said.

#### Not Cost Competitive with Natural Gas and Large Reactors

Biello ‘12 - Associate Editor at Scientific American (David, March 27, "Small Reactors Make a Bid to Revive Nuclear Power", http://www.scientificamerican.com/article.cfm?id=small-reactors-bid-to-revive-nuclear-power)

Regardless of how cheap such Small Modular Reactors may allow nuclear to be in future, it is unlikely to be as cheap as natural-gas-fired turbines in the present. In fact, low natural gas prices stalled the U.S. nuclear renaissance outside Georgia and South Carolina, long before the reactor meltdowns at Fukushima Daiichi in Japan. "Because of an unanticipated abundance of natural gas in the United States, nuclear energy, in general, is facing tough competition," noted an analysis of the prospects for small modular reactors from the University of Chicago published last November. The analysis also suggested that small reactors would be more expensive than large reactors on a per-megawatt basis until manufacturing in significant quantities has happened. "It [is] unlikely that SMRs will be commercialized without some form of government incentive." But the Department of Energy funding may only support two designs. Innovation spurred by competition seems unlikely. And that may ultimately erode the current U.S. nuclear industry advantage—from design to operation to regulation.

Economic Uncertainity and costs

Amena Saiyid 9/22/08, Washington writer for Nuclear Fuel, “Wall Street uncertainties may affect US reactor construction, fuel market” Nuclear Fuels. Lexis

The projected nuclear renaissance in the US may not materialize as expected due to uncertainties in the global financial market that many companies were expected to use to finance new reactors, according to Stephen Maloney, managing consultant for Towers Perrin. Maloney, an expert in energy commodity risk, expressed a dim view of financing prospects for the construction of new nuclear units in the US during his presentation September 15 at Platts' Nuclear Fuel Strategies conference in Arlington, Virginia. Maloney said financing and risk issues will be "formidable" and "made more formidable **by what is happening in the** market today" for utilities that have filed applications to build new nuclear power plants. "We are living through the great crash of 2008" said Maloney, referring to Wall Street's uncertainty September 15 following news of Merrill Lynch 's impending sale and Lehman Brothers' bankruptcy. Utilities expecting to finance $5 billion to $8 billion for each new reactor will not have it easy, said Maloney. Even if companies get federal loan guarantees or licenses to build new reactors, they still need financing, he said. The cost of a new nuclear unit could take up a sizable portion of a utility's equity, according to Maloney. A reactor costing $7 billion, for instance, would translate to roughly 66.7% of Constellation worth, while the same cost at the larger Exelon would amount to roughly 15.6% of that company's total value, he said. Currently, the market is not valuing new construction, Maloney said, noting that spark spreads are both thinning and converging. A spark spread is the net value of electrical energy considering the market value of the power generated, less the total production cost, including capital and fuel costs, he noted. A slower growth scenario for new reactors would mean there would be less demand for nuclear fuel over the next decade or so than projected, Maloney said. According to his presentation slides, "excess supply can slowly suppress fuel prices and idle some capacity in certain sectors of the nuclear fuel industry." Maloney also said that "nuclear fuel vendors would benefit from hedging strategies over the mid-term to cover potential market downturns." Obtaining federal loan guarantees is like exercising "call options," or options to buy or sell, he said. Adding "guarantees may subsidize the purchase of 'call options' on future capacity, but it is a different matter altogether to actually build these plants," he said. Given the uncertainty in the growth of US economy, which in turn fuels power generation, Maloney said the prospects for nuclear power look uncertain too. For that reason, he said, utilities that are looking to secure financing must have ratings of at least AA from such organizations as Moody's and Standard & Poor's Ratings Services. S&P, like Platts, is a division of The McGraw-Hill Companies. Maloney also said that utilities can no longer rely on traditional forms of financing, such as 30-year bonds, but will have to use innovative financing approaches that will involve taking higher risk. For instance, he said, utilities that are determined to participate in new nuclear construction must be prepared to pay a higher risk premium because of the high risk involved in whether the plant will be completed.

## A2 Arctic Conflict Impact

#### Best intel proves they’re jokers.

Mueller and Stewart 12 [John Mueller is Senior Research Scientist at the Mershon Center for International Security Studies and Adjunct Professor in the Department of Political Science, both at Ohio State University, and Senior Fellow at the Cato Institute in Washington, D.C. Mark G. Stewart is Australian Research Council Professorial Fellow and Professor and Director at the Centre for Infrastructure Performance and Reliability at the University of Newcastle in Australia. Their book, Terror, Security, and Money: Balancing the Risks, Benefits, and Costs of Homeland Security, was published by Oxford University Press in 2011. The Terrorism Delusion, International Security > Volume 37, Number 1, Summer 2012]

Finally, on May 1, 2012, nearly ten years after the September 2001 terrorist attacks, the most costly and determined manhunt in history culminated in Pakistan when a team of U.S. Navy Seals killed Osama bin Laden, a chief au-thor of the attacks and one of history’s most storied and cartooned villains. Taken away with bin Laden’s bullet-shattered body were written documents and masses of information stored on ªve computers, ten hard drives, and one hundred or more thumb drives, DVDs, and CD-ROMs. This, it was promised, represented a “treasure trove” of information about al-Qaida—“the mother lode,” said one U.S. ofªcial eagerly—that might contain plans for pending at-tacks.4 Poring through the material with great dispatch, however, a task force soon discovered that al-Qaida’s members were primarily occupied with dodg-ing drone missile attacks, complaining about the lack of funds, and watching a lot of pornography.5

#### Ayson concedes the risk is extremely low and that it might escalate only if the US and Russia and China were already at war.

Ayson 10 [Robert, Professor of Strategic Studies and Director of the Centre for Strategic Studies: New Zealand – Victoria University of Wellington, “After a Terrorist Nuclear Attack: Envisaging Catalytic Effects”, Studies in Conflict & Terrorism, 33(7), July]

A Catalytic Response: Dragging in the Major Nuclear Powers 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.

#### WTO accession solves.

Aslund 10 [Anders, Peterson Institute for International Economics10 Reasons Why the Russian Economy Will Recover Op-ed in the Moscow Times November 25, 2010 http://www.piie.com/publications/opeds/oped.cfm?ResearchID=1712]

Russia is finally about to accede to the World Trade Organization (WTO) within a year, which would be a **game changer**. The best available studies predict **enormous gains** for the country. Economists Jesper Jensen, Thomas Rutherford, and David Tarr estimate in a World Bank study that Russia should gain about 3.3 percent of GDP annually in the medium term and 11 percent of GDP in the long term. The gains would mainly come from increased foreign direct investment and services. International integration and convergence will **drive the country's growth for a couple of decades.**

#### No escalation – U.S. attack subs have the best combat subs and can defeat any undersea opponent even if outnumbered – ensures continued deterrence and checks escalation – their evidence is just sensationalism. That’s Axe.

#### Dispute system checks – states empirically turn to legal structures and scientific and diplomati cooperation to agress disagreements, not weapons systems. Joint data gathering ensures certainty and stability. That’s Baker.

#### Economic stakes are too high.

Smirnov 9 [Alexei Smirnov, @ Defense and Security, 1-23-09, “The Arctic is Hot,” lexis]

Five countries are claiming areas close to the North Pole: Denmark, Russia, the United States, Canada, and Norway. Four of them are NATO members. "**It's hard to imagine them fighting each other**," said Major Henrik Edig Jorgensen, a co-author of the Danish military report. "Based on available maps of the Arctic regions that Moscow is claiming, up to 70% of their oil and gas reserves would end up in the hands of the Russians. The stakes are too high - they have too much to lose. If the Arctic is full of warships monitoring each other, no oil platforms could be built there. So militarization of the North is not in Moscow's interests."

#### Diplomacy ensures peace.

Baker 8 [Betsy, prof. International Law @ Vermont Law School Arctic Mapping and the Law of the Sea, 9-14-08” http://arctic-healy-baker-2008.blogspot.com/2008/09/conflict-in-arctic-tenacity-of-media.html]

The territorial disputes referenced in the NYT editorial are also resolved **not by conflict but by diplomacy**. In June 1990 Russia (then still the Soviet Union) and the United States signed a brilliantly conceived single maritime boundary treaty that precludes the need to renegotiate the boundary once the extended continental shelf limits are determined. Canada’s recent announcement that it plans to extend enforcement jurisdiction from 100 to 200 miles beyond its shores should raise concern. But it must also be viewed within the context of the long-standing friendship and shared interests of the United States and Canada on such matters as environmental protection, trade (ca. $1.5 billion daily) and common security. Their disagreement over the Northwest Passage has never flared out of control and continues to be the subject of diplomatic attention. Other existing legal and diplomatic structures provide an imperfect but solid basis for Arctic states to resolve potential disagreements. The Arctic Council is a cooperative forum for states and the Inuit Circumpolar Conference to address a range of environmental and economic problems in the region. The Ilulissat (Greenland) Declaration, signed in May 2008, confirms the will of the five coastal Arctic states – Canada, Denmark, Norway, Russia and the United States – to **strengthen existing cooperation** based on mutual trust and transparency. Treaties in force in the Arctic cover issues ranging from polar bear protection to pollution by dumping from vessels to biological diversity. Activists and diplomats alike should be concerned and asking hard questions about whether these agreements will be sufficient, or sufficiently enforced,to protect the Arctic, but to pretend that it is a lawless region up for grabs **ignores the facts.**

# 1NR

## Politics DA

### Econ U

#### US economy faltering

Fox News 3/28, “Economy expanded at 0.4 percent rate at end of 2012, latest sign of meager recovery”, http://www.foxnews.com/politics/2013/03/28/us-economy-expanded-at-04-percent-rate-at-end-2012/

The U.S. economy is teetering further on the edge of recession, with revised numbers showing economic growth clocking in at an anemic rate at the end of 2012.

Analysts expect the numbers to pick up this quarter, but a succession of revisions for the final months of last year give a bleak picture. The Commerce Department estimated Thursday that the gross domestic product, the total output of goods and services, grew at an annual rate of 0.4 percent in the October-December quarter. That was just slightly better than the previous estimate of 0.1 percent, and an estimate before that showing the economy actually contracted in that period.

### 2nc Impact Calc

#### DA O/Ws and turns the case—

#### Economic collapse results in extinction—devestates multilateral cooperation and increases incentives for aggression.

#### Much faster impact—econ based on perception. T/F o/ws—means DA turns case not vice versa—impacts in the short term are inherently more probable due to propagation of uncertainty

#### Turns investment—no one would be willing to invest in using the fuel (can’t fiat out)

#### Turns Russia—devestates the Russian economy

#### Growth is key to solve warming.

Anderson, 2004 (Terry, Researcher at PERC (A Market Think Tank), Hoover Digest, “Why Economic Growth is Good for the Environment”, Summer, http://www.perc.org/publications/articles/econ\_growth.php)

In the March 2004 issue of Scientific American, National Aeronautics and Space Administration global-warming expert James Hansen notes that greenhouse gas emissions and global-warming projections are "consistently pessimistic." Hansen suggests that projections do not take into account the lower carbon dioxide and methane emissions that have resulted from technological advancements. He explains that the lower carbon dioxide emissions result from increased energy efficiency following the energy crisis in the 1970s and the lower methane emissions, from technological changes in agriculture. Hansen's essay concludes on an optimistic note, saying "the main elements [new technologies] required to halt climate change have come into being with remarkable rapidity." This statement would not have surprised economist Julian Simon. He saw the "ultimate resource" to be the human mind and believed it to be best motivated by market forces. Because of a combination of market forces and technological innovations, we are not running out of natural resources. As a resource becomes more scarce, prices increase, thus encouraging development of cheaper alternatives and technological innovations. Just as fossil fuel replaced scarce whale oil, its use will be reduced by new technology and alternative fuel sources. Market forces also cause economic growth, which in turn leads to environmental improvements. Put simply, poor people are willing to sacrifice clean water and air, healthy forests, and wildlife habitat for economic growth. But as their incomes rise above subsistence, "economic growth helps to undo the damage done in earlier years," says economist Bruce Yandle. "If economic growth is good for the environment, policies that stimulate growth ought to be good for the environment." The link between greenhouse gas emissions and economic prosperity is no different. Using data from the United States, Professor Robert McCormick finds that "higher GDP reduces total net [greenhouse gas] emissions."

Turns terrorism

CCIR 7

Coalition for Comprehensive Immigration Reform (CCIR) Questions and Answers Updated, March 7, 2007

How would comprehensive immigration reform improve our national security? When people are admitted legally, their identities, photos, and fingerprints are checked against watch lists and criminal databases. Potential security threats can more easily be identified and either apprehended or deterred from entering the U.S. The key is intelligence—we must do a better job at gaining the intelligence we need to detect those who would do us harm. As long as our legal immigration system fails to provide sufficient opportunity to come here legally—to satisfy our nation’s demand for labor and the desire of families to be with their loved ones—a large percentage of immigration will occur outside of the system set up to screen those coming to the U.S. Fake documents proliferate and criminal smuggling enterprises turn huge profits, posing obvious risks that one day networks used by men and women seeking work in our economy will be exploited by those seeking to attack our nation.Currently, twelve million people live in the United States without authorization. The government does not know who they are or where they are. Our enforcement resources are overextended chasing after workers and families when they should be focusing on real security threats. A path to legal status for the current undocumented population is integral to enhance national security.

### **Thumper**

#### Should have read our link—NUCLEAR isn’t the link—reprocessing is.

### PC Low

#### Prefer issue specific UQ—it’s high enough.

#### Obama has the capital for immigration

Avlon 2-13

John Avlon, The Daily Beast, “Obama’s 2013 State of the Union and the Immigration Reform Moment” http://www.thedailybeast.com/articles/2013/02/13/obama-s-2013-state-of-the-union-and-the-immigration-reform-moment.html

President Obama is at a moment of maximum political leverage. But for all the bipartisan framing of his State of the Union speech, the basic fact of divided government makes legislative progress difficult. Immigration reform is the great exception. Six years after President Bush tried and failed to pass comprehensive immigration reform with odd-couple senators Ted Kennedy and John McCain, both parties have recognized that now is the time to get it done. Immigration reform is their self-interest as well as the national interest. Listen carefully to the president’s language: “Real reform means strong border security … Real reform means establishing a responsible pathway to earned citizenship—a path that includes passing a background check, paying taxes and a meaningful penalty, learning English, and going to the back of the line behind the folks trying to come here legally.” This is self-consciously Republican rhetoric. “Learn English” and “going to the back of the line” are not typical liberal applause lines. And paradoxically, the initial framing of border security is an area of policy strength for the Obama administration. The number of convicted criminals deported has increased 70 percent, while arrests at the border are up and attempted crossings are down.

### PC Not Key

#### Political capital is key—Obama’s push is central to consensus building and agenda setting on the immigration bill, that’s Fifield.

#### Obama needs space and political capital to pressure congress on immigration

The Anniston Star 3-27

The Anniston Star Editorial Board Mar 27, 2013 m On the offensive: Obama is wise to start anew the push for immigration reform http://annistonstar.com/view/full\_story/22088295/article-On-the-offensive--Obama-is-wise-to-start-anew-the-push-for-immigration-reform?instance=opinion\_lead

The point: President Obama didn’t fulfill his promise of securing sweeping immigration-reform policies during his first term. Now in his second, Obama is beginning a new campaign to urge legislators — particularly Republicans — to find a bipartisan compromise that (a.) isn’t watered down and (b.) is effective. It’s a lot to ask. Nevertheless, Obama is wise to go on this offensive. The need, as always, is great. An Associated Press report this week points out that the president is working behind the scenes in order to keep Republicans at the negotiating table between now and Congress’ April 8 return from spring break. The key is the Senate working group, the Gang of Eight, that is putting together a bipartisan plan the White House has yet to see. “We’ll reserve judgment on the product of those discussions until it’s produced,” White House spokesman Josh Earnest said. Here is where we’d like to see the professorial Obama take an aggressive stance and will Congress to pass the immigration reform this nation needs. Unfortunately, even in his second term Obama is facing overwhelming Republican opposition on virtually all matters of policy. His is a precarious perch: push too hard and risk a Republican storm; push meekly and risk ineffectiveness.

### Winners Win

#### Wins don’t spill over – Obama has finite capital and only 100 days to get his agenda through

Schultz 1-22

David Schultz, professor at Hamline University School of Business, 1/22/13, “Obama's dwindling prospects in a second term” www.minnpost.com/community-voices/2013/01/obamas-dwindling-prospects-second-term

Four more years for Obama. Now what? What does Barack Obama do in his second term and what can he accomplish? Simply put, his options are limited and the prospects for major success quite limited. Presidential power is the power to persuade, as Richard Neustadt famously stated. Many factors determine presidential power and the ability to influence including personality (as James David Barber argued), attitude toward power, margin of victory, public support, support in Congress, and one’s sense of narrative or purpose. Additionally, presidential power is temporal, often greatest when one is first elected, and it is contextual, affected by competing items on an agenda. All of these factors affect the political power or capital of a president. Presidential power also is a finite and generally decreasing product. The first hundred days in office – so marked forever by FDR’s first 100 in 1933 – are usually a honeymoon period, during which presidents often get what they want. FDR gets the first New Deal, Ronald Reagan gets Kemp-Roth, George Bush in 2001 gets his tax cuts. Presidents lose political capital, support But, over time, presidents lose political capital. Presidents get distracted by world and domestic events, they lose support in Congress or among the American public, or they turn into lame ducks. This is the problem Obama now faces.

Obama can’t regenerate capital in his second term

Walsh 12

Ken Walsh, covers the White House and politics for U.S. News, 2012/12/20, “Setting Clear Priorities Will Be Key for Obama” http://www.usnews.com/news/blogs/Ken-Walshs-Washington/2012/12/20/setting-clear-priorities-will-be-key-for-obama

And there is an axiom in Washington: Congress, the bureaucracy, the media, and other power centers can do justice to only one or two issues at a time. Phil Schiliro, Obama's former liaison to Congress, said Obama has "always had a personal commitment" to gun control, for example. But Schiliro told the New York Times, "Given the crisis he faced when he first took office, there's only so much capacity in the system to move his agenda." So Obama might be wise to limit his goals now and avoid overburdening the system, or he could face major setbacks that would limit his power and credibility for the remainder of his presidency.

Obama can’t win on energy issues

Eisler 12

Matthew Eisler, Researcher at the Chemical Heritage Foundation, April 2, 2012, “Science, Silver Buckshot, and ‘All of The Above’” http://scienceprogress.org/2012/04/science-silver-buckshot-and-%E2%80%9Call-of-the-above%E2%80%9D/

Conservatives take President Obama’s rhetoric at face value. Progressives see the president as disingenuous. No doubt White House planners regard delaying the trans-border section of the Keystone XL pipeline and approving the Gulf of Mexico portion as a stroke of savvy realpolitik, but one has to wonder whether Democratic-leaning voters really are as gullible as this scheme implies. And as for the president’s claims that gasoline prices are determined by forces beyond the government’s control (speculation and unrest in the Middle East), it is probably not beyond the capacity of even the mildly educated to understand that the administration has shown little appetite to reregulate Wall Street and has done its part to inflate the fear premium through confrontational policies in the Persian Gulf. Committed both to alternative energy (but not in a rational, comprehensive way) and cheap fossil fuels (but not in ways benefiting American motorists in an election year), President Obama has accrued no political capital from his energy policy from either the left or the right by the end of his first term. The president long ago lost the legislative capacity for bold action in practically every field, including energy, but because the GOP’s slate of presidential candidates is so extraordinarily weak in 2012, he may not need it to get re-elected. At least, that is the conventional wisdom in Democratic circles. Should President Obama win a second term, Congress is likely to be even more hostile than in his first term, as in the Clinton years. And as in the Clinton years, that will probably mean four more years of inaction and increased resort to cant.

He wins too slowly – healthcare & climate sequencing proves

Lashof 10

Dan Lashof 28 Jul 2010 “Lessons from Senate climate fail” Grist http://www.grist.org/article/2010-07-28-lessons-from-senate-climate-fail

Perhaps the most fateful decision the Obama administration made early on was to move healthcare reform before energy and climate legislation. I'm sure this seemed like a good idea at the time. Healthcare reform was popular, was seen as an issue that the public cared about on a personal level, and was expected to unite Democrats from all regions. White House officials and Congressional leaders reassured environmentalists with their theory that success breeds success. A quick victory on healthcare reform would renew Obama's political capital, some of which had to be spent early on to push the economic stimulus bill through Congress with no Republican help. Healthcare reform was eventually enacted, but only after an exhausting battle that eroded public support, drained political capital, and created the Tea Party movement. Public support for healthcare reform is slowly rebounding as some of the early benefits kick in and people realize that the forecasted Armageddon is not happening. But this is occurring too slowly to rebuild Obama's political capital in time to help push climate legislation across the finish line.

Wins are too short-lived

Porter 9

Ethan Porter Sep. 22 2009 “Obama’s political capital problem” True/Slant http://trueslant.com/ethanporter/2009/09/22/obamas-political-capital-problem/

But as Mark Twain pointed out, history doesn’t repeat itself–it rhymes. In this case, that rhyme might mean that health care legislation, even if it passes, will be no cure-all for Barack Obama. The political capital he’s spending now to achieve health care reform isn’t coming back, Moreover, any long-term political benefits might be a long time coming. Yes, of course, following the signing of any major bill, the president would be greeted by a chorus of support and enthusiasm, among his supporters past and present, as well as the media. Success breeds appreciation, which, in this case, would come in the form of a bump in his approval ratings. But that can be perilously short-lived.

### AT: Bottom of the Docket

1. Expanding the docket still forces Obama to redirect capital on the plan.

Edwards 97

George, center for presidential studies director, “Presidential Leadership: Politics and Policy Making”, 1997

An important aspect of a president’s legislative strategy can be establishing priorities among legislative proposals. The goal of this effort is to set the congressional agenda. If the president is not able to focus the attention of Congress on his priority programs, these bills may become lost in the complex and overloaded legislative process. Congress needs time to digest what the president sends, time to come up with independent analysis, time to schedule hearing and markups of bills. Unless the president gives some indication of what is most important, Congress will simply put the proposals in a queue and they will compete with each other for attention often with disastrous results for the president.

1. **If they win this argument, you should vote neg on presumption, it will take years for the plan to pass.**
2. **CI—fiat means plan passes immediately**

**This is a voter**

1. **They kill politics DA’s, those are good:**

**Politics debate is good:**

1. **Key to current events education—prevents stale debate and insures discussion of most pertinent issues.**
2. **Real World—Any decision maker must consider how people will react to their decisions**
3. **Core neg ground—key to beat squirrely affs and this topic has no good DA’s**
4. **Kills all neg ground—uncertain timeframe of passage makes it impossible to win uniqueness for DA’s.**

### Link Debate

#### Been cut recently—their evidence is just too old—political climate has changed

#### Political support is for disposition not for MOX

Pavey 13 Rob Pavey Staff Writer February 15, 2013 The Augusta Chronicle (Georgia HEADLINE: COST OF MOX PROJECT RISES; PLANT'S ESTIMATED PRICE TAG UP $2 BILLION lexis

Last month, a key member of the U.S. House Energy and Com-merce committee, Rep. Ed-ward Markey, D-Mass., raised questions about the project's cost.

"While there is near-universal agreement on the need for permanent disposal of our surplus weapons-grade plutonium, it is far from clear that the department's current plan is the most cost-effective means of doing so," Markey wrote in a letter to the Energy De-part-ment.

The GAO report is part of the agency's program to focus attention on government operations it identifies as high risk because of vulnerabilities to fraud, waste, abuse and mismanagement or the need for transformation to address economy, efficiency or effectiveness challenges.

Though the 275-page report mentioned the MOX project only briefly, it also noted that the agency is conducting a more specific inquiry into the program.

#### Lobby opposition will be extensive

NIRS 12 Nuclear Information and Resource Service 11-27-12 Nuclear News A warning on Mixed-Oxide Fuel (MOX) nuclear fuel plan <http://nuclear-news.net/2012/11/27/a-warning-on-mixed-oxide-fuel-mox-nuclear-fuel-plan/>

The MOX program is dangerous and unnecessary. More than 200 environmental and other organizations across the world have signed an International NIX MOX statement and have pledged to work to stop this program in the U.S. and similar programs in Russia, France and England.

#### Budget pressure will cause opposition – even DOE is limiting the program

Clements 12 Tom Clements, ANA, and Katherine Fuchs, ANA, (Alliance for Nuclear Accountability) January 12, 2012

DOE Seeking More Reactors to Use Controversial Plutonium Fuel (MOX) <http://www.ananuclear.org/PressRoom/> ANAPressReleases/tabid/115/articleType/ArticleView/articleId/492/Default.aspx

 Washington, DC – Under growing budgetary stress, the U.S. Department of Energy (DOE) announced that it is amending a troubled program to dispose of surplus weapons plutonium[i]. DOE aims to eliminate a costly new facility for disassembling plutonium cores (pits) from nuclear bombs and is considering processing the pits in existing facilities at the Savannah River Site (SRS) in South Carolina and the Los Alamos National Lab in New Mexico.

#### Opposition to MOX is substantial

Weinstein 13 Bernard L. Weinstein, is associate director of the Maguire Energy Institute in the Cox School of Business at Southern Methodist University and a fellow with the George W. Bush Institute.- 03/19/13 The Hill Nuclear non-proliferation obligations must be honored <http://thehill.com/blogs/congress-blog/energy-a-environment/288811-nuclear-non-proliferation-obligations-must-be-honored>

In order to convert our plutonium stockpiles into MOX, a fabrication facility is currently under construction at the Savannah River Site operated by the U.S. Department of Energy in Aiken, South Carolina. Ground was broken in 2007, and the project should be completed and able to start converting plutonium into MOX by 2016. The Tennessee Valley Authority and several other utilities are currently negotiating with the National Nuclear Security Administration to buy the MOX fuel for use in their nuclear power plants.

Unfortunately, some environmental groups, as well as members of Congress, have been voicing objections to the MOX facility. Opponents of nuclear energy claim that MOX is a dangerous fuel, though it’s been used safely around the world for decades. What’s more, MOX is an extremely efficient fuel source for power generation. For example, one MOX fuel assembly can provide enough electricity to power 9,000 homes for one year.

Anti-nuclear organizations are now lobbying Congress to deny further funding for the MOX project, and they have enlisted the support of Representative Edward Markey of Massachusetts, the ranking member of the House Natural Resources Committee and a perennial anti-nuclear gadfly. Opposition has grown louder since the General Accountability Office estimated that the final cost of building the facility was likely to be $2 billion more than the $5 billion originally budgeted.

Russia is already producing MOX from its plutonium stockpile but is threatening to stop if America doesn’t complete its own fabrication facility at the Savannah River Site. Fortunately, President Barack Obama wants to stay the course. In a recent speech to the National War College, he stated the United States must remain firm on nonproliferation. “We have to sustain the partnerships we have, and that includes Russia. It took decades to build those (nuclear) arsenals and it’s going to take decades—and continued investments—to dismantle them.”

It’s important to keep in mind that the 2000 U.S.-Russia agreement on securing and reducing fissile materials was adopted in response to the threat of nuclear terrorism, and vulnerable stockpiles of plutonium still remain in Russia. By living up to our part of the agreement, and completing the MOX facility at Savannah River, we can reduce the likelihood of fissile material falling into the wrong hands. We’ll also be providing a reliable fuel supply for America’s more than 100 nuclear power plants for decades to come.

#### MOX will face cuts in the FY 14 budget

Aplin 13 Steve Aplin March 18, 2013 Canadian Energy Issues Fighting nuclear proliferation and climate change in one project: the Savannah River MOX spectacle http://canadianenergyissues.com/2013/03/18/fighting-nuclear-proliferation-and-climate-change-in-one-project-the-savannah-river-mox-spectacle/

If you don’t like the tens of thousands of “superfluous” nuclear weapons in the U.S. and Russian arsenals, or any nuclear weapons for that matter, you should be encouraged to know that the U.S. and Russia agreed, in the years after the Cold War ended, to dismantle thousands of them and destroy the nuclear explosive. This was formalized in two agreements: the U.S.-Russia High Enriched Uranium Agreement, otherwise known as Megatons to Megawatts; and in the Plutonium Management and Disposition Agreement.

These are real green jobs: workers at the Shaw-Areva Savannah River MOX plant, currently under construction. Around 4,000 jobs have been created by the U.S.-Russia agreement to turn the plutonium in nuclear weapons into electricity. The facility was the first new nuclear facility in decades to be licensed by the US NRC, and is a model of successful project management. Almost 60 percent complete, the project may face cuts in the 2014 U.S. federal budget.

### Obama Would Push

Plan says USfg—that’s all three branches—their interp destroys politics—that’s good—above

#### Would push—involved in international relations issues—reprocessing perceived

### 2nc Immigration – Yes

Will pass

#### Extend Fifield, Immigration will pass, four warrants:

#### Momentum now-- Bipartisan groups are drafting bills in the House and Senate

#### Obama’s push is key—he’s applying pressure to Republicans and building support.

#### Growing consensus—even big business and big labor agree on immigration. Outweighs their warrants, those groups put money in congress’s pockets.

#### Electoral pressure—growing Hispanic voting blocs pressure for immigration reform—that’s key--elections outweigh ideology.

Obama will get his top priority of immigration passed – applying both public and private pressure

Hunter & Lerer 3-28

Kathleen Hunter and Lisa Lerer, Bloomberg News March 28, 2013 Obama, senators upbeat on immigration overhaul http://www.philly.com/philly/news/nation\_world/20130328\_Obama\_\_senators\_upbeat\_on\_immigration\_overhaul.html

President Obama said he was confident that an immigration bill would pass in the next several months, as key senators charged with crafting the legislation indicated that their process was almost complete. Speaking to reporters after touring the U.S.-Mexico border with other lawmakers, Sen. Charles E. Schumer (D., N.Y.) said a bipartisan Senate group was "90 percent" done with its draft of a bill to revamp U.S. immigration law. "Bottom line is, we are very close," Schumer, who is part of an eight-member group working on the proposal, said Wednesday at the news conference in Arizona. Talks were left unresolved last week, when Congress left for its holiday recess without striking a deal. Union workers and business groups disagree over visas for low-skilled workers. Obama and senators from both parties signaled Wednesday that they were open to solving that dispute and were working on the details. "This is a resolvable issue," the president said in an interview Wednesday with Spanish-language station Telemundo. "I'm optimistic." Overhauling the country's immigration system is Obama's top legislative priority for his second term. Still, wary of undermining talks with Republicans, he has taken a backseat in negotiating a bill. Rather then advocate for specific proposals, he has spoken privately to lawmakers in the group and dispatched aides to provide technical support. In his interviews Wednesday, Obama announced a trip in early May to Mexico and Central America as part of an effort to nudge lawmakers toward a compromise. "My sense is that they've come close, and my expectation is that we'll actually see a bill on the floor of the Senate next month," he said in an interview with Univision.

Immigration will pass – key principles are worked out and the OFA is ready to provide support

Pace 3-26

Julie Pace | Associated Press March 26, 2013 Overhaul immigration laws now, Obama tells Congress http://www.bostonglobe.com/news/nation/2013/03/25/obama-calls-for-speedy-debate-immigration-bill/1iFS3WuovsEw0Vj626WTXK/story.html

Obama and the bipartisan Senate group are in agreement on the key principles of a potential immigration bill, including a pathway to citizenship, strengthening the legal immigration system, and cracking down on businesses that employ illegal immigrants. The White House has largely backed the Senate process but says it has its own immigration bill ready if the debate on Capitol Hill stalls. Organizing for Action, the political advocacy group that grew out of Obama’s reelection campaign, is entering the debate this week with an online effort to highlight the personal stories of immigrants, The New York Times reported. The group has collected 7,000 stories from supporters, some of whom entered the country illegally or were brought as young children by their parents. Organizers say they will distribute the stories using Twitter, Facebook, and blogs. Officials of the group said the idea is to demonstrate support for efforts in Congress to overhaul immigration laws in ways that would provide 11 million illegal immigrants with a path to citizenship. Starting early next month, Organizing for Action will move beyond the online effort to organize its supporters at events around the country. The events will run from April 1 to April 7, a week before the expected unveiling of the Senate immigration plan. ''It is clear that America’s immigration system is broken, with so many employers that game the system by hiring undocumented workers and 11 million people living in the shadows,’’ said Jon Carson, the executive director of Organizing for Action and a former director of the White House Office of Public Engagement. ‘‘Neither is good for the economy or the country.’’ Opponents of an immigration overhaul say they are counting on conservative activists to rise up in anger once the Senate legislation is unveiled. One group has said it will hold a two-day conference for conservative radio talk show hosts next month to encourage opposition to the legislation. In 2007, the last time Congress considered an immigration overhaul, conservatives hammered lawmakers at town-hall-style meetings and on talk radio. Proponents of the legislation eventually gave up. The goal of Organizing for Action’s initiative is to counter any opposition by conservatives to the current legislative effort with support from around the country. ‘'Our supporters know it is time to fix the system that requires responsibility from everyone — both from the workers here that are undocumented and those who hire them — a system that guarantees that everyone is playing by the same rules,’’ Carson said.