## Prolif

#### Nuclear terrorism is extremely likely and is comparatively the largest threat to international stability.

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The misperception, miscalculation and above all ignorance of the ruling elite about security puzzles are perilous for the national security of a state. Indeed, in an age of transnational terrorism and unprecedented dissemination of dual-use nuclear technology, ignoring nuclear terrorism threat is an imprudent policy choice. The incapability of terrorist organizations to engineer fissile material does not eliminate completely the possibility of nuclear terrorism. At the same time, the absence of an example or precedent of a nuclear/radiological terrorism does not qualify the assertion that the nuclear/radiological terrorism ought to be remained a myth. Farsighted rationality obligates that one should not miscalculate transnational terrorist groups — whose behavior suggests that they have a death wish — of acquiring nuclear, radiological, chemical and biological material producing capabilities. In addition, one could be sensible about the published information that huge amount of nuclear material is spread around the globe. According to estimate it is enough to build more than 120,000 Hiroshima-sized nuclear bombs (Fissile Material Working Group, 2010, April 1). The alarming fact is that a few storage sites of nuclear/radiological materials are inadequately secured and continue to be accumulated in unstable regions (Sambaiew, 2010, February). Attempts at stealing fissile material had already been discovered (Din & Zhiwei, 2003: 18).Numerous evidences confirm that terrorist groups had aspired to acquire fissile material for their terrorist acts. Late Osama bin Laden, the founder of AL Qaeda stated that acquiring nuclear weapons was a “religious duty” (Yusufzai, 1999, January 11). The IAEA also reported that “al-Qaeda was actively seeking an atomic bomb.” Jamal Ahmad al-Fadl, a dissenter of Al Qaeda, in his trial testimony had “revealed his extensive but unsuccessful efforts to acquire enriched uranium for al-Qaeda” (Allison, 2010, January: 11). On November 9, 2001, Osama bin Laden claimed that “we have chemical and nuclear weapons as a deterrent and if America used them against us we reserve the right to use them (Mir, 2001, November 10).” On May 28, 2010, Sultan Bashiruddin Mahmood, a Pakistani nuclear scientist confessed that he met Osama bin Laden. He claimed that “I met Osama bin Laden before 9/11not to give him nuclear know-how, but to seek funds for establishing a technical college in Kabul (Syed, 2010, May 29).” He was arrested in 2003 and after extensive interrogation by American and Pakistani intelligence agencies he was released (Syed, 2010, May 29). Agreed, Mr. Mahmood did not share nuclear know-how with Al Qaeda, but his meeting with Osama establishes the fact that the terrorist organization was in contact with nuclear scientists. Second, the terrorist group has sympathizers in the nuclear scientific bureaucracies. It also authenticates bin Laden’s Deputy Ayman Zawahiri’s claim which he made in December 2001: “If you have $30 million, go to the black market in the central Asia, contact any disgruntled Soviet scientist and a lot of dozens of smart briefcase bombs are available (Allison,2010, January: 2).”The covert meetings between nuclear scientists and al Qaeda members could not be interpreted as idle threats and thereby the threat of nuclear/radiological terrorism is real. The 33Defense Secretary Robert Gates admitted in 2008 that “what keeps every senior government leader awake at night is the thought of a terrorist ending up with a weapon of mass destruction, especially nuclear(Mueller, 2011, August 2).” Indeed, the nuclear deterrence strategy cannot deter the transnational terrorist syndicate from nuclear/radiological terrorist attacks. Daniel Whiteneck pointed out: “Evidence suggests, for example, that al Qaeda might not only use WMD simply to demonstrate the magnitude of its capability but that it might actually welcome the escalation of a strong U.S. response, especially if it included catalytic effects on governments and societies in the Muslim world. An adversary that prefers escalation regardless of the consequences cannot be deterred” (Whiteneck, 2005, summer: 187) since taking office, President Obama has been reiterating that “nuclear weapons represent the ‘gravest threat’ to United States and international security.” While realizing that the US could not prevent nuclear/radiological terrorist attacks singlehandedly, he launched 47an international campaign to convince the international community about the increasing threat of nuclear/radiological terrorism. He stated on April 5, 2009: “Black market trade in nuclear secrets and nuclear materials abound. The technology to build a bomb has spread. Terrorists are determined to buy, build or steal one. Our efforts to contain these dangers are centered on a global non-proliferation regime, but as more people and nations break the rules, we could reach the point where the center cannot hold (Remarks by President Barack Obama, 2009, April 5).” He added: “One terrorist with one nuclear weapon could unleash massive destruction. Al Qaeda has said it seeks a bomb and that it would have no problem with using it. And we know that there is unsecured nuclear material across the globe” (Remarks by President Barack Obama, 2009, April 5). In July 2009, at the G-8 Summit, President Obama announced the convening of a Nuclear Security Summit in 2010 to deliberate on the mechanism to “secure nuclear materials, combat nuclear smuggling, and prevent nuclear terrorism” (Luongo, 2009, November 10). President Obama’s nuclear/radiological threat perceptions were also accentuated by the United Nations Security Council (UNSC) Resolution 1887 (2009). The UNSC expressed its grave concern regarding ‘the threat of nuclear terrorism.” It also recognized the need for all States “to take effective measures to prevent nuclear material or technical assistance becoming available to terrorists.” The UNSC Resolution called “for universal adherence to the Convention on Physical Protection of Nuclear Materials and its 2005 Amendment, and the Convention for the Suppression of Acts of Nuclear Terrorism.” (UNSC Resolution, 2009)The United States Nuclear Posture Review (NPR) document revealed on April6, 2010 declared that “terrorism and proliferation are far greater threats to the United States and international stability.” (Security of Defense, 2010, April 6:i). The United States declared that it reserved the right to “hold fully accountable” any state or group “that supports or enables terrorist efforts to obtain or use weapons of mass destruction, whether by facilitating, financing, or providing expertise or safe haven for such efforts (Nuclear Posture Review Report, 2010, April: 12)”. This declaration underscores the possibility that terrorist groups could acquire fissile material from the rogue states.

## Warming

#### Aerosol dispersals won’t offset anthropogenic warming – it will make it worse.

Alf Kirkevåg et. al, May 2008, Post-doctoral Research Fellow in physical meteorology at the University of Oslo, Norwegian Meteorological Institute, M.S. in astrophysics from the University of Trondheim, Visiting Scientist to the Southeast Asia START regional center, Trond Iversen, Norwegian Climate Centre (NCC), Meteorologist Institute, Jón Egill Kirstjánsson is a professor of Meteorology at the Department of Geosciences, University of Oslo, Øyvind Seland Department Member, Research and Development at the Norwegian Meteorological Institute, Jens Boldingh Debernard, Department of Geosciences, University of Oslo, Tellus, Vol. 60 Issue 3, “On the additivity of climate response to anthropogenic aerosols and CO2, and the enhancement of future global warming by carbonaceous aerosols,” p. 525, Ebsco Host

However, the global response to anthropogenic aerosol forcing is found to be nearly independent of the CO2 level. For present-day CO2 the surface air cooling is estimated at 1.44 K, accompa-nied by a 4.2% decrease in precipitation, while the correspond-ing figures at doubled CO2 are 1.46 K and 4.0%, respectively. Hence, the global climate responses to these sources of forcing are nearly additive. The increase in surface temperature due to the combined effect of anthropogenic aerosols and a doubling of CO2is 1.15 K, compared to 1.17 K for the sum of the two effects. This result contrasts that of Feichter et al. (2004), who found a considerably weaker global warming for combined aerosol and CO2 forcing than obtained by adding the individual responses. Apart from a southward shift in the ITCZ as a response to the asymmetric interhemispheric distribution of aerosol forcing, the spatial climate response patterns differ considerably from the forcing patterns both for aerosols and CO2. Feedbacks related to ice and snow cover, as well as clouds, generally produce high-latitude amplification of the temperature signals. The presented results emphasize that the climate system’s response pattern is only partly determined by the detailed structure of the forcing, and generally more by the properties of local feedbacks and naturally occurring flow regimes in the climate system. The cooling by anthropogenic aerosols is predominantly due to the indirect forcing of sulphate. While being a magnitude smaller at the TOA, the direct forcing is about half of the first indirect forcing at the ground. This is due to solar absorption by BC particles, which exert a negative forcing at the surface but a positive forcing on the atmospheric column. Changing aerosol emissions from present-day to projected SRES A2 emissions for the year 2100 gives a doubling of the BC burden whilst sulphate is only slightly increased and shifted southwards. This leads to a 0.3 K surface air warming, compared to what is found for present-day aerosols, thus enhancing the global warming from greenhouse gases. The warming due to increased BC is largest in the Northern Hemisphere, and the southward shift in ITCZ due to aerosol forcing is partly reversed. The net increase in globally averaged precipitation is small despite the considerable rise in temperature, only 0.1%. This is probably caused by a weakening of the hydrological cycle in response to the negative ground surface forcing of BC mentioned above. To summarize, our simulations indicate that the global warm-ing and the associated increase in precipitation up to now would be considerably larger without the effects of anthropogenic aerosols, as expected. However, the results suggest that this ten-dency of anthropogenic aerosols to counteract the effects of en-hanced greenhouse gas levels may be reversed in the future, since light-absorbing BC is projected to increase compared to soluble and light-scattering aerosols such as sulphate. This applies to the response in surface air temperatures, and to a lesser extent also the precipitation. Although the precipitation response to present-day anthro-pogenic aerosols and increased CO2-levels counteract each other in a globally averaged sense, there are large spatial variations. The presented results suggest that also these aerosols may en-hance the response of the CO2forcing regionally, namely in parts of the tropics. Hence, any effort to offset the enhanced green-house warming by simply maintaining high aerosol emissions may aggravate the situation in parts of the world, by leading to more intense and more frequent droughts or floods. Defined as the global precipitation change normalized by the global surface air temperature change, the equilibrium hydrolog-ical sensitivity is estimated at about 3.0% K −1 for present-day anthropogenic aerosols, while for a doubling of CO2a value of 1.8% K −1 is obtained, close to the 1.9% K −1 given in IPCC (2001). Although it is almost 70% larger for aerosols than for CO2, the joint hydrological sensitivity to changes in aerosols and CO2 is slightly positive: 0.30% K −1. For anthropogenic aerosols in the 2100 emission scenario, in which both anthro-pogenic aerosols and CO2 contribute to a global warming rela-tive to present-day, the hydrological sensitivity is close to that of CO2 alone.

## **Solvency**

#### Loan guarantees is the best way to incentivize new nuclear energy – it is given at no cost.

NEI, 2012, Nuclear Energy Institute, “New Reactor Development,” <http://www.nei.org/112thcongress/new-reactor-development/>

The NRC certified Westinghouse Electric Co.'s revised AP1000 reactor design in December 2011. The AP1000 reactor will be used at the Vogtle facility and at South Carolina Electric & Gas Co.'s V.C. Summer site in Jenkinsville, which was licensed by the NRC in March 2012. The Nuclear Regulatory Commission is reviewing 11 license applications for 18 new nuclear reactors. The new NRC licensing process moves the licensing and safety issues to the front of three processes: approval of standardized reactor designs, early site permits, and combined construction and operating licenses. In addition, the licensing process provides greater opportunity for public input at the front end of the project. Costs Electricity generated from nuclear power can be competitive with other new sources of baseload power. This is true even before including the cost impact of potential restrictions on carbon dioxide and other greenhouse gas emissions. Loan Guarantees The Department of Energy loan guarantee program is the most effective program for addressing the major challenge facing new nuclear power plants: construction financing. Loan guarantees through DOE are available for 10 technologies—including nuclear power—that reduce, sequester or avoid greenhouse gas emissions. Recipients of loan guarantees for nuclear energy projects pay a fee and cover all administrative costs incurred by the government program. There is no cost to the taxpayer. In fact, a disciplined process will help lower electricity prices for consumers and will actually make money for the U.S. Treasury. Small Reactor Designs Small reactors will provide energy companies with an array of electricity production options. Their small size (typically fewer than 350 megawatts) and modular construction will allow these reactors to be built in a controlled factory setting, reducing the financing challenge and matching a variety of needs for low-carbon energy.

#### Pyro-processing is developed now and is comparatively better than existing reactors.

Tom Blees, 5-31-2011, is the author of Prescription for the Planet, the president of the Science Council for Global Initiatives, member of the selection committee for the Global Energy Prize, Idaho Samizdat: Nuke Notes, “Critique of MIT Nuclear Fuel Cycle Report,” <http://djysrv.blogspot.com/2011/05/critique-of-mit-nuclear-fuel-cycle.html>

The public views adequate nuclear waste management as a critical linchpin in further development of nuclear energy. The technical community, therefore, needs to provide a practical approach to deal with the waste issue. The Fukushima accidents call attention to the importance of managing spent fuel safely. It appears the best technical approach is extracting the actinides from spent fuel, which reduces the effective lifetime of nuclear wastes from ~300,000 years to ~300 years. Extracting actinides (and using them to generate power) is by far the best technical approach to dealing with nuclear wastes. The MIT Study fails to mention this important possibility. If actinide extraction is chosen as a pathway for waste “disposal,” the recovered actinides still must be transmuted to fissile material or fissioned directly. This can be done only in fast reactors. Actinides can be burned in fast reactors, generating energy and at the same time creating more fissile material for the future. A key advantage of fast reactors is that they can be utilized as “burners” when excess plutonium inventories exist, and then converted to “breeders” whenever needed. Only fast reactors can satisfy the waste-disposal mission simply and effectively while extending utilization of the uranium resources by more than two orders of magnitude. Thermal reactors—such as LWRs and high-temperature gas-cooled reactors—utilize less than 1% of uranium resources, even with recycling of plutonium and some of the uranium. Thermal-spectrum reactors, even optimized, can extend the resource utilization only marginally, and they cannot burn actinides effectively. Actinide recycling also requires an efficient processing technology, with improved economics and nonproliferation characteristics. The pyroprocessing technique based on electrorefining, developed in the IFR program, has the potential to recover the actinides from LWR spent fuel as well as to fully recycle fuel in fast reactors. The fundamentals of pyroprocessing have already been demonstrated – this is not new science. The technology is now ready for pilot-scale demonstration, and it should be given the highest priority. We do not need decades of R&D to pursue all esoteric ideas. We already have in our hands on the most advanced technology, technology that no other countries possess. The MIT Study also talks about the inter-generational equity considerations. We believe that our generation should demonstrate the technologies that will solve the energy supply and waste management problems, rather than proposing a century-long interim storage of the spent nuclear fuel.

## 2AC elections

#### Romney will win –

#### Political forecasts, economic data, swing-states, and accountability.

Peter Caughey & David Kelly, 10-4-2012, University of Colorado Boulder, “Updated election forecasting model still points to Romney win, University of Colorado study says,” <http://www.colorado.edu/news/releases/2012/10/04/updated-election-forecasting-model-still-points-romney-win-university>

According to their updated analysis, Romney is projected to receive 330 of the total 538 Electoral College votes. President Barack Obama is expected to receive 208 votes -- down five votes from their initial prediction -- and short of the 270 needed to win. The new forecast by political science professors Kenneth Bickers of CU-Boulder and Michael Berry of CU Denver is based on more recent economic data than their original Aug. 22 prediction. The model itself did not change. “We continue to show that the economic conditions favor Romney even though many polls show the president in the lead,” Bickers said. “Other published models point to the same result, but they looked at the national popular vote, while we stress state-level economic data.” While many election forecast models are based on the popular vote, the model developed by Bickers and Berry is based on the Electoral College and is the only one of its type to include more than one state-level measure of economic conditions. They included economic data from all 50 states and the District of Columbia. Their original prediction model was one of 13 published in August in PS: Political Science & Politics, a peer-reviewed journal of the American Political Science Association. The journal has published collections of presidential election models every four years since 1996, but this year the models showed the widest split in outcomes, Berry said. Five predicted an Obama win, five forecast a Romney win, and three rated the 2012 race as a toss-up. The Bickers and Berry model includes both state and national unemployment figures as well as changes in real per capita income, among other factors. The new analysis includes unemployment rates from August rather than May, and changes in per capita income from the end of June rather than March. It is the last update they will release before the election. Of the 13 battleground states identified in the model, the only one to change in the update was New Mexico -- now seen as a narrow victory for Romney. The model foresees Romney carrying New Mexico, North Carolina, Virginia, Iowa, New Hampshire, Colorado, Wisconsin, Minnesota, Pennsylvania, Ohio and Florida. Obama is predicted to win Michigan and Nevada. In Colorado, which Obama won in 2008; the model predicts that Romney will receive 53.3 percent of the vote to Obama’s 46.7 percent, with only the two major parties considered. While national polls continue to show the president in the lead, “the president seems to be reaching a ceiling at or below 50 percent in many of these states,” Bickers said. “Polls typically tighten up in October as people start paying attention and there are fewer undecided voters.” The state-by-state economic data used in their model have been available since 1980. When these data were applied retroactively to each election year, the model correctly classifies all presidential election winners, including the two years when independent candidates ran strongly: 1980 and 1992. It also correctly estimates the outcome in 2000, when Al Gore won the popular vote but George W. Bush won the election through the Electoral College. In addition to state and national unemployment rates, the authors analyzed changes in personal income from the time of the prior presidential election. Research shows that these two factors affect the major parties differently: Voters hold Democrats more responsible for unemployment rates, while Republicans are held more responsible for fluctuations in personal income. Accordingly -- and depending largely on which party is in the White House at the time -- each factor can either help or hurt the major parties disproportionately. In an examination of other factors, the authors found that none of the following had a statistically significant effect on whether a state ultimately went for a particular candidate: The location of a party’s national convention, the home state of the vice president or the partisanship of state governors.

#### GOP Fundraising to turn the tide

Jay Cost. 10/5/12. Morning Jay: Will October Be a Bad Month For Obama? http://www.weeklystandard.com/blogs/morning-jay-will-october-be-bad-month-obama\_653661.html?page=2

Third, the GOP fundraising machine is set to be deployed this month. As of August 31, the Romney-Ryan campaign, the Republican National Committee, and the Restore Our Future PAC had a cash-on-hand advantage of some $61 million over Obama-Biden, the Democratic National Committee, and the Priorities USA super PAC. Moreover, this broader GOP organization has outraised its Democratic counterpart in June, July, and August. And yet the GOP allowed the Democrats to outspend it on television during this period. But that will not be the case in October. At the very least, Republican advertisements will match Democratic ones – and it is quite possible that the GOP will outmatch the Democrats on the airwaves. So, contrary to the conventional wisdom, Obama enters the month of October with substantial problems. And with just a 3-point lead in the polls, he really cannot afford a bad month.

#### Winners win elections

Creamer, 11 – political strategist for over four decades

(Robert, he and his firm, Democracy Partners, work with many of the country’s most significant issue campaigns, one of the major architects and organizers of the successful campaign to defeat the privatization of Social Security, he has been a consultant to the campaigns to end the war in Iraq, pass health care, pass Wall Street reform, he has also worked on hundreds of electoral campaigns at the local, state and national level, "Why GOP Collapse on the Payroll Tax Could be a Turning Point Moment," Huffington Post, 12-23-11, www.huffingtonpost.com/robert-creamer/why-gop-collapse-on-the-p\_b\_1167491.html, accessed 9-1-12, mss)

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

#### Fast reactors developed and popular with the public – waste management.

Tom Blees, 5-31-2011, is the author of Prescription for the Planet, the president of the Science Council for Global Initiatives, member of the selection committee for the Global Energy Prize, Idaho Samizdat: Nuke Notes, “Critique of MIT Nuclear Fuel Cycle Report,” <http://djysrv.blogspot.com/2011/05/critique-of-mit-nuclear-fuel-cycle.html>

The public views adequate nuclear waste management as a critical linchpin in further development of nuclear energy. The technical community, therefore, needs to provide a practical approach to deal with the waste issue. The Fukushima accidents call attention to the importance of managing spent fuel safely. It appears the best technical approach is extracting the actinides from spent fuel, which reduces the effective lifetime of nuclear wastes from ~300,000 years to ~300 years. Extracting actinides (and using them to generate power) is by far the best technical approach to dealing with nuclear wastes. The MIT Study fails to mention this important possibility. If actinide extraction is chosen as a pathway for waste “disposal,” the recovered actinides still must be transmuted to fissile material or fissioned directly. This can be done only in fast reactors. Actinides can be burned in fast reactors, generating energy and at the same time creating more fissile material for the future. A key advantage of fast reactors is that they can be utilized as “burners” when excess plutonium inventories exist, and then converted to “breeders” whenever needed. Only fast reactors can satisfy the waste-disposal mission simply and effectively while extending utilization of the uranium resources by more than two orders of magnitude. Thermal reactors—such as LWRs and high-temperature gas-cooled reactors—utilize less than 1% of uranium resources, even with recycling of plutonium and some of the uranium. Thermal-spectrum reactors, even optimized, can extend the resource utilization only marginally, and they cannot burn actinides effectively. Actinide recycling also requires an efficient processing technology, with improved economics and nonproliferation characteristics. The pyroprocessing technique based on electrorefining, developed in the IFR program, has the potential to recover the actinides from LWR spent fuel as well as to fully recycle fuel in fast reactors. The fundamentals of pyroprocessing have already been demonstrated – this is not new science. The technology is now ready for pilot-scale demonstration, and it should be given the highest priority. We do not need decades of R&D to pursue all esoteric ideas. We already have in our hands on the most advanced technology, technology that no other countries possess. The MIT Study also talks about the inter-generational equity considerations. We believe that our generation should demonstrate the technologies that will solve the energy supply and waste management problems, rather than proposing a century-long interim storage of the spent nuclear fuel.

#### Romney supports loan guarantees – he can’t credibly run against plan

NEI (Nuclear Energy Insight), Summer 2012, “Obama, Romney Support Nuclear Energy, Offer Views on Financing, Regulation,” <http://www.nei.org/resourcesandstats/publicationsandmedia/insight/insightsummer2012/obama-romney-support-nuclear-energy-offer-views-on-financing-regulation/>

The Obama administration, in support of what it calls “prudent deployment of nuclear energy through loan guarantees,” has conditionally committed to use federal guarantees to reduce the cost of financing two Georgia reactors. That action alone would translate to millions of dollars in consumer savings. Romney also wants to spur nuclear power plant development. His 2011 energy plan calls for reform of the “cumbersome and restrictive” U.S. Nuclear Regulatory Commission. Romney wants the agency to review several new reactor designs and ensure that licensing decisions based on pre-approved designs are issued within two years. Romney in 2011 said he prefers streamlining the federal permitting process for the use of loan guarantees through the Department of Energy. If permits are not issued for approved sites and designs within a specified time period, the government should “refund the money to [nuclear energy utilities] that have invested to build the facility.”

#### Undecided voters won’t notice plan

Ezra Klein http://www.bloomberg.com/news/2012-09-26/why-undecided-voters-won-t-be-deciding-this-election.html 9-26-12

Even though the ad is an exaggeration, it’s not an outright lie. This election will probably be decided by a tiny fraction of the electorate in eight or nine states. The undecided voters in those states are popularly portrayed as people who just can’t make up their minds. But that’s not quite right. They aren’t so much “undecided” as uninterested and, frankly, uninformed; in political-science parlance -- and SNL ads -- they are “low information” voters. It’s worth stopping here to clarify something: “uninformed” does not mean “dumb.” We’re all uninformed about certain topics. You wouldn’t believe how little I know about, say, baseball. I’m vaguely aware that it happens, and that it culminates in a World Series, but I can’t tell you who won last year, or who’s in contention this year. Baseball just isn’t something I pay attention to. Lynn Vavreck, a political scientist at the University of California at Los Angeles, says that uninformed voters have roughly the same relationship to politics that I have to baseball. “They are lower on political information, for sure. That’s a function of being not that interested and not paying attention,” she said. “It’s not that they can’t comprehend the information, or that they’re at a balancing point and can’t decide. They’re just not dialed in. They’re not getting all the information you or I are getting.” Vavreck asked thousands of voters -- both decided and undecided -- a battery of basic, multiple-choice questions about who’s who in politics. The questions were designed to be easy. You didn’t have to know that John Boehner is Speaker of the House. You just had to know he is a congressman rather than a judge or the vice president. According to Vavreck’s polling, only 35 percent of undecided voters could identify Boehner’s job as “congressman.” Only 69 percent could say that Joe Biden is the vice president rather than, say, a representative. Only 17 percent can identify Chief Justice John Roberts as a judge. Decided voters have an easier time rattling off the job titles of Boehner and Biden, as well as those of Harry Reid, Eric Cantor, Mitch McConnell and Nancy Pelosi. (Interestingly, they struggle more than undecideds to identify Roberts.) That’s likely because decided voters are paying more attention to the election. About 43 percent of decided voters say they’re following the presidential election “very closely.” Only 12 percent of undecided voters say the same. Recognizing that undecided voters are mostly uninterested voters helps to clarify the trajectory of the presidential campaign. In their book “The Timeline of Presidential Elections,” Robert Erikson and Christopher Wlezien show that voter preferences tend to be very stable in the fall, but that campaign observers -- the authors analyze people betting money in online political prediction markets -- tend to assume those preferences are far more volatile. Psychological Projection The misjudgment makes sense as an act of psychological projection. To people personally invested in politics, the homestretch of the campaign appears loaded with the kind of political information that could change voter opinions. There are debates, a flood of ads, inevitable gaffes, the crush of election news -- maybe even an October surprise or two. But undecided voters are precisely those least likely to tune in to the debates, which helps explain why debates typically have little effect on elections. They’re the least likely to care about a gaffe -- or even to know when one has occurred. They’re more likely to throw out political mail and tune out political ads. If they live in a swing state, they’ve already been buffeted by -- and proved immune to -- months of commercials and phone messages. Vavreck has been tracking a group of 44,000 voters since December 2011. When she started, 94 percent were already leaning toward a candidate. Of the 6 percent who were truly undecided, 33 percent now say they’re going with Mitt Romney and 37 percent with President Barack Obama. The ranks of the original undecided voters were partially replenished by voters who had expressed a preference in 2011 but have since grown uncertain. Of the new undecideds, slightly more were Romney supporters in 2011 than were Obama supporters, but the total numbers are small. There’s little reason to believe that undecided voters in this campaign will break sharply toward one candidate. The votes of the undecideds seem to be roughly evenly split, and if any big news happens between now and the election, they’re likely to be the last to know about it, and the least interested in following up on it. If Obama is going to turn this into a rout, or if Romney is to salvage a win, it will probably require changing minds that are already made up, or increasing (or suppressing) turnout among base voters. In other words, don’t expect the votes of the mythical undecideds to actually be decisive. It’s likely to be the decided who will, well, decide. (Ezra Klein is a Bloomberg View columnist. The opinions expressed are his own.)

#### Plan is too late to impact elections

Ramsey Cox (writer for The Hill) September 24, 2012 “Congress to hold pro forma sessions until November” http://thehill.com/blogs/floor-action/senate/251313-congress-to-hold-pro-forma-sessions-until-november

Rather than being in recess for more than five weeks, both the Senate and the House decided to hold pro forma sessions until after the November elections. Both chambers will gavel in Tuesday morning for a brief session; typically, legislative business doesn't take place in pro forma sessions. At most members ask to be recognized for a speech, but rarely do. It is unclear if the legislative branch was afraid of recess appointments by the White House, yet both sides took a formal recess in August. The Senate will hold a pro forma session every Tuesday and Friday until Nov. 13 at 2 p.m. when they’ll continue work on S. 3525, the Sportsmen Act, which would increase access to federal land for hunters and fishers while also supporting conservation measures.

#### Bioterrorism is exaggerated – wont cause extinction

Arms Control Center, 2010 (Scientists Working Group on Biological and Chemical Weapons, report in response to the Graham-Talent Commission report on the Prevention of WMD Proliferation and Terrorism, Center for Arms Control and Non-Proliferation, “Biological threats: a matter of balance” January 26, google)

• The bioterrorist threat has been greatly exaggerated. • New bioweapons assessments are needed that take into account the complex set of social and technical issues that shape bioweapons development and use by state and non-state actors, and that focus on more plausible threats than the worst-case scenarios that have largely driven discussion to date. • Continuing to emphasize and spend billions of dollars on measures to specifically counter bioterrorist threat scenarios distorts our national understanding of the important issues in public health, and diverts scarce scientific talent and resources away from more pressing public health and natural disease threats. • While it has been argued that spin-offs from biodefense programs contribute to countering natural diseases, the converse is more likely: direct targeting of effort and expenditure on natural disease threats would provide much greater public health benefit, and spin-offs from these programs would significantly strengthen resistance to bioterrorism. • Bioterrorist threats need to be seen and addressed within a wider public health context--as just one of the many possible ways in which infectious agents may harm human, animal, and plant health How Serious is the Bioterrorist Threat? • Beginning in the early 1990s, an increasing amount was written about the threat of bioterrorism. Prior to 2001 most examples of “bioterrorism” were in fact hoaxes or were only tenuously related to actual threats, with the single exception of the use of Salmonella to contaminate salad bars in Oregon in 1984. Much was made of the Japanese group Aum Shinrykio’s unsuccessful attempts to use anthrax and botulinum toxin without drawing the simple and obvious lesson that achieving success in such attempts is difficult. The 2001 anthrax letters were seen as validating large scale and catastrophic threat scenarios, despite the very real difficulties that isolated individuals or small groups would have had in making such material. By the time the source of those letters was identified in August 2008 as a government laboratory with capabilities vastly in excess of those of any terrorist organization, biodefense programs costing tens of billions of dollars were already established, producing a potent and vocal constituency for continued and increased funding. • Offensive, including terrorist, use of biological agents presents major technical problems. This is why the Soviet Union, United States, United Kingdom and others needed to spend vast sums for decades in order to research and develop biological weapons. Even then the results were considered an unreliable form of warfare, and there was little opposition to their elimination by international agreement (indeed the US unilaterally eliminated its biological weapons stockpiles). • Fictional bioterrorism exercises such as Atlantic Storm and Dark Winter routinely used unrealistic values for critical parameters and were unrealizable by putative perpetrators. They tended to gloss over the very real problems involved in acquiring, growing and disseminating smallpox virus on a sufficient scale to represent a major threat. They also posited unreasonable assumptions about issues such as the rate of disease spread, which skewed the outcomes towards inflated and unlikely results.

### 2AC rare earth elements

#### Converts existing coal plants – means no material cost of start-up.

Steve Kirsch, 2011, M.S. Massachusetts Institute of Technology (MIT), writer for the Huffington Post, CEO Kirsch foundation on climate, founder/head of Center for Energy and Climate Change, National Award from the Caring Institute in Washington DC, written much about the Integral Fast Reactor, Fellow, with the Science Council for Global Initiatives (SCGI), Steve Kirsch’s blog, “The Integral Fast Reactor (IFR) project: Q&A,” <http://skirsch.com/politics/globalwarming/ifrQandA.htm>

\*\*\*cites Charles Till, former Associate Director, Argonne National Laboratory, The National Academy Studies, James Hansen, Director, NASA Goddard Institute for Space Studies, Ray Hunter, former Deputy Director of the Office of Nuclear Energy, Science and Technology in the U.S. Department of Energy (DOE), Leonard Koch, winner of the Global Energy International Prize, Barry Brook Sir Hubert Wilkins Chair of Climate Change\*\*\*

Can you convert existing coal plants to be IFR plants? One nice thing about the S-PRISM is that they're modular units and of relatively low output (one power block of two will provide 760 MW). They could be emplaced in excavations at existing coal plants and utilize the same turbines, condensers (towers or others), and grid infrastructure as the coal plants currently use, and the proper number of reactor vessels could be used to match the capabilities of those facilities. Essentially all you'd be replacing is the burner (and you'd have to build a new control room, of course, or drastically modify the current one). Thus you avoid most of the stranded costs. If stranded costs can thus be kept to a minimum, both here and, more importantly, in China, we'll be able to talk realistically not just about stopping to build new coal plants but replacing the existing ones, even the newest ones.

#### Fast reactors don’t cause shortages of REE – no complex systems and small containment fields.

Barry Brook et. al, 2-21-2009, a leading environmental scientist, holding the Sir Hubert Wilkins Chair of Climate Change at the School of Earth and Environmental Sciences, and is also Director of Climate Science at the University of Adelaide’s Environment Institute, published three books, over 200 refereed scientific papers, is a highly cited researcher, received a number of distinguished awards for his research excellence including the Australian Academy of Science Fenner Medal, is an International Award Committee member for the Global Energy Prize, Australian Research Council Future Fellow, ISI Researcher, Ph.D., Macquarie University in Environmental Engineering, Science Council for Global Initiatives, Edgeworth David Medal Royal Society of NSW, Cosmos Bright Sparks Award, Tom Blees is the author of Prescription for the Planet, the president of the Science Council for Global Initiatives, member of the selection committee for the Global Energy Prize, George S. Stanford is a nuclear reactor physicist, part of the team that developed the Integral Fast Reactor, PhD from Stanford University in Physics, Masters from University of Virginia in Engineering, worked at Argonne National Laboratory, Graham R.L. Cowan, "Boron: A Better Energy Carrier than Hydrogen?" in 2001, published "How Fire Can Be Tamed," BraveNewClimate, “Response to an Integral Fast Reactor (IFR) critique,” <http://bravenewclimate.com/2009/02/21/response-to-an-integral-fast-reactor-ifr-critique/>

A new IFR should cost less than either a new nuclear (typical of today’s technology) or coal plant based on the following. The IFR does not require some of the complex systems that today’s reactors require. Examples include the low level radwaste cleanup station, the emergency core cooling system, and fewer control rod drives and control rods for comparable power. Because of the low pressure in the sodium systems, less steel is required for the plant piping and reactor vessel. There are studies that suggest that the reactor containment will be less massive. Other cost savings will be made because the IFR does not require the services of the Isotopic Separation Plants for fuel enrichment. Additional costs to the IFR include the integral fuel reprocessing capability, and a secondary sodium system (but the IFR fuel process costs are somewhat offset by the extremely low cost for raw fuel and the improved waste product). Some studies have been done which indicate that an IFR would be very economical and competitive to build, own, and operate, but the final proof of economics can only come in the construction and operation of a commercial sized plant.”

#### Nuclear labs are innovating away from REE in the squo – new deposits ensure no shortages.

Jonathan Marshall, October 13, 2011. Clean Tech No Hostage to Rare Earth Shortages. http://www.pgecurrents.com/2011/10/13/clean-tech-no-hostage-to-rare-earth-shortages/

mining companies are finding new supplies all the time. California-based Molycorp Inc., the only active U.S. producer of rare earth metals, announced promising new deposits in Southern California, which could be tapped within a year. In Alaska, geologists report finding 70 promising deposits of the materials. And—much farther afield—experts from the U.S. Geological Survey have mapped deposits of at least a million metric tons of these elements in southern Afghanistan. Equally promising, inventors are finding ways to substitute more common materials for rare earth metals in vital applications. The Department of Energy has earmarked up to $30 million on cutting-edge research to this end. For example, the Pacific Northwest National Laboratory is developing a way to use composite materials containing manganese to form powerful magnets for wind turbines and electric vehicle motors. Substitutes for rare earth metals in permanent magnets are also being developed by Oak Ridge National Laboratory. Tesla Motors already uses an alternative design in its Roadster electric vehicle. So clean-tech developers need not lose too much sleep over this latest crisis. Good old Yankee ingenuity—through both geology and materials science—holds every promise of ensuring that rare earth metals rarely become a problem.

#### Shortage short term, no impact and cooperation will increase in the future.

Nabeel A. Mancheri, 5-16-2012, China faces WTO again over rare earth metals. http://www.eastasiaforum.org/2012/05/16/china-faces-wto-again-over-rare-earth-metals/

Despite the significance of China’s actions, most analysts argue that the shortage of rare earths will be a temporary phenomenon, because the rising prices for rare earth elements will encourage others to enter the market, leading to increased supply. The US, for example, has 13 per cent of the world’s known rare-earth reserves, and could re-enter the production and refining business. China’s efforts to exert price leverage are unintentionally driving a revival of global rare earths production and, over time, China will likely be just one of many global suppliers. China’s efforts to monopolise the sector are bound to backfire because such high-handed measures have prompted the rest of the world to formulate alternate strategies. At the same time, businesses and policy makers around the world alike are concerned about the increasingly restrictive and unpredictable environment of international trade in industrial raw materials. Multilateral disciplines governing export restrictions are ambiguous, which creates uncertainty for industries that require these materials and raises the risk for investment in both mining and processing facilities worldwide.

#### Plan key to national labs.

Michael Wallace & Sarah Williams, 2012, head of the Transatlantic Program at the Royal United Services Institute, and Sarah Williams, program coordinator and research associate in the U.S. Nuclear Energy Project at CSIS, “Nuclear Energy in America: Preventing its Early Demise,” CSIS

Second, setting global norms and standards for safety, security, operations, and emergency response. As the world learned with past nuclear accidents and more recently with Fukushima, a major accident anywhere can have lasting repercussions everywhere. As with nonproliferation and security, America’s ability to exert leadership and influence in this area is directly linked to the strength of our domestic industry and our active involvement in the global nuclear enterprise. A strong domestic civilian industry and regulatory structure have immediate national security significance in that they help support the nuclear capabilities of the U.S. Navy, national laboratories, weapons complex, and research institutions.

#### Key to deterrence.

John D. Immele, 1-19-2009, Deputy Laboratory Director for National Security at Los Alamos, and Richard L. Wagner, physicist who has worked in nuclear weapon and weapon-system design, missile defense, defenses against nuclear terrorism, nuclear energy, non-proliferation, WMD threat reduction at Los Alamos, “The US Nuclear Weapon Infrastructure and a Stable Global Nuclear Weapons Regime,” Strategic Weapons in the 21st Century Conference, http://www.lanl.gov/conferences/sw/2009

An important aspect of the broader national nuclear security mission – indeed, a definition of mission, in a sense -- is the integrated solutions that emerge from Laboratories that are responsible for the whole problem and not just disconnected fragments of the problem. Science, by its nature, is and must be an open endeavor. This can be exploited for the benefit and stability of the future global nuclear regime, or it can be wasted by overspecifying small projects and stifling creative solutions to the broader problem. The concept and practice of the national laboratory has historically been a US strength of strategic importance. It provided long-term focus, building the technology base for the long term to provide solutions that would not appear for a long time, but were very important when they did - beyond the horizon for industry, too big for universities. Laboratory leadership had considerable discretion to define Laboratory tasks within broad, long-term mission-areas, to trade among alternative problems and to match problems and solutions. Examples include the emergence of nuclear safeguards, nuclear intelligence, compact warheads for submarines, nuclear defenses and tools for the human genome such as laser cell sorting – all from a weapons program much less bureaucratized and parsed than today.¶ The US may be in some danger of losing its lead in science and its applications. In remedying or preventing this, there is much to be done, and rebuilding strong, effective national labs will be an important component of the fix. In the emerging era of nuclear dissuasion and latent nuclear (in)stability, national nuclear security will depend on re-establishing the concept and practice of the national laboratory, enlarging the mission of the labs to reflect the larger scope of this era’s nuclear and other security challenges, healing the relationship between the labs and the government.

### 2AC topicality – energy production

#### We meet – was created to address energy demands.

Steve Kirsch, 2009, M.S. Massachusetts Institute of Technology (MIT), writer for the Huffington Post, CEO Kirsch foundation on climate, founder/head of Center for Energy and Climate Change, National Award from the Caring Institute in Washington DC, written much about the Integral Fast Reactor, Fellow, with the Science Council for Global Initiatives (SCGI), Steve Kirsch’s blog, “The Integral Fast Reactor (IFR) project: Congress Q&A,” <http://skirsch.com/politics/ifr/QAcongressKirsch.htm>

\*\*\*cites Charles Till, former Associate Director, Argonne National Laboratory, The National Academy Studies, James Hansen, Director, NASA Goddard Institute for Space Studies, Ray Hunter, former Deputy Director of the Office of Nuclear Energy, Science and Technology in the U.S. Department of Energy (DOE), Leonard Koch, winner of the Global Energy International Prize, Barry Brook Sir Hubert Wilkins Chair of Climate Change\*\*\*

There is no other alternative energy technology which eats our nuclear waste for fuel. So a billion dollars to solve a $100 billion dollar nuclear waste problem is a good deal. You get the power for free. Secondly, we need a technology to offer to India and China that is more attractive than coal. None of the alternatives you are funding now do that. But if we don't do it, the planet will suffer damages beyond repair. We must get rid of coal or we are hosed. Nothing we can do will matter. This project will take 5 years if Obama orders the NRC to fast-track the certification of the PRISM and the longer we keep putting it off, the more damage will be done. It gets exponentially harder to stop global warming as time goes on. The least expensive approach is to start yesterday. While a billion dollars is a large earmark, it is tiny in comparison to the magnitude of the problem it solves. Thirdly, because our government already invested 10 years and $1 billion into it already and then pulled the rug out from under it even though it met all expectations. Fourth, because this technology was invented by our nation's top energy scientists at our top energy national lab to solve our energy problems. How can you not fund your own top scientists especially when they proved they were right and that we now need it more than ever?

#### More ev. - decreases energy costs.

Steve Kirsch, 11-25-2009, M.S. Massachusetts Institute of Technology (MIT), writer for the Huffington Post, CEO Kirsch foundation on climate, founder/head of Center for Energy and Climate Change, National Award from the Caring Institute in Washington DC, written much about the Integral Fast Reactor, Fellow, with the Science Council for Global Initiatives (SCGI), Steve Kirsch’s blog, “Why We Should Build an Integral Fast Reactor Now,” <http://skirsch.wordpress.com/2009/11/25/ifr/>

\*\*\*cites Charles Till, former Associate Director, Argonne National Laboratory, The National Academy Studies, James Hansen, Director, NASA Goddard Institute for Space Studies, Ray Hunter, former Deputy Director of the Office of Nuclear Energy, Science and Technology in the U.S. Department of Energy (DOE), Leonard Koch, winner of the Global Energy International Prize, Barry Brook Sir Hubert Wilkins Chair of Climate Change\*\*\*

A successful IFR demonstration has the following important benefits: The only technology we have with a realistic potential to save the planet. Eliminating carbon emissions from coal plants worldwide is required to prevent a climate catastrophe. But using carbon capture adds cost and may not be practical or viable. The IFR, on the other hand, can replace the burner in an existing coal plant while reducing operating costs. So countries will actually want to eliminate their carbon emissions because they’ll save money. This is why the IFR is one of Jim Hansen’s top five priorities for saving the planet: because the IFR is the only viable solution we know of today can eliminate CO2 emissions from coal plants without increasing energy costs. Addresses the climate change problem while helping our ecomomy with lower energy costs and increased jobs. Unlike many renewable sources, nuclear power has the potential to decrease energy costs and create new high paying jobs.

## CP-Lead Cooled Reactors

#### New reactor designs ensure no repeat of Fukushima.

David Biello, 2-9-2012, Scientific American, “Nuclear Reactor Approved in U.S. for First Time Since 1978,” <http://www.scientificamerican.com/article.cfm?id=first-new-nuclear-reactor-in-us-since-1978-approved&page=2>

Other than the Watts Bar unit No. 2 in Tennessee, which will simply be the completion of a reactor that started construction in the 1970s, the four new plants will all employ a novel design—the AP1000. They will be the first to employ so-called passive safety features, or technology that kicks in with or without human intervention. In the case of the AP1000 that means cooling water sits above the reactor core and, in the event of a meltdown like the ones at Fukushima Daiichi, will flow via gravity into the core to cool it with the automatic opening of a heat-sensitive valve. Furthermore, although the thick steel vessel containing the nuclear reactor is encased in a shell of 1.2-meter-thick concrete, that shell is itself surrounded by a building that is open to the sky. Should the concrete containment vessel begin to heat up during a meltdown, natural convection would pull cooling air inside? The NRC initially rejected that open-air building for a lack of structural strength. The U.S. regulator argued that it would not withstand a severe shock such as an earthquake or airplane impact because it was initially planned to be built from prefabricated concrete and steel modules to save money. The NRC approved a modified design (pdf) in December that employs more steel reinforcement, among other changes. Nevertheless, NRC Chairman Gregory Jaczko voted against approving the license for the two reactors at Vogtle today unless they incorporated a "binding obligation that these plants will have implemented the lessons learned from the Fukushima accident before they operate." The commission also required more inspection and testing of the explosive-opened valves that would allow venting in case of an accident.

## CP 2-Sunset CP

#### Long term Investment in pyro-processing by the government is necessary to sustain the nuclear industry – prices and management.

Stephen Berry & George S. Tolley, 11-29-2010, James Franck Distinguished Service Professor Emeritus at the University of Chicago, Fellow, American Academy of Arts and Sciences, foreign Member, Royal Danish Academy of Sciences, member and Home Secretary, National Academy of Sciences, J. Heyrovsky Honorary Medal for Merit in the Chemical Sciences, Academy of Sciences of the Czech Republic, Alexander von Humboldt-Stiftung Senior Scientist Award, Phi Beta Kappa National Lecturer, George S. Tolley is a professor emeritus in Economics at the University of Chicago, fellow, American Association for the Advancement of Science, honorary editor, Resource and Energy Economics, honorary Ph.D., North Carolina State University, “Nuclear Fuel Reprocessing Future Prospects and Viability,” p. 39, <http://humanities.uchicago.edu/orgs/institute/bigproblems/Team7-1210.pdf>

Increasing government support of advancements in reprocessing in the U.S. would encourage growth and investment in this technology. Therefore, continued government commitment to researching pyroprocessing and other advanced fuel cycle technologies is vital to the nuclear industry, especially if we envision this technology maturing internationally. As unsustainable as our current nuclear waste disposal strategies are, we believe in the current political climate, commercial reprocessing in the United States are not a viable option due to high environmental and technological costs, as well as having significant nuclear proliferation threats. However, in order for the U.S. to employ pyroprocessing in the future, the government must begin now to incentivize the technology for firms and investors. As uranium prices are expected to increase in the future, as well as an increasing concern regarding the management of nuclear waste worldwide, reprocessing may become a promising solution provided investments are made to address current challenges in the field.