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## Offcase

### Off 1

#### R&D isn’t topical

#### Violates Energy production---it’s pre-production

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3. SUBSIDIES THROUGH THE FUEL CYCLE

Because no two fuel cycles are exactly the same, examining subsidies through the context of a generic fuel cycle is instructive in providing an overall framework from which to understand how common subsidization policies work. Subsidies are grouped into preproduction (e.g., R&D, resource location), production (e.g., extraction, conversion/generation, distribution, accident risks), consumption, postproduction (e.g., decommissioning, reclamation), and externalities (e.g., energy security, environmental, health and safety).

3.1 Preproduction

Preproduction activities include research into new technologies, improving existing technologies, and market assessments to identify the location and quality of energy resources.

3.1.1 Research and Development

R&D subsidies to energy are common worldwide, generally through government-funded research or tax breaks. Proponents of R&D subsidies argue that because a portion of the financial returns from successful innovations cannot be captured by the innovator, the private sector will spend less than is appropriate given the aggregate returns to society. Empirical data assembled by Margolis and Kammen supported this claim, suggesting average social returns on R&D of 50% versus private returns of only 20 to 30%.

However, the general concept masks several potential concerns regarding energy R&D. First, ideas near commercialization have much lower spillover than does basic research, making subsidies harder to justify. Second, politics is often an important factor in R&D choices, especially regarding how the research plans are structured and the support for follow-on funding for existing projects.

Allocation bias is also a concern. Historical data on energy R&D (Table III) demonstrate that R&D spending has heavily favored nuclear and fossil energy across many countries. Although efficiency, renewables, and conservation have captured a higher share of public funds during recent years, the overall support remains skewed to a degree that may well have influenced the relative competitiveness of energy technologies. Extensive public support for energy R&D may also reduce the incentive for firms to invest themselves. U.S. company spending on R&D for the petroleum refining and extraction sector was roughly one-third the multi-industry average during the 1956-1998 period based on survey data from the U.S. National Science Foundation. For the electric, gas, and sanitary services sector, the value was one-twentieth, albeit during the more limited 1995-1998 period.

3.1.2 Resource Location

Governments frequently conduct surveys to identify the location and composition of energy resources. Although these have addressed wind or geothermal resources on occasion, they most often involve oil and gas. Plant siting is another area where public funds are used, primarily to assess risks from natural disasters such as earthquakes for large hydroelectric or nuclear installations. Survey information can be important to evaluate energy security risks and to support mineral leasing auctions, especially when bidders do not operate competitively. However, costs should be offset from lease sale revenues when evaluating the public return on these sales. Similarly, the costs of siting studies should be recovered from the beneficiary industries.

3.2 Production

Energy production includes all stages from the point of resource location through distribution to the final consumers. Specific items examined here include resource extraction, resource conversion (including electricity), the various distribution links to bring the energy resource to the point of final use, and accident risks.

#### Violates “financial incentives”---they are non-financial

GSWH 11 Global Solar Water Heating Market Transformation and Strengthening Initiative, This publication is the result of a joint effort from the following contributors: The European Solar ThermalIndustry Federation (ESTIF), the United Nations Environment Program (UNEP) through its Division ofTechnology, Industry and Economics (DTIE) and the Global Environment Fund (GEF). "Guidelines for policy and framework conditions" No Specific Date Cited, Most Recent Citations From 2011 www.solarthermalworld.org/files/policy\_framework.pdf?download

8 Non financial incentives for solar thermal

Non Financial Incentives include all public policies that support the creation of public good, even when providing an indirect financial advantage to the solar thermal market. For instance: an awareness raising campaign financed from public money or a programme to subsidise craftsmen training or R&D, etc. Obviously, all these instruments create an indirect financial advantage for companies involved in the market and this benefit is then passed on to the users.

8.1 Solar thermal obligations

• What is a Solar Thermal Obligation (STO)?

STO are legal provisions making mandatory the installation of solar thermal systems in buildings. The obligation mainly applies to new buildings and those undergoing major refurbishment. The owner must then install a solar thermal system meeting legal requirements. Most of the existing STOs are connected to national or regional energy laws and implemented through the municipal building codes. A growing number of European municipalities, regions and countries have adopted solar thermal obligations. Already today, more than 150 million people live in regions covered by a STO.

• Benefits

A major benefit of solar thermal ordinances is their effectiveness combined with low costs and limited administrative overheads for public authorities. As part of the building permit process, the inspection with regard to the renewable energy requirement is simple and thus does not strain public finances.

The introduction of a solar thermal ordinance prevents market fluctuation caused by inconsistent incentive programmes. It provides a stable planning environment for market actors and investors, encouraging local economic growth and creating new jobs in this sector.

• Unwanted effects and flanking measures

Solar obligations have a profound effect on the solar thermal market's structure. Therefore, to maximise their benefits, they require flanking measures.

In a market where solar thermal becomes mandatory, promoters and customers will tend to question the solar systems' operation and react more negatively than in a voluntary market.

Ends users and the construction sector will often go for the cheapest possible solution, while building owners will try to circumvent the obligation through exemptions. The real impact of any regulation strongly depends on its technical parameters and control procedures.

It is vital, therefore, that the regulations adopted ensure state-of-the-art quality assurance, products, planning, installation and maintenance of the system, guaranteeing the same high level of customer satisfaction as in the current voluntary market. Poor performance of "mandatory" systems would not only undermine public acceptance of the obligation, but also, possibly, of the solar thermal technology in general.

Israel, 30 years of experience with solar thermal ordinances

Thirty years ago, Israel was the first country to pass legislation on solar thermal installations. With the second oil crisis at the end of the 1970s, members of parliament examined ways to make their country less dependent on imported energy. The result was a law, which made solar water heaters mandatory in new buildings such as residential housing, hotels, guest houses and old people's homes up to 27 metres high. The legislation entered into force in 1980.

Nowadays over 80% of Israel's households get their domestic hot water from solar rooftop heaters. A typical domestic unit consists of a 150 litre insulated storage tank and a 2 m2 collector. These hot water heaters save the country the need to import about 4% of its energy needs, and replace about 9% of the electricity production.

The law has now become redundant. More than 90% of the solar systems are installed on a voluntary basis, i.e. they are installed in existing buildings, or the systems are larger than required by the obligation.

Source: PROSTO project

8.2 Quality, standards and certification policy

The need and methods to ensure quality in the market are so important for solar thermal, that a complete guide is dedicated to this topic in the framework of the GSWH project.

Why do we need standards?

The objective of standardisation and quality assurance is to guarantee product safety and quality, as well as lower prices. At every stage of market development, the capacity of solar thermal systems to deliver the expected level of performance is a key factor. In the early stage of the market, quality issues have had long lasting devastating effects. The existence of standards is the cornerstone of quality assurance.

The actors of standards and certification

Standardisation and quality for solar thermal should be the result of a joint effort from public authorities (market regulation), the industry, the technical community and, when they are adequately organised, the end users.

• Public authorities have a key role to play in imposing stringent quality requirements and in initiating, facilitating and controlling the standardisation process.

• The industry must provide product and technical expertise. It must understand the benefits

of ensuring standardised level of quality. Public authorities should guarantee that the standards are neutral and do not favour certain products or companies.

• I t is essential to be able to rely on independent testing facilities and certification bodies. If the private initiative is not adequate, then public authorities should actively support the creation of such structures.

• Consumer organisations can bring a useful contribution to the process. Quality installation for quality products

Solar thermal products usually need to be installed. This operation can be simple to the extent that it might not require the intervention of a specialist, e.g. some termosiphons systems, but on average it should be undertaken by a professional. To guarantee performance, the quality of the installation is as important as the quality of the system. Minimum requirements in terms of training and qualification of installers should be implemented in parallel with product requirements. Public authorities should regulate in the absence of initiatives from trade and industry.

Performance and quality for a sustainable market

Performance and quality measures do not constitute flanking or accompanying measures. Framework and regulations should be developed, and relevant bodies involved from the beginning, even if this has to be imposed to the market to some extent.

The market tends to be shortsighted; industry will naturally prefer to avoid costs and regulations. The benefits of high quality regulations and market surveillance will emerge eventually and guarantee a sustainable market. Public authorities should ensure that incentives and promotion endorse quality.

8.3 Research and development, demonstration projects (definition, importance, recommendations, examples)

Solar thermal is a simple and mature technology; however, research and development are necessary to guarantee that performance will continue to improve and costs to decrease. Research and development can also contribute to adapt the technical features of products to local needs, e.g. improve water tightness in tropical areas, resistance to frost in mountainous regions. Research and development cannot proceed only from public initiative but, through public universities and public research centres, public authorities have a leading role to play.

Building up centres of technical excellence

Applied research, engineering education, development, product innovation, standardisation, testing are closely linked and there are a lot of synergies between those fields. Most of the time, the same persons will be likely to teach, test and lead research projects. A sustainable market will always require relying on a high level engineering community. Public authorities should encourage the creation of multi disciplinary technical facilities for solar thermal engineering and encourage or even impose on the industry to participate in this effort.

Importance of demonstration projects

For both promotion and technical (experimental) reasons demonstrations projects are extremely useful. Projects implementing technologies that are not market ready, but which have an important potential, will allow testing and improving the solution, gather data, monitor functioning and finally demonstrate the feasibility to the general public and the industry in order to prepare the introduction on the market.

9 Financial incentives (direct, indirect, tax incentives, low interest loans): definition, importance, recommendations, examples

Financial Incentives include any public policy giving a financial advantage to those who install a solar thermal system or that use solar thermal energy.

#### Voting issue for limits and ground---creates an unmanageable topic of new speculative tech via government research that doesn’t interact with the market

**Dyson et al, 3** - International Union for Conservation of Nature and Natural Resources (Megan, Flow: The Essentials of Environmental Flows, p. 67-68)

Understanding of the term ‘incentives’ varies and economists have produced numerous typologies. A brief characterization of incentives is therefore warranted. First, the term is understood by economists as incorporating both positive and negative aspects, for example a tax that leads a consumer to give up an activity that is an incentive, not a disincentive or negative incentive. Second, although incentives are also construed purely in economic terms, incentives refer to more than just financial rewards and penalties. They are the “positive and negative changes in outcomes that individuals perceive as likely to result from particular actions taken within a set of rules in a particular physical and social context.”80 Third, it is possible to distinguish between direct and indirect incentives, with direct incentives referring to **financial** or other inducements and indirect incentives referring to both variable and **enabling incentives**.81 Finally, incentives of any kind may be called ‘perverse’ where they work against their purported aims or have significant adverse side effects. ¶ Direct incentives lead people, groups and organisations to take particular action or inaction. In the case of environmental flows these are the same as the net gains and losses that different stakeholders experience. The key challenge is to ensure that the incentives are consistent with the achievement of environmental flows. This implies the need to compensate those that incur additional costs by providing them with the appropriate payment or other compensation. Thus, farmers asked to give up irrigation water to which they have an established property or use right are likely to require a payment for ceding this right. The question, of course, is how to obtain the financing necessary to cover the costs of developing such transactions and the transaction itself. ¶ Variable incentives are policy instruments that affect the relative costs and benefits of different economic activities. As such, they can be manipulated to affect the behaviour of the producer or consumer. For example, a government subsidy on farm inputs will increase the relative profitability of agricultural products, hence probably increasing the demand for irrigation water. Variable incentives therefore have the ability to greatly increase or reduce the demand for out-of-stream, as well as in-stream, uses of water. The number of these incentives within the realm of economic and fiscal policy is practically **limitless.**

### Off 2

#### Comprehensive immigration reform will pass---maintaining political pressure on the GOP is key

Joseph 2/21 Cameron is a writer for The Hill. “More than half of Congress has never debated immigration reform,” 2013, http://thehill.com/homenews/senate/284131-more-than-half-of-congress-has-never-debated-immigration-reform

More than half of Congress has turned over since the last time the House and Senate tried to move legislation to overhaul the nation's immigration laws.¶ The high turnover rate bolsters the argument of Republican leaders, who say Congress must move methodically on immigration. President Obama, meanwhile, has pushed for swift passage of a bill, saying lawmakers have long debated the issue.¶ Only 54 current senators were in the Senate in June of 2007, when the upper chamber last voted on comprehensive immigration and border-security legislation. And just five of the 23 GOP senators who voted in favor of the 2006 immigration reform bill are still serving: Sens. Lindsey Graham (S.C.), John McCain (Ariz.), Susan Collins (Maine), Lisa Murkowski (Alaska) and Mitch McConnell (Ky.).¶ In the House, the turnover has been higher since the lower chamber last cast a major vote on immigration at the end of 2005.¶ Fifty-eight percent of new House members have taken office since then, meaning less than half of the lower chamber took part in the last significant legislative battle over tightening the border and granting legal status to the nation's illegal immigrants.¶ The high level of turnover suggests it’s hard to predict how negotiations will fare, as a number of lawmakers haven’t yet indicated where they stand. It could also slow down the pace of legislation.¶ There are potential upsides in the high turnover rate for reform advocates, however. New sets of eyes on the legislation, and new ways to discuss immigration policy, could translate into a different ending for a bill this Congress.¶ For example, freshman Sen. Marco Rubio’s (Fla.) is among the GOP leaders on immigration and has so far skillfully navigated the thorny matter.¶ “There's an opportunity and a challenge,” said America’s Voice Executive Director Frank Sharry, a top immigration reform advocate who was involved in the last round of negotiations. “The key is going to be whether a whole crop of new lawmakers say, 'Hey man, I get it, this is sound.' We haven't been able to break through the white noise before. Here's our chance.”¶ Another factor: Few Republicans backed the bill even though then-President George W. Bush lobbied hard for it in 2006 and 2007.¶ There is a much bigger political impetus for the GOP to resolve the issue following their 2012 losses, and Rubio is perhaps better liked by the GOP base now than Bush was after he led his party to a drubbing at the polls in 2006. But if a sitting president couldn’t rally members of his own party around his bill, it’s unclear whether pro-reform Republicans will be able to do any better this time.¶ The 2006 vote on the McCain-Kennedy bill is the best comparison to the current bill, because the June 2007 vote on a bill co-sponsored by the late Edward Kennedy (D-Mass.) and then-Sen. Jon Kyl (R-Ariz.) had many senators who’d once supported the legislation bail out when it was clear it would fail. The Kennedy-Kyl bill died on the floor after a fight over a series of amendments portrayed as "poison pills" that would sink the measure, including one sponsored by then-Sen. Illinois Barack Obama.¶ Of the Democrats who opposed the bill in 2006, only Sen. Debbie Stabenow (Mich.) is still around. Yet, nine current Democratic senators, including three members facing challenging reelection races next year, voted against a key procedural motion on the 2007 Kennedy-Kyl bill. Many GOP Senate opponents remain: Of the 22 who remain from 2006, 17 voted against both reform bills.¶ House Judiciary Committee Chairman Bob Goodlatte (R-Va.) told The Hill earlier this month that his panel would move at a deliberate pace on immigration, in part because Republican leaders need to educate more than 100 first- and second-term members. He said these legislators “know very little” about the complexities of immigration law.¶ “We’re going to be aggressively pursuing the issue to see if we can do something that is — I won’t call it all-encompassing, but that encompasses a number of the different issues that are addressed in immigration,” he said.¶ Obama has warned that if Congress doesn’t move fast enough on legislation, he’ll seek a vote on his own bill. Over the weekend, a draft White House immigration bill was leaked to the press. Rubio’s office blasted the move, arguing that the White House was injecting “additional partisanship into an already difficult process.”¶ Obama has since called on Rubio and other Republicans to lower the temperature on immigration.¶ Proponents of comprehensive immigration reform have been pushing hard to educate House members on the issue, and remain optimistic that the political pressure on the GOP to get something done has changed the conversation.

#### Political capital is still key---Obama’s leading negotiations with the GOP

AFP 2/19 “Obama courts key Republicans on immigration reform,” 2013, Factiva

US President Barack Obama on Tuesday called key Senate Republicans, with whom he is at odds on other many top issues, to discuss the prospects for bipartisan immigration reform.¶ Obama placed the calls following complaints he had not done enough to reach across the political aisle on the key issue, and after the leak of partial White House immigration plans angered Republican players in the debate.¶ The White House said that Obama had spoken to Republican Senators Lindsey Graham, John McCain and Marco Rubio, to discuss a "shared commitment to bipartisan, commonsense immigration reform."¶ "The President reiterated that he remains supportive of the effort underway in Congress, and that he hopes that they can produce a bill as soon as possible that reflects shared core principles on reform."¶ "He thanked the senators for their leadership, and made clear that he and his staff look forward to continuing to work together with their teams to achieve needed reform."¶ Obama's aides said he also wanted to speak to Republican Senator Jeff Flake, of Arizona, but was unable to reach him because he was traveling.¶ Cuban-American Rubio, a rising star of the Republican Party, is emerging as a key player in the immigration debate, and he warned that leaked versions of White House plans obtained by USA Today would be "dead on arrival."¶ Eight senators -- four of Obama's Democratic allies and four Republicans -- unveiled a joint plan last month aiming to provide a route to legal status for illegal immigrants living on US soil.¶ Under the White House fallback plan, illegal immigrants would have to wait eight years until applying for legal permanent residency, and, in practice, at least 13 years before they could apply for US citizenship.¶ Advocates of immigration reform say that time period is too long -- while conservative opponents still rail against "amnesty" for illegal immigrants, reflecting the toxicity of much of the immigration reform debate.¶ Obama had been sharply at odds with Graham and McCain for their role in delaying the confirmation of his pick for defense secretary Chuck Hagel.¶ His call to Rubio, who is traveling in the Middle East, came after the Florida senator's office had said that no one in his office had met White House officials to discuss immigration.¶ The White House had maintained that its staffers had met congressional officials working on immigration reform.¶ Obama's move may be seen as an effort to prevent partisan wrangling from derailing hopes of immigration reform, as it did under the presidency of his predecessor George W. Bush.¶ Immigration reform may be Obama's best chance for a genuine legacy-boosting success in his second term.¶ Senior Republicans, meanwhile, are wary of entering another election hampered by the mistrust of Hispanic voters, a growing slice of the electorate for whom immigration reform is a key issue.¶ A key sticking point in the debate is the Republican demand that the process of offering legal status to illegals should only start once the US southern border with Mexico has been certified as secure.¶ Obama has so far declined to make that linkage.

#### Plan’s a political football

Chameides 10/8 Bill is the Dean of Duke University’s School of the Environment. “Fusion: Maybe Less Than 30 Years, But This Year Unlikely,” 2012, <http://www.huffingtonpost.com/bill-chameides/fusion-maybe-less-than-30_b_1949573.html>

But by July 19, 2012, the fusion bubble was burst. An external review (pdf) of NIF by the National Nuclear Security Administration presented a mixed bag of praise -- "NIF has demonstrated an 'unprecedented level of quality and accomplishment'" -- and circumspection -- "considerable hurdles must be overcome to reach ignition ... [G]iven the unknowns with the present ...approach, the probability of ignition before the end of December is extremely low."¶ Bad Timing¶ Just so happens that LIFE's funding was to run out at the end of this fiscal year, which fell on September 30. Perhaps that's why the fusion researchers were so publicly sanguine about having results by the end of 2012. So now the scientists hand off this energy holy grail to the politicians, transforming, at least for the time being, a scientific quest into a political football, or, you might say fusing the scientific and the political. What should Congress do? Scrap the project or double down? Just another spending issue poised on the fiscal cliff our folks on the Hill will have to wrestle with.

#### CIR’s critical to economic growth---multiple internals

Klein 1/29 Ezra is a columnist for The Washington Post. “To Fix the U.S. Economy, Fix Immigration,” 2013, http://www.bloomberg.com/news/2013-01-29/to-fix-the-u-s-economy-fix-immigration.html

Washington tends to have a narrow view of what counts as “economic policy.” Anything we do to the tax code is in. So is any stimulus we pass, or any deficit reduction we try. Most of this mistakes the federal budget for the economy.¶ The truth is, the most important piece of economic policy we pass -- or don’t pass -- in 2013 may be something we don’t think of as economic policy at all: immigration reform.¶ Congress certainly doesn’t consider it economic policy, at least not officially. Immigration laws go through the House and Senate judiciary committees. But consider a few facts about immigrants in the American economy: About a tenth of the U.S. population is foreign-born. More than a quarter of U.S. technology and engineering businesses started from 1995 to 2005 had a foreign-born owner. In Silicon Valley, half of all tech startups had a foreign-born founder.¶ Immigrants begin businesses and file patents at a much higher rate than their native-born counterparts, and while there are disputes about the effect immigrants have on the wages of low-income Americans, there’s little dispute about their effect on wages overall: They lift them.¶ The economic case for immigration is best made by way of analogy. Everyone agrees that aging economies with low birth rates are in trouble; this, for example, is a thoroughly conventional view of Japan. It’s even conventional wisdom about the U.S. The retirement of the baby boomers is correctly understood as an economic challenge. The ratio of working Americans to retirees will fall from 5-to-1 today to 3-to-1 in 2050. Fewer workers and more retirees is tough on any economy.¶ Importing Workers¶ There’s nothing controversial about that analysis. But if that’s not controversial, then immigration shouldn’t be, either. Immigration is essentially the importation of new workers. It’s akin to raising the birth rate, only easier, because most of the newcomers are old enough to work. And because living in the U.S. is considered such a blessing that even very skilled, very industrious workers are willing to leave their home countries and come to ours, the U.S. has an unusual amount to gain from immigration. When it comes to the global draft for talent, we almost always get the first-round picks -- at least, if we want them, and if we make it relatively easy for them to come here.¶ From the vantage of naked self-interest, the wonder isn’t that we might fix our broken immigration system in 2013. It’s that we might not.¶ Few economic problems wouldn’t be improved by more immigration. If you’re worried about deficits, more young, healthy workers paying into Social Security and Medicare are an obvious boon. If you’re concerned about the slowdown in new company formation and its attendant effects on economic growth, more immigrant entrepreneurs should cheer you. If you’re worried about the dearth of science and engineering majors in our universities, an influx of foreign-born students is the most obvious solution you’ll find.

#### Global nuclear war

Cesare Merlini 11, 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, May 2011, “A Post-Secular World?”, Survival, Vol. 53, No. 2

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 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**.**

### Off 3

#### The plan collapses uranium demand by replacing fission nuclear production with fusion---that collapses Kazakhstan’s economy

McDermott 11 (Roger, Senior Fellow, Foreign Military Studies Office, Fort Leavenworth, “Kazakhstan: Countering nuclear proliferation, Action to develop a nuclear and terrorist-free world,” in Kazakhstan 2011: Twenty Years of Peace and Creation, *First: The Forum for Global Decision Makers*, 2011, <http://www.firstmagazine.com/Publishing/SpecialReportsDetail.aspx?RegionId=4&SpecialReportId=96>)

Kazakhstan’s ambitions are likely to be realized if uranium prices stay high and Kazatomprom is successful in further expanding its international partnerships. Kazatomprom’s most immediate task is to secure customers for its final nuclear fuel product--fuel assemblies, an extra fuel fabrication stage which Kazatomprom plans to start carrying out domestically. Having a nearly complete nuclear fuel cycle, save for enrichment, will ensure a stable cash flow for Kazatomprom and limit its dependence on the fluctuating market price of raw uranium. In the meantime, increased uranium sales will help alleviate the country’s overdependence on oil exports and help modernize its nuclear sector. If Kazakhstan does become the world’s leading uranium and nuclear fuel supplier, the ramifications for the country both in terms of increased gross domestic product and status on the world stage will be profound.

#### Prevents diversification of Kazakhstan’s economy

Pleitgen 12 (Frederick, CNN, “Kazakhstan hopes uranium, oil and gas will fuel its future,” 7-18-12,

<http://articles.cnn.com/2012-07-18/asia/world_asia_kazakhstan-natural-resources-economy_1_vladimir-shkolnik-kazakhstan-uranium>)

Kazakhstan's mineral wealth will be a major source of income for decades to come, but it won't last forever. The country is trying to use it wisely to transition to a broader economic base while developing the natural resources industries to the maximum. Last year Kazakhstan was the world's top producer of uranium, accounting for over a third of global production. The industry's rapid expansion, plus the good quality of the uranium and the comparatively cheap method of mining it have combined to give Kazakhstan an advantage over other big exporters like Australia and Canada. With continued investment, Vladimir Shkolnik, the head of Kazakhstan's national atomic energy company, Kazatomprom, is keen to maintain that position. "We are hoping to keep our leadership position in the uranium field," he says. "We have dozens of facilities and hundreds of mines and we think we will remain a world leader in the uranium sector." Kazakhstan's government is also trying to encourage more foreign investment. Since independence in 1991, around $150 billion of foreign investment has flowed into the country; $18 billion dollars last year alone, according to the government. Companies like GE and Eurocopter have been attracted to the country, entering partnerships with national companies that have helped bring training and new skills to the local workforce. While money is flowing from the country's natural resources industry, the government is using some of its revenue to boost other sectors, like IT and engineering. The aim is to make the economy more resilient when commodities prices fall and better prepared for the day when the gush of oil and gas reduce to a trickle. "Of course revenues from raw materials are still by far the largest share of the country's budget," says energy analyst, Murat Karymsakov. "But in recent years the president (of Kazakhstan) has announced and put into place a plan for industrial and technological development to diversify the economy."

#### Destroys stability

Hamm 12 (Nathan, founder and Principal Analyst for Registan, MA in Central Asian Studies from the University of Washington, “Kazakhstan’s Stability, Central Asia’s Stability,” 1-31-12, <http://registan.net/2012/01/31/kazakhstans-stability-central-asias-stability/>)

I’m paraphrasing, but on the first two items, Dr. Roberts argues that the thoroughly Soviet education and background of Kazakhstan’s leadership leaves it out of touch and unable to adequately respond to the public. The government’s response to labor strikes, including the violence in Zhanaozen, he says, show that the government was not prepared to deal with dissatisfaction over unmet economic expectations. Dr. Roberts says that these challenges are not extreme nor likely to cause widespread unrest in the near term, but that the stagnancy of the political system means that the government lacks mechanisms to deal with large socio-economic changes. [Note: Alima wrote about the crisis of unmet expectations at length recently.] This is good, succinct analysis of the situation that puts risks to Kazakhstan’s stability in good context. The risks are there, the government is ill-prepared to deal with them at present, but it’s unlikely that it will be overwhelmed by them soon. These risks, however, aren’t present only in Kazakhstan. They exist in similar forms and combinations throughout Central Asia. Growing segments of society throughout the region are bringing (or attempting to…) Islam into the public square, where it is responded to with shock and terror by secular officials. National economies are failing to meet the expectations, and in many areas, even the basic needs, of the public. And though nationalism is not so clearly a problem the way it is Kazakhstan and Kyrgyzstan in the rest of Central Asia, there are small signs that society is challenging the state’s monopoly on defining what it means to be Uzbek, Tajik, Kyrgyz, etc. In talking about risks to stability, there is often a tendency to focus on presidential succession, the specter of fundamentalism and political Islam, and a more recent tendency to talk about replication of the Arab Spring. Recent history should make it abundantly clear though, that analysts, experts, and observers are taken by surprise in the region. Game-planning what happens after Karimov dies or a resurgence of the IMU activity in Tajikistan and Kyrgyzstan might be worthless because they assume state and society lack the mechanisms to respond to and manage succession or terrorist groups. The greatest risks to stability throughout the region are medium- to long-term risks arising from the three aforementioned factors and the oppositional relationship between state and society. Devising a list of indicators and warnings based on the three factors Dr. Roberts identifies — rising public religiosity, increasing nationalism, and under-performance in the economy — are more likely not only to lead to better anticipation of the trajectory of stability in Central Asia but also to provide a better idea of when serious risks to stability are likely to arise.

#### Spreads throughout the region

Assenova 8 (Margarita Assenova, IND Director; Natalie Zajicova, Program Officer (IND); Janusz Bugajski, CSIS NEDP Director; Ilona Teleki, Deputy Director and Fellow (CSIS); Besian Bocka, Program Coordinator and Research Assistant (CSIS), “Kazakhstan’s Strategic Significance,” 2008, CSIS-IND Taskforce Policy Brief team, European Dialogue, <http://eurodialogue.org/Kazakhstan-Strategic-Significance>)

The decision by the Organization for Security and Cooperation in Europe (OSCE) to award Kazakhstan the chairmanship of the organization for 2010 underscores a growing recognition of the country’s regional and continental importance. Kazakhstan is a strategic linchpin in the vast Central Asian-Caspian Basin zone, a region rich in energy resources and a potential gateway for commerce and communications between Europe and Asia. However, it is also an area that faces an assortment of troubling security challenges. Ensuring a stable and secure Central Asia is important for the international interests of the United States and its European allies for several prescient reasons: • Asian Security: Because of its proximity to Russia, China, Iran, and the South Asian sub-continent, Kazakhstan’s security and stability is an increasingly vital interest to all major powers. Kazakhstan’s tenure as chair of the OSCE will become an opportunity for greater multilateral cooperation in achieving this objective while strengthening the role and prestige of the OSCE throughout Central Asia.

#### Global nuclear war

Peimani 2 - Head of Energy Security and Geopolitics @ the Energy Studies Institute (Dr. Hooman, “Failed Transition and Bleak Future? War and Instability in Central Asia and the Caucasus,” Book, <http://www.questia.com/PM.qst?a=o&d=101331065>, EMM)

If the existing negative trend continues, the entire Caucasus and Central Asia will likely head toward long-term tension and instability. The first and foremost victims of this undesirable future will obviously be the three Caucasian and five CA countries. Yet, this bleak future will also have major implications for a number of regional (Iran, China, Turkey, and Russia) and nonregional (United States) powers with long-term interests in the two regions most of which share borders with them. The deteriorating situation will create a suitable ground for the emergence and growth of political extremism among the peoples of the Caucasus and Central Asia, who are mostly dissatisfied with the status quo. These frustrated and disenchanted peoples will likely find the extremist political ideologies and programs more appealing and more convincing than those of their discredited rulers. The latter’s legitimacy is being questioned by a growing number of their nationals for a wide range of reasons, including incompetence, rampant corruption, and an antidemocratic style of government. In response to the rising internal threat, the ruling elites will likely resort to nationalism. In particular, they might promote extreme forms of nationalism, including chauvinism, as experienced in many other countries in different continents confronting the same situation. Creating an appealing alternative to that of the opposition extremist groups aimed at the dissatisfied people will be one of its major objectives. Extreme nationalism will be very attractive for the youth—the social stratum most vulnerable to extremist ideologies and the main targets of extremist groups. The ruling elites might also find their resort to extreme nationalism necessary for the sake of consolidating their challenged power apparatus. In this case, they could seek to manipulate the nationalist sentiment of their peoples as a means to increase their legitimacy and strengthen their social basis of support. However, using the nationalist card will have a negative backlash, with weakening and destabilizing effects on its users. Extreme nationalism could, and will likely, provoke ethnic conflicts within the multiethnic Caucasian and CA countries. It could therefore lead to civil wars. Moreover, it could spread fear in the neighboring countries. They might feel threatened by the surge of nationalism in their vicinity, which could easily take the form of expansionism in the Caucasian and CA countries characterized with territorial and border disputes. In addition to various external influences, many internal social, economic, and political factors will determine in what form and to what extent instability will surface in each Caucasian and CA country. Needless to say, based on the specific situation in each country there will be differences in its shape and in the extent of its initial emergence. Regardless of these differences, the logical and predictable outcome of the current trend will likely be instability in the form of civil, interstate, and regional wars in the Caucasus and Central Asia. The existence of unsettled, although currently inactive, violent conflicts (i.e., independence movements and civil wars) in these two regions have left no doubt about the feasibility of this scenario. To this list, one should also add the existence of many ethnic grievances and territorial and border disagreements, which will likely create a suitable ground for the instigation of new ethnic conflicts and territorial disputes in violent forms. For a number of reasons, there is a great possibility that many of them could escalate to civil wars and interstate wars, respectively. Among other factors, the ethnic makeup of the Caucasus and Central Asia and the existence of many sources of conflict between their regional states will pave the way for their further escalation to the level of regional wars, despite the intention of their initiators. The presence of certain regional (Iran, China, Turkey, and Russia) and nonregional ([and the] United States) powers with long-term interests in the two regions will have a certain impact on the development of the scenarios mentioned above and will likely contribute to the extent, intensity, and duration of wars of various forms. In particular, the presence of these powers will increase the possibility of their intentional or unintentional involvement in those wars in support of one side or another, while preserving their interests. Depending on the situation, whether this involvement takes a direct or indirect form will be determined by many factors, including the importance of the affected Caucasian or CA countries for each of the five states and the latter’s political, economic, and military capabilities. These factors also include the geographical realities, which, depending on the case, facilitate or impede their access to the affected countries, and the overall political environment in Central Asia and the Caucasus. The latter determines whether a foreign intervention in whatever form can take place at all. The possibility of some or all of the five states being dragged into any future military conflict will therefore strengthen the potential for the escalation and expansion of military conflicts in either of the two regions. War and instability in these energy-producing regions bordering regional and global powers with strong conventional military and/or nuclear capabilities will have long-term political, economic, and security implications. They will not be confined only to the countries directly involved in any future regional military conflict. In one way or another, they could affect the stability of the Caucasus and Central Asia as well as that of the Asian and/or European regions in their proximity. As a result, wars in whatever form in those two regions could escalate and affect the stability of the international system and global peace.

### Off 4

#### The fifty state governments of the United States should substantially increase funding for Princeton Plasma Physics Laboratory fusion energy generation. The United States federal government should allow the states to fund Princeton Plasma Physics Laboratory fusion energy generation.

#### States can empirically fund energy research at national labs

Kay Corditz, 3-15-2010, “State Grant to Fund Advanced Battery Materials Partnership,” Brookhaven National Lab, http://www.bnl.gov/newsroom/news.php?a=21663

Funded by a $550,000 grant from the New York State Energy Research and Development Authority (NYSERDA), Brookhaven National Laboratory will partner with battery materials researchers from leading New York State universities to explore new chemistries and synthesize new materials for long-lasting batteries. The Laboratory will partner with SUNY’s University at Buffalo and Binghamton University on three projects to develop improved batteries for use in stationary grid-scale energy storage applications, including lithium-air, lithium-ion, and lithium-titanate batteries. The Brookhaven effort, led by Brookhaven materials scientist Jason Graetz, will focus on the development and synthesis of new materials, and application of advanced experimental techniques to characterize these materials using Brookhaven’s National Synchrotron Light Source (NSLS). The SUNY-Buffalo lead is Esther S. Takeuchi, and the Binghamton University lead is M. Stanley Whittingham. “This partnership among Brookhaven and two leading SUNY schools will capitalize on the research strengths of each, and our materials characterization capabilities will be a key element of the project,” said James Misewich, Brookhaven’s Associate Laboratory Director for Basic Energy Sciences. The collaboration grew out of a workshop sponsored by Brookhaven and Stony Brook University’s Joint Photon Sciences Institute (JPSI) last spring. Chi-Chang Kao, NSLS Chair and Founding Director of JPSI, coordinated the collaboration’s successful proposal. “It is an excellent example of how universities, industries, and national laboratories can work together to address an important scientific challenge with major societal impact,” said Kao. Said Graetz: “NYSERDA’s funding of this program will give us the opportunity to expand our energy storage research to large-scale stationary energy storage systems, which are crucial for integrating intermittent renewable generation sources such as wind and solar. In the past, the vast majority of battery research investment has focused on the important problem of electrical energy storage for transportation. However, a different set of criteria exist for stationary systems, and this project will allow us to explore new electrode materials, like lithium titanate, that meet those criteria.”

### Off 5

#### The United States Federal Government should eliminate all US financial support for fusion research.

#### Stopping domestic fusion research would persuade other countries to abandon ship as well – checks weaponization

Arjun Makhijani, Ph.D. and Pres. Inst. for Energy and Environmental Research, and Hisham Zerriffi, Project Scientist, 7-15-1998, “Dangerous Thermonuclear Quest: The Potential of Explosive Fusion Research for the Development of Pure Fusion Weapons,” IEER, http://ieer.org/resource/reports/dangerous-thermonuclear-quest/

Given the immense consequences of the development of pure fusion weapons, an indefinite delay of planned MTF experiments and a moratorium on the construction and planning of large ICF projects designed to achieve ignition (NIF, Laser Mégajoule)152 is necessary. If the US halts NIF it would be in a position to persuade other countries, such as France, Japan, and Germany, to halt their ICF projects designed to achieve ignition until a review process is undertaken which is comprehensive, inclusive, and world-wide. It could do this by arguing for an interpretation of the CTBT ban to include ICF ignition. The potential near-term and medium-term risks of continuing research with such machines are too great not to pursue restrictions.

#### Demonstration of fusion feasibility would spark massive pressure for pure fusion weaponization and arms racing

Arjun Makhijani, Ph.D. and Pres. Inst. for Energy and Environmental Research, and Hisham Zerriffi, Project Scientist, 7-15-1998, “Dangerous Thermonuclear Quest: The Potential of Explosive Fusion Research for the Development of Pure Fusion Weapons,” IEER, http://ieer.org/resource/reports/dangerous-thermonuclear-quest/

In the long term, facilities such as the National Ignition Facility and MTF facilities pose even greater threats to both the CTBT and the disarmament process. As discussed above, if ignition is demonstrated in the laboratory, the weapons labs and the DOE would likely exert considerable pressure to continue investigations and to engage in preliminary design activities for a new generation of nuclear weapons (even if it is just to keep the designers interested and occupied). Ignition would also boost political support and make large-scale funding of such activities more likely. Even without the construction of actual weapons, these activities could put the CTBT in serious jeopardy from forces both internal and external to the United States. Internally, those same pressures, which could lead to the resumption of testing of current generation weapons, could also lead to the testing of new weapons (to replace older, less safe or less reliable weapons). Externally, the knowledge that the United States or other weapons states were engaging in new fusion weapons design activities could lead other states to view this as a reversal of their treaty commitments. Comparable pressures to develop pure fusion weapons would be likely to mount in several countries. This would have severe negative repercussions for both non-proliferation and complete nuclear disarmament. The time to stop this dangerous thermonuclear quest for explosive ignition is now, before its scientific feasibility is established.

#### Pure fusion weapons cause nuclear war – wreck the nuclear firebreak

Sam Cohen, nuclear weapons analyst, and Joe Douglass, national security analyst, both members of the Los Alamos Tactical Nuclear Weapons panel, 3-11-2002, “Nuclear Threat That Deesn’t Exist – Or Does It?” Rense, http://rense.com/general35/doex.htm

The comparison of a pure-fusion warhead with a normal fission warhead is even more stark. The lethal area to military troops of a 10 ton (high explosive equivalent yield) pure-fusion device would be approximately the same as the lethal area of a fission warhead several hundred times larger; that is, one in the kiloton range! The cost of a pure-fusion warhead is also reduced. In terms of the precious nuclear material that is required, namely, tritium and deuterium, pure-fusion devices are extremely cheap. Because the pure-fusion warhead does not need active nuclear material, such as plutonium, to "trigger" the deuterium-tritium burn, they can be made for a fraction of the cost of one fission-fusion neutron bomb of the 1980s. The inherent consequences of a pure-fusion device go far beyond low cost and greatly reduced explosive yield. Most significant, pure-fusion warheads, in contrast to warheads that use fissionable material, are not covered by the Nuclear Non-Proliferation Treaty (NPT). Any country can, in terms of international law, legally possess and even sell such weapons and not be in violation of the NPT. Also, deuterium-tritium fuel can be purchased openly on the international market. The spirit of the NPT may be in violation, but not the letter. Still further, because there is no fissionable component and because the explosive yield is so small, full operational tests of a pure-fusion device could be conducted in any country and not be detected by systems set up to monitor nuclear weapons tests. If tests were conducted underground at a moderate depth, say 50 to 100 meters, even the local inhabitants would suspect nothing. These consequences drive a stake through the heart of U.S. non-proliferation policies. These policies are based on preventing those who want to "go nuclear" from having access to the active nuclear material. A warhead or "device" that does not use active nuclear material (uranium or plutonium) is not prohibited. To make matters worse, in no sense can they be termed weapons of "mass destruction." Indeed, the pure-fusion devices are even more discriminant than the neutron bomb because there is, in comparison, negligible physical damage and a total absence of fission by-products and related contaminating fallout. Because of this, the pure-fusion device represents the worst fear of those whose personal crusade is to stop the spread of nuclear weapons and preserve the fire break in a hope that this will prevent a nuclear war. The pure-fusion device is less destructive than most conventional bombs, is reasonably cheap, and can be tested with impunity. It produces no fission radioactive by-products or fallout of serious concern. That is, the pure-fusion device renders the unthinkable thinkable. This is why officials do not want to discuss the possibility of pure-fusion warheads and, as will be seen, will do their best to deny their possible existence.

## PPPL Advantage

### AT: PPPL Solar Storms

#### PPPL solar storm research is inevitable – their evidence says status quo cuts are only 12% of the PPPL budget, and it’s only for fusion research, not non-fusion science research. No ev the entire PPPL will collapse.

#### PPPL can still do solar storm research, despite budget cuts for general fusion – new collaboration with Germany solves, and international research is inevitable

John Greenwald, 3-30-2012, “Princeton, Max Planck Society launch new research center for plasma physics,” Princeton News, <http://www.princeton.edu/main/news/archive/S33/31/16S10/index.xml?section=topstories>

Princeton University and the Max Planck Society of Germany have joined forces in a scientific collaboration that is designed to accelerate progress in cutting-edge research ranging from harnessing fusion to understanding solar storms. Princeton President Shirley M. Tilghman and President of the Max Planck Society Peter Gruss participated Thursday, March 29, in a signing ceremony in Whig Hall on the Princeton campus to officially start the Max Planck Princeton Research Center for Plasma Physics. The center will be a virtual facility in which researchers will work cooperatively on projects from their current locations. "This collaboration with Germany's distinguished Max Planck Society is certain to enhance our common excellence in fusion and plasma astrophysical research and, more broadly, to advance the development of clean and abundant energy," Tilghman said. Such cooperation is coming at precisely the right time, according to Gruss. "It is essential that we pool our strengths and knowledge in the field of fusion research, in particular, so that we can develop nuclear fusion into something the world urgently needs for the years and decades to come: safe, clean and abundant energy technology," Gruss said. The new center will combine the research capabilities of Princeton's Department of Astrophysical Sciences and the U.S. Department of Energy's Princeton Plasma Physics Laboratory (PPPL) with the Max Planck Society's institutes for plasma physics, astrophysics and solar system research. The selected topics will focus on issues that are crucial to both fusion and astrophysical plasmas. Such plasmas consist of superhot and electrically charged gases whose fusion powers the sun and stars. A. J. Stewart Smith, Princeton's dean for research and the Class of 1909 Professor of Physics, served as master of ceremonies and welcomed the guests from Germany in remarks delivered in German. Turning to the new research center, Smith said that "this new partnership with the Max Planck Society will establish a world-leading effort to link the studies of plasmas and fusion in the universe and on Earth. This will continue the grand vision of Princeton astrophysics giant Lyman Spitzer, who more than 50 years ago initiated the Hubble Space Telescope and founded PPPL." Smith delivered a statement from William Brinkman, director of the DOE's Office of Science, who was unable to attend. Brinkman noted that the DOE "welcomes the creation of this new center in such an exciting field as plasma astrophysics. From questions of the dynamics of accretion disks surrounding black holes, to the plasma dynamo processes that create interstellar magnetic fields, to the anomalous heating of the solar corona — these questions are challenges that need to be addressed and we are looking forward to the interaction with the institutes of the Max Planck Society on them." James Van Dam, director of the research division of the DOE's Office of Fusion Science, pointed out, "We have had years of excellent collaboration with German scientists, and this brings it to a new level. The interconnectedness of plasma physics is just amazing, and we really appreciate that this new center is involved in the whole field." The collaboration will benefit from the complementary strengths and research tools of this trans-Atlantic partnership. Both PPPL and the Max Planck Institute for Plasma Physics (IPP) operate major experimental fusion facilities, for example. "There is wonderful synergy between PPPL and the Max Planck IPP," said PPPL Director Stewart Prager. "We are very enthused to combine the capabilities of the two labs to make otherwise unattainable advances in key problems in fusion and astrophysics." Insights gained from the study of astrophysical and laboratory plasmas are expected to be mutually reinforcing. "What is most exciting about the center to me is the focus on basic physical processes that are important in a diverse range of astrophysical systems," said James Stone, a Princeton professor of astrophysical sciences and applied and computational mathematics who will oversee the U.S. side of the venture related to his own discipline. "I know the astrophysicists are going to learn a lot from their plasma physics colleagues, and I think the reverse is going to be true as well." The field of plasma astrophysics is growing in interest among researchers around the world. PPPL scientists are studying such astrophysical phenomena as the source of violent space weather and the formation of stars. This research is conducted on PPPL devices called the Magnetic Reconnection Experiment and the Magnetorotational Instability experiment, respectively. Prager from PPPL, Stone from astrophysical sciences and Sibylle Günter, director of the Max Planck Institute for Plasma Physics, will form the new center's leading team. "The aim of the cooperation is to make greater use of the synergies between fusion research and the work carried out by the astrophysicists," Günter said. Among other German guests attending the ceremony were Sami Solanki, director of the Max Planck Institute for Solar System Research, and Busso von Alvensleben, consul general of the Federal Republic of Germany in New York. The formation of the center will enhance already strong research collaborations between the groups, scientists said. For example, scientists at the Max Planck Institute for Plasma Physics in Greifswald, Germany, are building the Wendelstein 7-X Stellarator, which will confine plasma with a magnetic field that is shaped like a cruller — a spiral wrapped around a circle. The stellarator device, also called W7X, is designed as one of two major configurations for experimental fusion facilities. Researchers at PPPL also plan to conduct experiments on W7X. In addition, PPPL is providing components for W7X known as "trim coils." The barn door-size coils, being manufactured by Everson Tesla Inc. of Nazareth, Pa., will fine-tune the shape of the magnetic "bottle" confining the hot ionized gas studied in fusion. There are shared interests that could spark new partnerships, too. PPPL, for example, is currently involved in implementing a $94 million upgrade on its largest research machine, the National Spherical Torus Experiment, and carries out laboratory experiments on general plasma physics. Max Planck scientists working in Greifswald are also researching this topic. Eight postdoctoral fellows from PPPL and the Department of Astrophysical Sciences will staff the center, along with 13 postdoctoral fellows from the Max Planck institutes. These researchers will work with senior scientists on both sides of the Atlantic who will oversee the fellows as part of the scientists' regular duties. Financial support for the center will come from the United States and Germany. Funding for the Princeton side will come from the DOE, the National Science Foundation and Princeton University. The Max Planck Society will fund its institutes' collaborative activities.

#### Plasma research for solar storms is distinct from fusion research – their author

Patricia Wieser, lead info officer @ PPPL, 1-3-2011, “The Role of the Princeton Plasma Physics Laboratory,” Daily Energy Report,

http://www.dailyenergyreport.com/role-of-the-princeton-plasma-physics-laboratory/

In addition to studying plasmas for fusion energy, PPPL scientists conduct research in plasma science and technology, and educate the next generation of plasma and fusion scientists.

“We study plasma-based propulsion systems for space vehicles, how plasma processes affect the accretion of matter onto black holes, and how plasmas give rise to flares on the surface of stars,” Prager said. “We also develop spinoff technologies, from a small nuclear material detection system to a plasma treatment method that could lead to artificial muscles.” With about 400 employees and students, PPPL has extensive capabilities for the experimental and theoretical study of fusion and nonfusion plasmas and for the design, fabrication and operation of experimental plasma facilities of all types. The University provides the institutional framework for a broad laboratory-based program of education in plasma physics and related science and technology.

#### Tons of space weather research going on – fusion isn’t key – their author

Ian O’Neill, space science producer for Discovery News, 5-10-2012, “Should we really worry about solar storms?” Aljazeera, http://www.aljazeera.com/indepth/opinion/2012/04/201244123922360473.html

The solar corona is of the order of millions of Kelvin (or degrees Celsius), whereas the photosphere (colloquially known as the "solar surface") is only 6,000 Kelvin. And therein lays the mystery: how is the Sun's atmosphere so radically heated? Although evidence is mounting for the presence of powerful magnetohydronamic waves (specifically Alfven waves) propagating along magnetic field-lines from the solar interior to the corona, interacting with the plasma and heating it to astonishing temperatures, we won't know for certain until we can send a probe deep into the corona. Plans are afoot to do just that, and NASA's Solar Probe Plus is expected to be launched in 2018. But why are we so interested in the corona? Well, the lower solar atmosphere is where flares and CMEs are spawned, so it would be nice if we can fully understand its mysteries - like the coronal heating phenomenon - so we may eventually arrive at more sophisticated means of predicting the onset of adverse space weather. The corona is one of the first links of the space weather chain that can ultimately influence our planet - if we master the corona, we can get a handle on space weather prediction. Solar tornadoes So, we may not have a direct means of measuring the conditions inside the corona (until 2018 at least), but we do have an increasingly sophisticated suite of solar sentries constantly watching the solar disk and sampling the solar wind - the constant stream of particles that bathe the entire Solar System. One such mission is NASA's Solar Dynamics Observatory (SDO) that has been observing the Sun from Earth orbit since 2009. What makes this observatory different is its high-definition view of the Sun. Previously unseen small-scale features are being spotted and rapid coronal processes can now be tracked. With the help of the SDO, a brand new magnetic feature was recently spotted ripping through the lower corona. On March 28, researchers from Aberystwyth University in Wales announced the discovery of a huge solar tornado - composed of twisting magnetic fields measuring up to five Earths across - dragging plasma from the lower corona to high altitudes, accelerating the material up to a blistering 300,000 kilometres per hour. Although this phenomenon may have been photographed in the past, it's only with the help of the SDO's rapid image acquisition technology that the researchers could watch the tornado evolve and identify it as such. But how does this research fit with our quest to better predict space weather? "These tornadoes may help to produce favourable conditions for CMEs to occur," said Xing Li, solar physicist at Aberystwyth and co-discoverer of the tornadoes. Whether or not this phenomenon triggers the eruption of CMEs remains to be seen - although, coincidentally, a tornado was spotted at the base of a CME prior to one eruption during the observations - but they are certainly another piece to add to the puzzle of the solar corona. When the sun attacks Solar researchers and space weather experts are intently looking at every aspect of the Sun, from the internal dynamics of the solar body to the impact of the solar wind on our planet's magnetosphere. But should the Sun hurl a massive CME toward us - a possibility that is becoming increasingly likely as the Sun picks up in activity toward the maximum in its 11-year cycle, peaking around 2013 - what's the worst that could happen?

#### Their “predictions key” card is about status quo experiments, not the plan

Richard A. Lovett, PhD, 3-8-2012, “Solar Flare: What If Biggest Known Sun Storm Hit Today?” http://news.nationalgeographic.com/news/2012/03/120308-solar-flare-storm-sun-space-weather-science-aurora/

Another answer is better forecasting. Scientists using NASA's Solar Dynamics Observatory spacecraft are hoping to get a better understanding of how the sun behaves as it moves deeper into its next maximum and begins generating bigger storms. (See some of SDO's first sun pictures.) These studies may help scientists predict when and where solar flares might appear and whether a given storm is pointed at Earth. "Improved predictions will provide more accurate forecasts, so [officials] can take mitigating actions," said Rodney Viereck, a physicist at the Space Weather Prediction Center. Even now, the center's Bogdan said, the most damaging emissions from big storms travel slowly enough to be detected by sun-watching satellites well before the particles strike Earth. "That gives us [about] 20 hours to determine what actions we need to take," Viereck said. (Related pictures: "Multicolored Auroras Sparked by Double Sun Blast" [August 2011].) In a pinch, power companies could protect valuable transformers by taking them offline before the storm strikes. That would produce local blackouts, but they wouldn't last for long. "The good news is that these storms tend to pass after a couple of hours," Bogdan added. Meanwhile, scientists are scrambling to learn everything they can about the sun in an effort to produce even longer-range forecasts.

### Solar Storms Defense

#### Flare is happening now and there’s no impact

Karpova 1-29 – Lisa Karpova, writer for Pravda, January 29th, 2013, "Solar flare could cause a geomagnetic storm," [english.pravda.ru/science/earth/29-01-2013/123606-solar\_flare-0/#](http://english.pravda.ru/science/earth/29-01-2013/123606-solar_flare-0/)

This particular solar flare was formed on the 23rd of January, according to NASA¶ NASA announced this week that a solar flare occurred following a magnetic storm, which occurs when these particles come into contact with the magnetosphere.¶ The National Aeronautics and Space Administration (NASA for its acronym in English) reported Friday that **a solar flare is traveling to Earth at a speed of about 600 kilometers per second and could**cause a geomagnetic stormon Earthin the next three days.¶ According to information published on the website of the Agency, and based on data from the Solar Terrestrial Relations Observatory (STEREO) and the Solar and Heliospheric Observatory (SOHO), the solar flare occurred on January 23rd, and was accompanied by coronal mass ejections (CME, for its acronym in English).¶ The NASA portal reported that a CME can launch into space with its solar particles taking within one to three days to reach Earth, causing the planet to experience the weather phenomenon known as 'geomagnetic storm.'¶ NASA explained that a magnetic storm occurs when these particles come into contact with the magnetosphere, the Earth's magnetic cover, over a long period of time.¶ There are currently four sunspots visible on the "Earthside" of the sun. None of the sunspots are emitting flaming activity at this time. Three new sunspots will reportedly be showing in the coming week.¶ Other coronal mass ejections from previous **similar speeds have**not**provoked geomagnetic storms**, but have caused auroras near the poles.¶ According to astronomers, it is "unlikely"thatthe storm will affect electricalsystemsor telecommunications systems.

#### The newest, most qualified study disproves your advantage - solar flares CANNOT cause widespread blackouts

National Defense, Citing the JASON Advisory Panel of the Department of Homeland Security, 11 (" Report: Solar Flares Unlikely to Spark Electrical Armageddon," 12/22, http://www.nationaldefensemagazine.org/blog/Lists/Posts/Post.aspx?ID=626, )

Energy from solar flares can indeed harm electrical grids on Earth, but a new study says the sun probably won’t plunge the United States into the Dark Ages, as some theorists have imagined. Working on behalf of the Department of Homeland Security, members of the JASON advisory panel, an independent group of scientists, recently published a report on the vulnerability of the nation’s electrical grid to solar flares. “Impacts of Severe Space Weather on the Electric Grid” concludes that while energy blasts from the sun, called coronal mass ejections, can damage transmission lines, it is unlikely that the entire grid could be brought down.

#### Risk of meltdown is tiny and decreasing

Cappiello**,** 2011(Dina Cappiello reporter for the AP March 29, 2011 “AP IMPACT: Long Blackouts Pose Risk to US Reactors” The Post and Courier http://www.postandcourier.com/news/2011/mar/29/ap-impact-long-blackouts-pose-risk-us-reactors/?print)

The Beaver Valley Power Station, Unit 1, in Pennsylvania had the greatest risk of core melt -- 6.5 in 100,000, according to the analysis. But that risk may have been reduced in subsequent years as NRC regulations required plants to do more to cope with blackouts. Todd Schneider, a spokesman for FirstEnergy Nuclear Operating Co., which runs Beaver Creek, told the AP that batteries on site would last less than a week.¶ In 1988, eight years after labeling blackouts "an unresolved safety issue," the NRC required nuclear power plants to improve the reliability of their diesel generators, have more backup generators on site, and better train personnel to restore power. These steps would allow them to keep the core cool for four to eight hours if they lost all electrical power. By contrast, the newest generation of nuclear power plant, which is still awaiting approval, can last 72 hours without taking any action, and a minimum of seven days if water is supplied by other means to cooling pools.¶ Despite the added safety measures, a 1997 report found that blackouts -- the loss of on-site and off-site electrical power -- remained "a dominant contributor to the risk of core melt at some plants." The events of Sept. 11, 2001, further solidified that nuclear reactors might have to keep the core cool for a longer period without power. After 9/11, the commission issued regulations requiring that plants have portable power supplies for relief valves and be able to manually operate an emergency reactor cooling system when batteries go out.¶ The NRC says these steps, and others, have reduced the risk of core melt from station blackouts from the current fleet of nuclear plants.¶ For instance, preliminary results of the latest analysis of the risks to the Peach Bottom plant show that any release caused by a blackout there would be far less rapid and would release less radiation than previously thought, even without any actions being taken. With more time, people can be evacuated. The NRC says improved computer models, coupled with up-to-date information about the plant, resulted in the rosier outlook.¶ "When you simplify, you always err towards the worst possible circumstance," Scott Burnell, a spokesman for the Nuclear Regulatory Commission, said of the earlier studies. The latest work shows that "even in situations where everything is broken and you can't do anything else, these events take a long time to play out," he said. "Even when you get to releasing into environment, much less of it is released than actually thought."

### Environment Defense

#### No impact to space debris and cleanup solves

USSD 7 (US State Department, “Study on Space Policy: Report on the International Security Advisory Board,” April 27, Accessed on Spacedebate.com, http://www.spacedebate.org/evidence/3003/, )

The United States is party to the Convention on International Liability for Damage Caused by Space Objects, the Return of Objects Launched into Outer Space and also the Agreement on the Rescue of Astronauts and the Return of Astronauts. The United States has been the world's leader in raising awareness about the dangers of man-made space debris and in developing ways of dealing with this consequence of human activity in space. The National Space Policy commits the United States to seek the minimization of space debris by government and nongovernment activities. The United States should continue to play a strong leadership role in the Inter-Agency Debris Coordination Committee, at the United Nations, and elsewhere, for the minimization of man-made space debris.

At the same time, it should be recognized that space debris produced by human activity is quite low compared to that produced by nature. To minimize does not mean stopping all activities that would or might produce some debris. It is a relative not an absolute matter. U.S. national security requirements could take precedence over the goal of minimization of space debris –for example, the testing and use of ballistic missile defense interceptors against objects in space that would threaten populations, armed forces, and infrastructure.

#### No impact to the environment

Holly Doremus 2k Professor of Law at UC Davis, "The Rhetoric and Reality of Nature Protection: Toward a New Discourse," Winter 2000 Washington & Lee Law Review 57 Wash & Lee L. Rev. 11, lexis

Reluctant to concede such losses, tellers of the ecological horror story highlight how close a catastrophe might be, and how little we know about what actions might trigger one. But the apocalyptic vision is **less credible today than it seemed in the 1970s.** Although it is clear that the earth is experiencing a mass wave of extinctions, n213 the **complete elimination of life on earth seems unlikely.** n214 **Life is remarkably robust**. **Nor is human extinction probable** any time soon. Homo sapiens is **adaptable to nearly any environment**. Even if the world of the future includes far fewer species, it likely will hold people. n215 One response to this credibility problem tones the story down a bit, arguing not that humans will go extinct but that ecological disruption will bring economies, and consequently civilizations, to their knees. n216 But this too may be **overstating the case**. Most ecosystem functions are **performed by multiple species**. This **functional redundancy** means that **a high proportion of species can be lost without precipitating a collapse**. n217 Another response drops the horrific ending and returns to a more measured discourse of the many material benefits nature provides humanity. Even these more plausible tales, though, suffer from an important limitation. They call for nature protection only at a high level of generality. For example, human-induced increases in atmospheric carbon dioxide levels may cause rapid changes in global temperatures in the near future, with drastic consequences for sea levels, weather patterns, and ecosystem services. n218 Similarly, the loss of large numbers of species undoubtedly reduces the genetic library from which we might in the future draw useful resources. n219 But it is difficult to translate these insights into convincing arguments against any one of the small local decisions that contribute to the problems of global warming or biodiversity loss. n220 It is easy to argue that **the** material **impact of any individual decision to increase** carbon **emissions slightly or to destroy a small amount of habitat will be small.** It is difficult to identify the specific straw that will break the camel's back. Furthermore, **no unilateral action at the local or even national level can solve these global problems**. Local decisionmakers may feel paralyzed by the scope of the problems, or may conclude that any sacrifices they might make will go unrewarded if others do not restrain their actions. In sum, at the local level at which most decisions affecting nature are made, the material discourse provides little reason to save nature. Short of the ultimate catastrophe, the material benefits of destructive decisions frequently will exceed their identifiable material costs. n221

### Agriculture Defense

#### No resource wars---prefer our more qualified, empirical evidence

**Pinker**, Professor @ Harvard University, **11** (An Excerpt from "The Better Angels of our Nature," http://www.globalwarming.org/2011/11/28/steven-pinker-resource-scarcity-doesnt-cause-wars/, EMM)

Once again it seems to me that the appropriate response is “maybe, but maybe not.” Though climate change can cause plenty of misery… it will not necessarily lead to armed conflict. The political scientists who track war and peace, such as Halvard Buhaug, Idean Salehyan, Ole Theisen, and Nils Gleditsch, **are skeptical of the** popular **idea that people fight wars over** scarce **resources.** Hunger and resource shortages are tragically common in sub-Saharan countries such as Malawi, Zambia, and Tanzania, but wars involving them are not. Hurricanes, floods, droughts, and tsunamis (such as the disastrous one in the Indian Ocean in 2004) do not generally lead to conflict. The American dust bowl in the 1930s, to take another example, caused plenty of deprivation but no civil war. And while temperatures have been rising steadily in Africa during the past fifteen years, civil wars and war deaths have been falling. Pressures on access to land and water can certainly cause local skirmishes, but a genuine war requires that hostile forces be organized and armed, and that depends more on the influence of bad governments, closed economies, and militant ideologies than on the sheer availability of land and water. Certainly any connection to terrorism is in the imagination of the terror warriors: terrorists tend to be underemployed lower-middle-class men, not subsistence farmers. As for genocide, the Sudanese government finds it convenient to blame violence in Darfur on desertification, distracting the world from its own role in tolerating or encouraging the ethnic cleansing. In a regression analysis on armed conflicts from 1980 to 1992, Theisen found that conflict was more likely if a country was poor, populous, politically unstable, and abundant in oil, but not if it had suffered from droughts, water shortages, or mild land degradation. (Severe land degradation did have a small effect.) **Reviewing analyses that examined a large number** (N) **of countries rather than cherry-picking one** or toe, **he concluded, “Those who foresee doom, because of** the relationship between **resource scarcity** and violent internal conflict, **have very little support** from the large-N literature.”

### Germany Defense

#### Relations are resilient

Weisel2/2/12Karl**,** U.S. Army Garrison Wiesbaden Public Affairs Office, Herald Union, “Leaders Celebrate US German relations” http://www.herald-union.com/article.php?i=18906

Referring to past challenges that were overcome thanks to outstanding German-American relations and partnership, Crawford said, “We know that no matter how difficult the tasks or what form it takes, the German-American relationship will endure and continue to grow, ensuring the strength, security and stability of our European communities.”

#### EU/US relations resilient

Joyner 11—editor of the Atlantic Council. PhD in pol sci (James, Death of Transatlantic Relationship Wildly Exaggerated, 14 June 2011, www.acus.org/new\_atlanticist/death-transatlantic-relationship-wildly-exaggerated)

The blistering farewell speech to NATO by U.S. defense secretary Robert Gates warning of a "dim, if not dismal" future for the Alliance drew the Western public's attention to a longstanding debate about the state of the transatlantic relationship. With prominent commenters voicing concern about much more than just a two-tiered defensive alliance, questioning whether the U.S.-Europe relationship itself is past its prime, doubts that the Western alliance that has dominated the post-Cold War world are reaching a new high.¶ But those **fears are overblown, and may be mistaking short-term bumps in the relationship for proof of a long-term decline that isn't there.** Gates' frustration with the fact that only five of the 28 NATO allies are living up to their commitment to devote 2 percent of GDP to defense, which has hindered their ability to take on even the likes of Muammar Qaddafi's puny force without American assistance is certainly legitimate and worrying.¶ Though the U.S.-Europe partnership may not be living up to its potential, it is not worthless, and that relationship continues to be one of the **strongest** and most important **in the world**. Gates is an Atlanticist whose speech was, as he put it, "in the spirit of solidarity and friendship, with the understanding that true friends occasionally must speak bluntly with one another for the sake of those greater interests and values that bind us together." He wants the Europeans, Germany in particular, to understand what a tragedy it would be if NATO were to go away.¶ Most Europeans don't see their security as being in jeopardy and political leaders are hard pressed to divert scarce resources away from social spending -- especially in the current economic climate -- a dynamic that has weakened NATO but**, despite fears to the contrary, not the greater Transatlantic partnership.¶** It would obviously have been a great relief to the U.S. if European governments had shouldered more of the burden in Afghanistan. This disparity, which has only increased as the war has dragged on and the European economies suffered, is driving both Gates' warning and broader fears about the declining relationship. But it was our fight, not theirs; they were there, in most cases against the strong wishes of the people who elected them to office, because we asked. We'd have fought it exactly the same way in their absence. In that light, every European and Canadian soldier was a bonus.¶ Libya, however, is a different story. The Obama administration clearly had limited interest in entering that fight - Gates himself warned against it -- and our involvement is due in part to coaxing by our French and British allies. The hope was to take the lead in the early days, providing "unique assets" at America's disposal, and then turn the fight over to the Europeans. But, as Gates' predecessor noted not long after the ill-fated 2003 invasion of Iraq, you go to war with the army you have, not the one you wish you had.¶ The diminished capabilities of European militaries, spent by nearly a decade in Afghanistan, should be of no surprise. NATO entered into Libya with no real plan for an end game beyond hoping the rebels would somehow win or that Qaddafi would somehow fall. That failure, to be fair, is a collective responsibility, not the fault of European militaries alone.¶ But the concern goes deeper than different defensive priorities. Many Europeans worry that the United States takes the relationship for granted, and that the Obama administration in particular puts a much higher priority on the Pacific and on the emerging BRICS (Brazil, Russia, India, China, and South Africa) economies.¶ New York Times columist Roger Cohen recently wrote that this is as it should be: "In so far as the United States is interested in Europe it is interested in what can be done together in the rest of the world." In Der Spiegel, Roland Nelles and Gregor Peter Schmitz lamented, "we live in a G-20 world instead of one led by a G-2."¶ It's certainly true that, if it ever existed, the Unipolar Moment that Charles Krauthammer and others saw in the aftermath of the Soviet collapse is over. But that multipolar dynamic actually makes transatlantic cooperation more, not less, important. A hegemon needs much less help than one of many great powers, even if it remains the biggest.¶ Take the G-20. Seven of the members are NATO Allies: the US, Canada, France, Germany, Italy, the UK, and Turkey. Toss in the EU, and you have 40 percent of the delegation. If they can form a united front at G-20 summits, they are much more powerful than if each stands alone. Add in four NATO Partner countries (Russia, Japan, Australia, and South Korea) and you're up to 60 percent of the delegation -- a comfortable majority for the U.S.-European partnership and its circle of closest allies.¶ Granted, it's unlikely that we'll achieve consensus among all 12 states on any one issue, let alone most issues. But constantly working together toward shared goals and values expands a sense of commonality.¶ And, like so many things, projects end. Indeed, that's generally the goal. The transatlantic military alliance that formed to defeat fascism remained intact after victory; indeed, it expanded to include its former German and Italian adversaries. NATO outlasted the demise of its raison d'être, the Soviet threat, and went on to fight together --along with many of its former adversaries -- in Bosnia, Kosovo, Afghanistan, and Libya. Is there seriously any doubt that other challenges will emerge in the future in which the Americans and its European allies might benefit from working together?

#### No impact to US/European relations

Haas 11—president of the CFR Lecturer in public policy, Harvard. DPhill, Oxford (17 June 2011, Richard, Why Europe No Longer Matters, http://www.cfr.org/europerussia/why-europe-no-longer-matters/p25308)

Gates sounded a pessimistic note, warning of "the real possibility for a dim if not dismal future for the transatlantic alliance." Yet, the outgoing Pentagon chief may not have been pessimistic enough. The U.S.-European partnership that proved so central to managing and winning the Cold War will inevitably play a far diminished role in the years to come. To some extent, we're already there: If NATO didn't exist today, would anyone feel compelled to create it? The honest, if awkward, answer is no.¶ In the coming decades, Europe's influence on affairs beyond its borders will be sharply limited, and it is in other regions, not Europe, that the 21st century will be most clearly forged and defined.¶ Certainly, one reason for NATO's increasing marginalization stems from the behavior of its European members. The problem is not the number of European troops (there are 2 million) nor what Europeans collectively spend on defense ($300 billion a year), but rather how those troops are organized and how that money is spent. With NATO, the whole is far less than the sum of its parts. Critical decisions are still made nationally; much of the talk about a common defense policy remains just that -- talk. There is little specialization or coordination. Missing as well are many of the logistical and intelligence assets needed to project military force on distant battlefields. The alliance's effort in Libya -- the poorly conceived intervention, the widespread refusal or inability to participate in actual strike missions, the obvious difficulties in sustaining intense operations -- is a daily reminder of what the world's most powerful military organization cannot accomplish.¶ With the Cold War and the Soviet threat a distant memory, there is little political willingness, on a country-by-country basis, to provide adequate public funds to the military. (Britain and France, which each spend more than 2 percent of their gross domestic products on defense, are two of the exceptions here.) Even where a willingness to intervene with military force exists, such as in Afghanistan, where upward of 35,000 European troops are deployed, there are severe constraints. Some governments, such as Germany, have historically limited their participation in combat operations, while the cultural acceptance of casualties is fading in many European nations.¶ But it would be wrong, not to mention fruitless, to blame the Europeans and their choices alone. There are larger historical forces contributing to the continent's increasing irrelevance to world affairs.¶ Ironically, Europe's own notable successes are an important reason that transatlantic ties will matter less in the future. The current euro zone financial crisis should not obscure the historic accomplishment that was the building of an integrated Europe over the past half-century. The continent is largely whole and free and stable. Europe, the principal arena of much 20th-century geopolitical competition, will be spared such a role in the new century -- and this is a good thing.¶ The contrast with Asia could hardly be more dramatic. Asia is increasingly the center of gravity of the world economy; the historic question is whether this dynamism can be managed peacefully. The major powers of Europe -- Germany, France and Great Britain -- have reconciled, and the regional arrangements there are broad and deep. In Asia, however, China, Japan, India, Vietnam, the two Koreas, Indonesia and others eye one another warily. Regional pacts and arrangements, especially in the political and security realms, are thin. Political and economic competition is unavoidable; military conflict cannot be ruled out. Europeans will play a modest role, at best, in influencing these developments.¶ If Asia, with its dynamism and power struggles, in some ways resembles the Europe of 100 years ago, the Middle East is more reminiscent of the Europe of several centuries before: a patchwork of top-heavy monarchies, internal turbulence, unresolved conflicts, and nationalities that cross and contest boundaries. Europe's ability to influence the course of this region, too, will be sharply limited.¶ Political and demographic changes within Europe, as well as the United States, also ensure that the transatlantic alliance will lose prominence. In Europe, the E.U. project still consumes the attention of many, but for others, especially those in southern Europe facing unsustainable fiscal shortfalls, domestic economic turmoil takes precedence. No doubt, Europe's security challenges are geographically, politically and psychologically less immediate to the population than its economic ones. Mounting financial problems and the imperative to cut deficits are sure to limit what Europeans can do militarily beyond their continent.¶ Moreover, intimate ties across the Atlantic were forged at a time when American political and economic power was largely in the hands of Northeastern elites, many of whom traced their ancestry to Europe and who were most interested in developments there. Today's United States -- featuring the rise of the South and the West, along with an increasing percentage of Americans who trace their roots to Africa, Latin America or Asia -- could hardly be more different. American and European preferences will increasingly diverge as a result.¶ Finally, the very nature of international relations has also undergone a transformation. Alliances, whether NATO during the Cold War or the U.S.-South Korean partnership now, do best in settings that are highly inflexible and predictable, where foes and friends are easily identified, potential battlefields are obvious, and contingencies can be anticipated.¶ Almost none of this is true in our current historical moment. Threats are many and diffuse. Relationships seem situational, increasingly dependent on evolving and unpredictable circumstances. Countries can be friends, foes or both, depending on the day of the week -- just look at the United States and Pakistan. Alliances tend to require shared assessments and explicit obligations; they are much more difficult to operate when worldviews diverge and commitments are discretionary. But as the conflicts in Iraq, Afghanistan and now Libya all demonstrate, this is precisely the world we inhabit.¶ For the United States, the conclusions are simple. First, no amount of harping on what European governments are failing to do will push them toward what some in Washington want them to do. They have changed. We have changed. The world has changed.¶ Second, NATO as a whole will count for much less. Instead, the United States will need to maintain or build bilateral relations with those few countries in Europe willing and able to act in the world, including with military force.¶ Third, other allies are likely to become more relevant partners in the regions that present the greatest potential challenges. In Asia, this might mean Australia, India, South Korea, Japan and Vietnam, especially if U.S.-China relations were to deteriorate; in the greater Middle East, it could again be India in addition to Turkey, Israel, Saudi Arabia and others.

## Launchers Adv

### AT: Spinoffs

#### No further spinoffs --- they would’ve been discovered

Manheimer 98 WALLACE M. MANHEIMER Back to the Future: The Historical, Scientific, Naval, and Environmental Case for Fission Fusion Code 6707 Plasma Physics Division April 2, 1998 Naval Research Laboratory, <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA347302>

Finally, there is now an effort to find an intermediate milestone for fusion research, so as to give our sponsors something useful in a more reasonable time. There has recently been at least one study of spinoffs [6],(using some particular algorithm to evaluate each), ranging from pollution abatement to remote sensing to medical applications to lithography. In a sense, this paper, advocating fission fusion is a search for a spin off. It would certainly be wonderful if these other spinoffs did exist, but it is unlikely that they do. The problem is that fusion has been a well funded, well publicized program for decades now. If it had another application, we probably would have known about it long ago. Furthermore, if after decades of promising an inexhaustible energy supply, we suddenly started selling say the 'medical tokamak', we would be accused of bait and switch big time. No, for better or worse, magnetic fusion is almost certainly tied to energy supply.

### AT: Impacts

#### SQ solves EMALS which is what their ev is talking about– their author

Lewis Page, 5-12-2012, “US Navy's Plane-Hurling Mass Driver in Tech Hiccup,” The Register, http://www.theregister.co.uk/2010/05/12/emals\_backfire/

Radical plans by the US Navy to equip its next aircraft carrier with electromagnetic mass-drivers for launching aircraft instead of the traditional steam catapults have hit technical snags. The so-called Electromagnetic Aircraft Launch System, or EMALS, is now under development in a shore-based test facility at Lakehurst naval air station in New Jersey. However, according to reports, the test mass-driver installation suffered serious damage earlier this year in a mishap blamed on a "software malfunction". Apparently the "shuttle" - which moves along the catapult track to accelerate a plane to flying speed - went the wrong way in a test shot and smashed into important equipment. The Newport News Daily Press, reporting on an interview with EMALS programme chief Captain Randy Mahr, says that the accident has delayed the shore-based testing by several months. It had been planned to commence launching aircraft - as opposed to test loads - this summer, but that will not now happen until autumn. The next US supercarrier, CVN 78, aka USS Gerald R Ford, is now under construction and intended to join the fleet in 2015. Navy officials confirmed last year that it is now too late to amend the ship's design and revert to steam catapults: EMALS must be made to work or the US Navy will receive the largest and most expensive helicopter carrier ever. Mahr says that the EMALS mishap won't delay the Ford's arrival, as the hardware is ready for installation on schedule. He is confident that remaining software problems can be rectified after the kit is in place. "The hardware issues we're comfortable with," he told the Daily Press. "The things that are delaying me right now are software integration issues, which can be fine-tuned after the equipment is installed in the ship." Mahr had been supposed to hand over the EMALS to another officer and move on to another job by now, following his selection for promotion last year. However, sceptical politicians in Washington, seeking to increase accountability in the event of potentially disastrous failures by the project, have demanded that he remain in post past his normal time. Present-day catapult carriers, operated only by the US and France, use steam generated by their nuclear propulsion to power their aircraft launchers. The steam catapult was actually a British invention, but the Royal Navy has not had conventional fixed-wing carriers since the 1970s for reasons of cost, instead being limited to more basic ships carrying helicopters and vertical-landing Harrier jumpjets. Steam catapults are hard on the planes they launch, require a lot of maintenance and manpower, and are bulky and heavy as well. The USN wants to move to EMALS as it should be cheaper to run, less burdensome on the ship and less damaging to aircraft. The electromotive launchers are more flexible and controllable, too, and are expected to be capable of launching lightweight unmanned aircraft as well as new and heavier naval aircraft of the future which steam cats couldn't manage.

#### No China war

Goldstein 9/1/11—professor emeritus of IR, American U. PhD in pol sci from MIT. Former visiting professor emeritus at Yale (Sept 2011, Joshua, Think Again: War, http://www.foreignpolicy.com/articles/2011/08/15/think\_again\_war)

What about China, the most ballyhooed rising military threat of the current era? Beijing is indeed modernizing its armed forces, racking up double-digit rates of growth in military spending, now about $100 billion a year. That is second only to the United States, but it is a distant second: The Pentagon spends nearly $700 billion. Not only is China a very long way from being able to go toe-to-toe with the United States; it's not clear why it would want to. A military conflict (particularly with its biggest customer and debtor) would impede China's global trading posture and endanger its prosperity. Since Chairman Mao's death, China has been hands down the most peaceful great power of its time. For all the recent concern about a newly assertive Chinese navy in disputed international waters, China's military hasn't fired a single shot in battle in 25 years.

"A More Democratic World Will Be a More Peaceful One."

Not necessarily. The well-worn observation that real democracies almost never fight each other is historically correct, but it's also true that democracies have always been perfectly willing to fight non-democracies. In fact, democracy can heighten conflict by amplifying ethnic and nationalist forces, pushing leaders to appease belligerent sentiment in order to stay in power. Thomas Paine and Immanuel Kant both believed that selfish autocrats caused wars, whereas the common people, who bear the costs, would be loath to fight. But try telling that to the leaders of authoritarian China, who are struggling to hold in check, not inflame, a popular undercurrent of nationalism against Japanese and American historical enemies. Public opinion in tentatively democratic Egypt is far more hostile toward Israel than the authoritarian government of Hosni Mubarak ever was (though being hostile and actually going to war are quite different things).

#### Multiple factors make Asia war unlikely

Vannarith 10—Executive Director of the Cambodian Institute for Cooperation and Peace. PhD in Asia Pacific Studies, Ritsumeikan Asia Pacific U (Chheang, Asia Pacific Security Issues: Challenges and Adaptive Mechanism, <http://www.cicp.org.kh/download/CICP%20Policy%20brief/CICP%20Policy%20brief%20No%203.pdf>)

Some people look to China for economic and strategic interests while others still stick to the US. Since, as a human nature, change is not widely acceptable due to the high level of uncertainty. It is therefore logical to say that most of the regional leaders prefer to see the status quo of security architecture in the Asia Pacific Region in which US is the hub of security provision. But it is impossible to preserve the status quo since China needs to strategically outreach to the wider region in order to get necessary resources especially energy and raw materials to maintain her economic growth in the home country. It is understandable that China needs to have stable high economic growth of about 8 percent GDP growth per year for her own economic and political survival. Widening development gap and employment are the two main issues facing China. Without China, the world will not enjoy peace, stability, and development. China is the locomotive of global and regional economic development and contributes to global and regional peace and stability. It is understandable that China is struggling to break the so-called containment strategy imposed by the US since the post Cold War. Whether this tendency can lead to the greater strategic division is still unknown. Nevertheless, many observers agree that whatever changes may take place, a multi-polar world and multilateralism prevail. The reasons or logics supporting multilateralism are mainly based on the fact that no one country can really address the security issues embedded with international dimension, no one country has the capacity to adapt and adopt to new changes alone, and it needs cooperation and coordination among the nation states and relevant stakeholders including the private sector and civil societies. Large scale interstate war or armed conflict is **unthinkable** in the region due to the high level of interdependency and democratization. It is believed that economic interdependency can reduce conflicts and prevent war. Democracy can lead to more transparency, accountability, and participation that can reduce collective fears and create more confidence and trust among the people in the region. In addition, globalism and regionalism are taking the center stage of national and foreign policy of many governments in the region except North Korea. The combination of those elements of peace is necessary for peace and stability in the region and those elements are **present and being improved in this region.**

#### No risk of fleet collapse

Robert O. Work 12, United States Under Secretary of the Navy and VP of Strategic Studies @ Center for Strategic and Budgetary Assessments, "The Coming Naval Century," May, Proceedings Magazine - Vol. 138/5/1311, US Naval Institute, www.usni.org/magazines/proceedings/2012-05/coming-naval-century

For those in the military concerned about the impact of such cuts, I would simply say four things:¶ • Any grand strategy starts with an assumption that all resources are scarce, requiring a balancing of commitments and resources. As political commentator Walter Lippmann wrote: “The nation must maintain its objectives and its power in equilibrium, its purposes within its means, and its means equal to its purposes.”¶ • The upcoming defense drawdown will be less severe than past post–World War II drawdowns. Accommodating cuts will be hard, but manageable.¶ • At the end of the drawdown, the United States will still have the best and most capable armed forces in the world. The President well appreciates the importance of a world-class military. “The United States remains the only nation able to project and sustain large-scale military operations over extended distances,” he said. “We maintain superior capabilities to deter and defeat adaptive enemies and to ensure the credibility of security partnerships that are fundamental to regional and global security. In this way our military continues to underpin our national security and global leadership, and when we use it appropriately, our security and leadership is reinforced.”¶ • Most important, as the nation prioritizes what is most essential and brings into better balance its commitments and its elements of national power, we will see the beginning of a Naval Century—a new golden age of American sea power.¶ The Navy Is More Than Ships¶ Those who judge U.S. naval power solely by the number of vessels in the Navy’s battle force are not seeing the bigger picture. Our battle force is just one component—albeit an essential one—of a powerful National Fleet that includes the broad range of capabilities, capacities, and enablers resident in the Navy, Marine Corps, and Coast Guard. It encompasses our special-mission, prepositioning, and surge-sealift fleets; the ready reserve force; naval aviation, including the maritime-patrol and reconnaissance force; Navy and Marine special operations and cyber forces; and the U.S. Merchant Marine. Moreover, it is crewed and operated by the finest sailors, Marines, Coast Guardsmen, civilian mariners, and government civilians in our history, and supported by a talented and innovative national industrial base.¶ If this were not enough, the heart of the National Fleet is a Navy–Marine Corps team that is transforming itself from an organization focused on platforms to a total-force battle network that interconnects sensors, manned and unmanned platforms with modular payloads, combat systems, and network-enabled weapons, as well as tech-savvy, combat-tested people into a cohesive fighting force. This Fleet and its network would make short work of any past U.S. Fleet—and of any potential contemporary naval adversary.

No Pakistani loose nukes

Jagadish 9 (Vikram, JD with Honors – Georgetown University Law Center, “Pakistan's Ultimate Nightmare Scenario: Preventing Islamic Extremists from Acquiring Nuclear Weapons”, Texas Review of Law & Politics, 13 Tex. Rev. Law & Pol. 223, Spring, Lexis)

In the short-term, however, it is unlikelythat extremists within the ranks will pose a threat to Pakistan's nuclear arsenal. First, Musharraf has filled key posts related to the nuclear program with moderates, who will control further staff appointments and access for the near future. 237 The NCA and the Strategic Plans Division in particular are headed by moderates, making an unauthorized use scenario virtually unthinkable in the near term. Second, even if the "true holy warriors" may want to seize Pakistan's nuclear weapons with the acquiescence of the "quiet holy warriors," the disillusioned warriors and modernist warriors in the ranks will almost certainly refuse to cooperate, seeing no strategic benefit. On the contrary, these moderates would view such a move as inviting the certain destruction of the Pakistani state by any nation on the receiving end of an act of nuclear [\*256] terrorism. Third, a successful "theft" of nuclear weapons requires the cooperation of commanding officers at dispersed storage sites with differing responsibilities. Cooperation is also required from counterintelligence teams from differing bureaus and employees with different levels of access. Given the complexity required for such an operation to succeed and the requirement that all necessary officers sympathize with the goal of the operation, this is a highly improbable scenario. Hence, it can be concluded that Pakistan's nuclear arsenal is safe in the short-term from extremists within the Pakistani army and intelligence agencies.

#### No impact to the industrial base or leadership

Fettweis 11 Christopher J. Fettweis, Department of Political Science, Tulane University, 9/26/11, Free Riding or Restraint? Examining European Grand Strategy, Comparative Strategy, 30:316–332, EBSCO

It is perhaps worth noting that there is no evidence to support a direct relationship between the relative level of U.S. activism and international stability. In fact, the limited data we do have suggest the opposite may be true. During the 1990s, the United States cut back on its defense spending fairly substantially. By 1998, the United States was spending $100 billion less on defense in real terms than it had in 1990.51 To internationalists, defense hawks and believers in hegemonic stability, this irresponsible “peace dividend” endangered both national and global security. “No serious analyst of American military capabilities,” argued Kristol and Kagan, “doubts that the defense budget has been cut much too far to meet America’s responsibilities to itself and to world peace.”52 On the other hand, if the pacific trends were not based upon U.S. hegemony but a strengthening norm against interstate war, one would not have expected an increase in global instability and violence. The verdict from the past two decades is fairly plain: The world grew more peaceful while the U**nited** S**tates** cut its forces. No state seemed to believe that its security was endangered by a less-capable United States military, or at least none took any action that would suggest such a belief. No militaries were enhanced to address power vacuums, no security dilemmas drove insecurity or arms races, and no regional balancing occurred once the stabilizing presence of the U.S. military was diminished. The rest of the world acted as if the threat of international war was not a pressing concern, despite the reduction in U.S. capabilities. Most of all, the United States and its allies were no less safe. The incidence and magnitude of global conflict declined while the United States cut its military spending under President Clinton, and kept declining as the Bush Administration ramped the spending back up. No complex statistical analysis should be necessary to reach the conclusion that the two are unrelated. Military spending figures by themselves are insufficient to disprove a connection between overall U.S. actions and international stability. Once again, one could presumably argue that spending is not the only or even the best indication of hegemony, and that it is instead U.S. foreign political and security commitments that maintain stability. Since neither was significantly altered during this period, instability should not have been expected. Alternately, advocates of hegemonic stability could believe that relative rather than absolute spending is decisive in bringing peace. Although the United States cut back on its spending during the 1990s, its relative advantage never wavered. However, even if it is true that either U.S. commitments or relative spending account for global pacific trends, then at the very least stability can evidently be maintained at drastically lower levels of both. In other words, even if one can be allowed to argue in the alternative for a moment and suppose that there is in fact a level of engagement below which the United States cannot drop without increasing international disorder, a rational grand strategist would still recommend cutting back on engagement and spending until that level is determined. Grand strategic decisions are never final; continual adjustments can and must be made as time goes on. Basic logic suggests that the United States ought to spend the minimum amount of its blood and treasure while seeking the maximum return on its investment. And if the current era of stability is as stable as many believe it to be, no increase in conflict would ever occur irrespective of U.S. spending, which would save untold trillions for an increasingly debt-ridden nation. It is also perhaps worth noting that if opposite trends had unfolded, if other states had reacted to news of cuts in U.S. defense spending with more aggressive or insecure behavior, then internationalists would surely argue that their expectations had been fulfilled. If increases in conflict would have been interpreted as proof of the wisdom of internationalist strategies, then logical consistency demands that the lack thereof should at least pose a problem. As it stands, the only evidence we have regarding the likely systemic reaction to a more restrained United States suggests that the current peaceful trends are unrelated to U.S. military spending. Evidently the rest of the world can operate quite effectively without the presence of a global policeman. Those who think otherwise base their view on faith alone.

# 2NC

# Neg Block

## States CP

### AT: DOE Labs Key

#### DOE programs exist now to enable the CP

Timothy Fitzsimmons, PhD, 2012, “Department of Energy,” EPSCoR/IDEA Foundation, http://www.epscorideafoundation.org/about/agency/doe/

The Department of Energy’s Experimental Program to Stimulate Competitive Research (DOE EPSCoR) was established by Section 2203 of the Energy Policy Act of 1992 (P.L. 102-486). DOE EPSCoR enhances the capability of 25 eligible states and Puerto Rico to conduct sustainable and nationally competitive energy-related research, increase the number of competitive scientists and engineers in energy-related areas, and build beneficial relationships between designated states and territories and the 10 world-class laboratories managed by the Office of Science, leveraging DOE national user facilities and intellectual collaboration. The DOE EPSCoR effort to develop science and engineering research infrastructure and human resources enables the states to contribute to the current and future energy-related needs.

#### State grants can fund national lab projects

John Brandon, 10-5-2012, “Could EV car batteries be made from salt water?” Fox News, http://www.foxnews.com/leisure/2012/10/05/could-ev-car-batteries-be-made-from-salt-water/

A California company is hoping to supply 20% of the world’s lithium by 2020 with an ingenious plan to produce this material used in the batteries that power most electric cars. Simbol Materials says it wants to build a plant in the Salton Sea near Imperial Valley, California, to extract lithium from the salt water brine that flows up from geo-thermal power generators. The salt water extraction process was originally conceived at California’s Lawrence Livermore National Laboratory (LLNL) with funds from a state grant, while Argonne National Laboratory in Chicago adapted it to be used with geothermal fluids.

#### National labs work in partnership with states on energy research – ORNL proves

Wikipedia, 2012, “Oak Ridge National Laboratory,” http://en.wikipedia.org/wiki/Oak\_Ridge\_National\_Laboratory

Oak Ridge National Laboratory (ORNL) is a multiprogram science and technology national laboratory managed for the United States Department of Energy (DOE) by UT-Battelle. ORNL is the largest science and energy national laboratory in the Department of Energy system.[1] ORNL is located in Oak Ridge, Tennessee, near Knoxville. ORNL's scientific programs focus on materials, neutron science, energy, high-performance computing, systems biology and national security. ORNL partners with the state of Tennessee, universities and industries to solve challenges in energy, advanced materials, manufacturing, security and physics.

### AT: State Funding Fails (Hartwig)

#### Hartwig agrees fiat remedies his arguments

Zach Hartwig, email exchange w/ Harrigan, 10-23-2012, http://msudebate.blogspot.com/2012/10/exchange-with-hartwig-2.html

It would be fascinating to research the juriprudence on this issue to see how the courts have interpreted these clauses with respect to science; however, that's outside my scope. In principle, I think that state could sponsor fusion research; however, in practice and precedent, the federal government will almost exclusively fund fusion for the foreseeable future.

#### Hartwig says he has no idea what he’s talking about

Zach Hartwig, email exchange w/ Harrigan, 10-23-2012, http://msudebate.blogspot.com/2012/10/exchange-with-hartwig-2.html

However, I'll take crack at your constitutionality question because it's an important one. I will note that I am by no means a Constitional scholar or expert on this issue...

### AT: Perm States Fund Plan

#### National labs aren’t part of the USFG – proves that research is being done by a third-party and the plan and CP are distinct methods of funding the same research

Utt, Senior Research Fellow @ Heritage, September 1999, http://www.heritage.org/research/reports/1999/09/improving-security-at-the-dept-of-energys-weapons-labs

The 17 national laboratories are not formally part of the federal government. Although they are managed by the Department of Energy and play an integral role in national security, they are administratively and organizationally independent of DOE, and their employees are not part of the federal civil service.

#### CP is key to education – have to understand multiple funding sources

Kevin Frances, E-Source, 4-6-2012, “NextGen VOICES: Results,” Science Magazine, http://www.sciencemag.org/content/336/6077/32/suppl/DC1

In many ways, the ultimate definition of a successful scientist today is the same as it has always been: a person who discovers new and useful information on behalf of society. This is not just a theoretical aphorism, but a good functional definition of "success" in science, even now. Sadly, the current practical definition has to be expanded to include the reality that no scientist can be truly effective—and therefore ultimately successful—without mastering the art of obtaining taxpayer or corporate funding. That is the biggest shift between my mentor's career as a scientist and that of my peers: My mentor was highly successful without having to spend a major portion of his time writing grant proposals to a variety of funding agencies. Sure, he had to apply for and receive external funding (ocean research cruises are expensive!), but to my eyes the game has shifted now toward an emphasis on obtaining grant money over any other standard of scholarly activity. Aside from the funding question, what will the future bring? An ever-increasing movement toward highly interdisciplinary research that aims to solve defined societal problems. Gone are the days of back-lab obscure research done in isolation, unless it has a clear and obvious impact on a larger societal question. The "successful" scientist will be one who sees—and can clearly explain—the important societal impacts behind scientific results.

### AT: Duplication/Coordination (Olynyk)

#### This is the problem with writing authors to beg for cards – sometimes it backfires. Olnyk concludes that fiat would remedy all his federal key arguments. He says there’s no legal barrier to receiving state funding, it’s just unlikely in the status quo

Geoff Olnyk, email exchange w/ Harrigan, 10-23-2012, http://msudebate.blogspot.com/2012/10/exchange-with-olynyk-2.html

Your understanding is correct. These are the three major tokamak/magnetic fusion facilities (C-Mod/MIT, DIII-D/GA, and PPPL which has NSTX-U and some smaller devices). There is also NIF at Livermore (although this is primarily a weapons-research facility, as is most inertial fusion research), plus a group at ORNL doing magnetic fusion (they used to have tokamaks like ORMAK), plus smaller devices at U. Wisconsin, U. Washington, Columbia, Auburn, and UCLA. The various UCs also send students to DIII-D, primarily UCSD. So, to answer your questions: 1. I don’t think anything legally stops C-Mod from getting funding from state governments (or even private actors), it’s just exceedingly unlikely that this would happen. C-Mod has a budget of about $29-million/year; I don’t think Massachusetts, for example, funds anything close to this amount for research. This kind of thing has always (since WWII at least) been done through the federal government. And, you say, why could states not pool funds – well sure, but why would (say) Pennsylvania fund a research facility in Mass? So while it’s not strictly impossible, I don’t see it happening, realistically.

\*\*\*FOR CONTEXT, HERE’S THE PART OF HARRIGAN’S EMAIL BEING RESPONDED TO\*\*\*

As I understand, there are three major fusion research facilities in the United States: Alcator C-Mod at MIT, PPPL at Princeton, and DIII-D at General Atomics. (Please correct me if this is wrong).

1. In a time of federal fiscal restraint (at least) and austerity (at worst), should those three (C-Mod, PPPL, DIII-D) seek funding from state governments? Would it even be possible for them to do so? Do the problems that you cite with 50 state-run programs apply to a situation where there are only 3 programs with 50 different state sponsors?

#### Explicitly agrees coordination at the federal level would solve

Geoff Olnyk, email exchange w/ Harrigan, 10-23-2012, http://msudebate.blogspot.com/2012/10/exchange-with-olynyk-2.html

So it makes more sense to coordinate efforts, to some extent. Which might be harder if each state were running their own research program. Now, you could imagine some coordinating body that tries to reduce duplication of effort, and allow the facilities to do joint experiments. This is in fact what we have internationally, mainly through a body called the ITPA (International Tokamak Physics Activity). I just don’t see the point of devolving it down to the state level in the U.S.

\*\*\*FOR CONTEXT, HERE’S THE PART OF HARRIGAN’S EMAIL BEING RESPONDED TO\*\*\*

3. What are the risks of duplicating fusion research? I could see that money would be wasted, but do you see ways that it could affect progress in research / fusion development?

#### Olnyk admits he has no idea and isn’t an expert

Geoff Olnyk, email exchange w/ Harrigan, 10-23-2012, http://msudebate.blogspot.com/2012/10/exchange-with-olynyk-2.html

2. Regarding the national labs, including PPPL, they may actually be banned from taking private funding. Those labs, remember, do the nation’s classified weapons research as well as civilian magnetic fusion research… so my guess is that it would be exceedingly difficult for them to get permission to take private money. I’m just speculating, though; I have no actual knowledge of the legal status of those labs. Even if it were legally allowed, you get the same problems as listed above, about whether any one state even could fund such a facility.

\*\*\*FOR CONTEXT, HERE’S THE PART OF HARRIGAN’S EMAIL BEING RESPONDED TO\*\*\*

2. When referring to the national labs, you wrote that "they can't just decide to do fusion research on their own - the federal government has to give them the money and instruct them to do so". Does this mean that national labs are precluded from taking money from outside (non-federal) sources? Do they exclusively receive funding from the federal government?

### 2NC---AT: 50 State Fiat

#### Assessing desirability of federal v. state action is key to energy education

Kay 12 (David, Cornell Community and Regional Development Institute, “Energy Federalism: Who Decides?”, July, http://devsoc.cals.cornell.edu/cals/devsoc/outreach/cardi/programs/loader.cfm?csModule=security/getfile&PageID=1071714)

Questions about energy production and consumption are acquiring renewed urgency in the 21st Century. **Among these questions are some that go to the heart of our nation’s system of federalism, as an underlying but ever-present friction mounts over the way in which decision making power has been divided between central and more locally distributed political units.** What is at stake? According to one author, **“the choice of regulatory forum often seems to determine the outcome of the controversy. That may explain why Americans have traditionally shed so much metaphorical and genuine blood deciding what are essentially jurisdictional disputes between governmental institutions.”**i

## CP/DA

### Impact Overview

#### Pure fusion weapons cause nuclear war – wreck the nuclear firebreak

Sam Cohen, nuclear weapons analyst, and Joe Douglass, national security analyst, both members of the Los Alamos Tactical Nuclear Weapons panel, 3-11-2002, “Nuclear Threat That Deesn’t Exist – Or Does It?” Rense, http://rense.com/general35/doex.htm

The comparison of a pure-fusion warhead with a normal fission warhead is even more stark. The lethal area to military troops of a 10 ton (high explosive equivalent yield) pure-fusion device would be approximately the same as the lethal area of a fission warhead several hundred times larger; that is, one in the kiloton range! The cost of a pure-fusion warhead is also reduced. In terms of the precious nuclear material that is required, namely, tritium and deuterium, pure-fusion devices are extremely cheap. Because the pure-fusion warhead does not need active nuclear material, such as plutonium, to "trigger" the deuterium-tritium burn, they can be made for a fraction of the cost of one fission-fusion neutron bomb of the 1980s. The inherent consequences of a pure-fusion device go far beyond low cost and greatly reduced explosive yield. Most significant, pure-fusion warheads, in contrast to warheads that use fissionable material, are not covered by the Nuclear Non-Proliferation Treaty (NPT). Any country can, in terms of international law, legally possess and even sell such weapons and not be in violation of the NPT. Also, deuterium-tritium fuel can be purchased openly on the international market. The spirit of the NPT may be in violation, but not the letter. Still further, because there is no fissionable component and because the explosive yield is so small, full operational tests of a pure-fusion device could be conducted in any country and not be detected by systems set up to monitor nuclear weapons tests. If tests were conducted underground at a moderate depth, say 50 to 100 meters, even the local inhabitants would suspect nothing. These consequences drive a stake through the heart of U.S. non-proliferation policies. These policies are based on preventing those who want to "go nuclear" from having access to the active nuclear material. A warhead or "device" that does not use active nuclear material (uranium or plutonium) is not prohibited. To make matters worse, in no sense can they be termed weapons of "mass destruction." Indeed, the pure-fusion devices are even more discriminant than the neutron bomb because there is, in comparison, negligible physical damage and a total absence of fission by-products and related contaminating fallout. Because of this, the pure-fusion device represents the worst fear of those whose personal crusade is to stop the spread of nuclear weapons and preserve the fire break in a hope that this will prevent a nuclear war. The pure-fusion device is less destructive than most conventional bombs, is reasonably cheap, and can be tested with impunity. It produces no fission radioactive by-products or fallout of serious concern. That is, the pure-fusion device renders the unthinkable thinkable. This is why officials do not want to discuss the possibility of pure-fusion warheads and, as will be seen, will do their best to deny their possible existence.

#### Fusion shatters the NPT---its materials aren’t covered by the regime---that’s Cohen

#### Extinction

F. Calogero 12 - Physics Department, University of Roma “La Sapienza” INFN, Section of Roma, Rome, Italy, “Prospects of nuclear proliferation, or of transition to a nuclear-weapon-free world,” EPJ Web of Conferences, 24 01003 (2012), http://www.epj-conferences.org/index.php?option=com\_article&access=doi&doi=10.1051/epjconf/20122401003&Itemid=129

The Non Proliferation Treaty

The main pillar of the world-wide nuclear-weapon non-proliferation regime is the Non Proliferation Treaty (NPT). It entered into force in 1970. It distinguishes the States of the world in two categories: Nuclear-Weapon States (NWS) and Non-Nuclear-Weapon States (NNWS). The five NWS are those that demonstrated a nuclear-weapon capability (by testing nucleatr weapons) before January 1, 1967: USA, Russia (as successor to the Soviet Union), UK, France, China. All the other States are categorized as NNWS. The NPT is based on three conceptual pillars: non proliferation of nuclear-weapon capabilities, nuclear disarmament (to eventually eliminate its discriminatory connotation), universal right to develop nuclear energy for peaceful purposes.

Now all States of the world are parties to the NPT, except three or perhaps four. The three States who never signed the NPT are India, Pakistan and Israel. The first two eventually acquired a nuclear weapon capability and demonstrated it by performing nuclear-weapon tests—underground, not to violate the Partial Test Ban Treaty which forbids all nuclear weapons tests except those underground, to which these States are parties. Israel is the third State that did not sign the NPT: it has an official policy of “ambiguity” concerning its nuclear-weapon capability, but it is universally believed to have acquired it over time. North Korea did sign the NPT, but at some point opted out of it and performed a few nuclear-weapon tests (underground); its status with respect to the NPT is unclear, and it is a matter of an ongoing negotiation with five other States (South Korea, USA, Russia, China, Japan), the outcome of which is hard to predict.

Certainly the almost universal support now prevailing for the NPT is a **demonstration of its success**, which was far from certain when it was initiated: at the time two of the five NWS were strongly opposed to it (the France of De Gaulle and the China of Mao), and several States had, at different stages of development, programs aimed at the development of a nuclear-weapon capability; so that at the time many “experts” predicted that the number of countries acquiring nuclear weapons would soon escalate, and for this reason opposed the signing and ratification of the NPT by their country and, more or less openly, advocated instead the initiation of a domestic nuclear-weapon program.

The NPT envisages every 5 years a Review Conference of the parties. The fifth Review Conference (in 1995) established (unanimously) that the NPT has no time limit. The next-to-last (May 2005) ended in disarray, with no agreed final statement. The last one (May 2010) ended with a unanimous agreement, including the principle of pursuing a Nuclear-Weapon-Free World (NWFW) (albeit without setting any definite time schedule). There also was an agreed decision to convene a Conference on the Middle East situation concerning nuclear weaponry, which might provide an opportunity to re-launch the prospect of a Nuclear-Weapon-Free Zone encompassing the extended Middle East (including Iran); this might conceivably constitute a context within which Israel might renounce its nuclear-weapon capability in exchange of a universal recognition, by all States in the zone, of its right to exist and of a credible guarantee (backed by adequate verification, involving also Israel) that no other State in the zone acquires a nuclear-weapon capability.

Nuclear-weapon-free zones (NWFZs)

The world-wide nuclear-weapon nonproliferation regime has another important component: Nuclear-Weapon-Free Zones (NWFZs). They now cover more than half of the globe, including the entire southern hemisphere. Many States belong both to the NPT and to a NWFZ.

The risk of a collapse of the nuclear-weapon non-proliferation regime

The **collapse of the world-wide regime of nuclear-weapon nonproliferation** might happen in two ways: **proliferation by States;** acquisition by sub-state (**terrorist) groups** of the capability to engineer a nuclear explosion.

In the long run, the alternative is clear: either widespread nuclear-weapon proliferation leading to the use of nuclear weapons and/or nuclear terrorism, with the prospect of major catastrophes, an end to our civilization, possibly the termination of homo sapiens; or the eventual establishment of a stable Nuclear-Weapon-Free World (NWFW).

Presumably the time scale of these developments is measured in decades rather than centuries.

2. The risk of nuclear-weapon proliferation by States, and eventually of their use “in anger”

The critical areas are: The extended Middle East; South-Asia (the India- Pakistan conflict over the status of Kashmir); East Asia (the two Koreas; Japan, . . . ); the rest of the world (Brazil, Argentina; Venezuela; Myanmar, Indonesia; . . . ).

#### Fusion weapons blur the firebreak, sparking nuclear war

Hisham Zerriffi, Project Scientist @ Institute for Energy and Environmental Research, and Arjun Makhijani, Jan/Feb 1999, “Pure Fusion Weapons?”, Peace Magazine, http://peacemagazine.org/archive/v15n1p24.htm

Nuclear weapons changed in 1953, when nuclear fission (the splitting of atoms) and nuclear fusion (the fusing, or joining of atoms) were combined, creating thermonuclear weapons, known more generally as "hydrogen bombs." So far, only a fission explosion has generated the high temperatures and pressures necessary to trigger the thermonuclear explosion in a hydrogen bomb. For this reason, all current generation thermonuclear weapons have a fission "primary" that sets off a fusion explosion in the "secondary." However, pure fusion weapons, that is, weapons that would not need a fission trigger, have long been thought of as "desirable" by nuclear weapons designers, in part because they would not produce fission-product fallout. The scientific feasibility of pure fusion weapons has not yet been demonstrated, but if the technical hurdles are overcome, the use of nuclear weapons as instruments of war could be fundamentally transformed, introducing new proliferation dangers and radically reducing the chances of getting complete and enduring nuclear disarmament. Thermonuclear explosions, unlike explosions caused by chain reactions in fissile materials like plutonium, do not require a minimum critical mass. Thus, pure fusion weapons could be made with very low yields, and would not produce fallout, blurring the distinction between conventional explosives and nuclear explosives. Yet, the lethality of the weapons, due to neutron radiation and explosive force, would still be great.1 In fact, the radius of lethality of small pure fusion weapons per unit of explosive power would be far greater than that of large fission weapons.2 For instance, the destructive area per ton of TNT equivalent of the Hiroshima bomb was a hundred times smaller than the estimated lethal radius of a one-ton TNT equivalent pure fusion bomb. The adverse implications of this military arithmetic for nuclear nonproliferation and disarmament would be profound.

### AT: Plan Stops Weaponization (Holdren)

#### This is a link, not a link turn – Holdren says US nuclear leadership in general can shape weapons prolif IF it picks technologies that can’t be weaponized – if we win the military has an incentive to weaponize and that fusion is dangerous, it proves the aff spreads weapons tech

#### THEIR CARD - U.S. leadership shapes global norms of fusion adoption —- stops weaponization

John P. Holdren, Energy Prof @ Berkeley, July 1995, “The U.S. Program of Fusion Energy Research and Development,” Fusion Review Panel, http://science.energy.gov/~~/media/fes/fesac/pdf/1990-99/1995\_jul.pdf

The sense of complacency in the United States engendered by this country's relative

energy-resource abundance is understandable, but it is not justified. Having suitable energysupply options is far more a matter of having the right technology than of having the raw

resources, and this will be even more true in the next century than it is today. There will be great

economic benefit to the United States, moreover, if it is in a position to be an exporter of

attractive energy technologies to the huge world market of the next century, and considerable

economic cost if these must be imported from Japan, Europe, and elsewhere. There is particular,

additional merit in exerting and maintaining leadership in nuclear energy technologies, because

of the influence of choices about these technologies worldwide on the prospects for minimizing

nuclear-weapons proliferation and for avoiding major nuclear accidents. This last point underlines

a more general one: the United States is unlikely to be able to isolate itself from either the

political turmoil or the large-scale environmental problems that will result if it turns out that

adequate energy options for countries less well endowed than the United States geographically

and technologically are simply not developed at all, by this country or by others.

Thus there is a powerful argument for the United States to invest adequately in a broad

and deep program of energy research and development, to maintain a position of international

leadership in this field, and to exert that leadership to foster and steer international collaboration

in those aspects of energy R&D for which there are particular advantages in doing so. The U.S.

energy R&D program needs to address energy efficiency and all of the major supply options and

potential options, including fission and fusion; and, in the nuclear technologies especially, it needs

to be closely coupled to the R&D programs of other countries. The difficulties experienced by

the United States in developing and sustaining the sort of energy R&D policy that is required, and

the importance of overcoming those difficulties, are treated at length in the recent report on

energy R&D by the "Yergin committee" of the Secretary of Energy's Advisory Board (SEAB

1995). We hope that readers of our report will read that one, too.

### AT: We Replace Fission

### 1NC Fusion

#### Demonstration of fusion feasibility would spark massive pressure for pure fusion weaponization and arms racing

Arjun Makhijani, Ph.D. and Pres. Inst. for Energy and Environmental Research, and Hisham Zerriffi, Project Scientist, 7-15-1998, “Dangerous Thermonuclear Quest: The Potential of Explosive Fusion Research for the Development of Pure Fusion Weapons,” IEER, http://ieer.org/resource/reports/dangerous-thermonuclear-quest/

In the long term, facilities such as the National Ignition Facility and MTF facilities pose even greater threats to both the CTBT and the disarmament process. As discussed above, if ignition is demonstrated in the laboratory, the weapons labs and the DOE would likely exert considerable pressure to continue investigations and to engage in preliminary design activities for a new generation of nuclear weapons (even if it is just to keep the designers interested and occupied). Ignition would also boost political support and make large-scale funding of such activities more likely. Even without the construction of actual weapons, these activities could put the CTBT in serious jeopardy from forces both internal and external to the United States. Internally, those same pressures, which could lead to the resumption of testing of current generation weapons, could also lead to the testing of new weapons (to replace older, less safe or less reliable weapons). Externally, the knowledge that the United States or other weapons states were engaging in new fusion weapons design activities could lead other states to view this as a reversal of their treaty commitments. Comparable pressures to develop pure fusion weapons would be likely to mount in several countries. This would have severe negative repercussions for both non-proliferation and complete nuclear disarmament. The time to stop this dangerous thermonuclear quest for explosive ignition is now, before its scientific feasibility is established.

### 2NC Link – Research

#### Fusion research causes pure fusion weapon development – shatters the nuclear firebreak

Arjun Makhijani, Pres. Inst. For Energy and Env. Research, 7-15-1998, “Statement Before the National Press Club,” <http://ieer.org/wp/wp-content/uploads/1998/07/dtq-statement-arjun.pdf>

The current period is comparable to the late 1940s and early 1950s, when decisions regarding fission-triggered thermonuclear weapons were being made. Once the feasibility of such weapons was established by a 1952 US test, which was not of a deliverable weapon, the pressure to develop huge arsenals of thermonuclear weapons in the United States and the Soviet Union became inexorable. We must prevent these new highly dangerous and destructive nuclear weapons from being developed. The time to do so is now, before their feasibility is established. Once feasibility is demonstrated, the pressures from nuclear weapons laboratories as well as the military establishment to design and build them will be immense. We have one advantage over the time when fission-triggered thermonuclear weapons were developed in the 1950s. We have a CTBT that bans all nuclear explosions. Besides the nuclear dangers that pure fusion weapons would pose, there is an immediate question of the legality of some of the research. Unlike the NPT, the Comprehensive Test Ban Treaty (CTBT) of 1996, which about 150 countries have signed (including the five nuclear weapons NPT signatory states), bans all nuclear explosions. Article I of the CTBT also requires parties to prevent nuclear explosions. However, the CTBT does not define such explosions and there is as yet no official ruling regarding which fusion explosions, if any, might be regarded as legal. As my colleague Hisham Zerriffi will explain, the negotiating record regarding fission explosions as well as considerations relating to the fusion process have allowed us to come to the technical conclusion that certain laboratory nuclear fusion explosions -- those that achieve thermonuclear ignition -- would be illegal. Such illegal explosive experiments are planned for the US National Ignition Facility (NIF) and the French Laser Mégajoule (LMJ). These experiments, and hence the NIF and LMJ, appear to be illegal under the CTBT. By the same criterion, some planned joint US-Russian magnetized target fusion experiments (MTF) at Los Alamos National Laboratory in New Mexico are also illegal. It is therefore essential to stop the construction of NIF and LMJ and cancel certain MTF experiments at Los Alamos. Laser and other similarly large devices are not themselves weaponisable, but could work in combination with other approaches, like MTF, to create usable weapons. Laser fusion would be useful in establishing scientific feasibility of pure fusion weapons and for designing the fuel pellets. We should note that most current fusion research activities are legal under the CTBT, including all non-explosive magnetic fusion research and research on existing laser fusion machines, like NOVA in Livermore and GEKKO XII in Japan. No country has actually announced the goal of building pure fusion weapons. Given the insistent international calls for nuclear disarmament and the requirement of the thirty-year-old Nuclear Non-Proliferation Treaty (NPT) that nuclear powers end the nuclear arms race at an "early date," those powers could hardly announce an explicit goal for developing pure fusion weapons. Pure fusion weapons have long been a dream for nuclear weapons designers. Present-day thermonuclear weapons need plutonium or highly enriched uranium to set off the hydrogenbomb part. But pure fusion weapons would not need either of these fissile materials. As a result, they would produce little fallout. They could be made very small or very huge. And the research involves interesting scientific challenges. Finally, the lethal area per unit of explosive power of relatively small pure fusion weapons would be much larger than today's nuclear weapons. Pure fusion weapons would present far greater nuclear proliferation dangers since the acquisition of highly enriched uranium or plutonium is currently the main obstacle to proliferation. By contrast, deuterium and tritium, the forms of hydrogen used in fusion research and weapons, are less difficult to make. Verification would also be more difficult. Most importantly, fusion weapons would likely lower the threshold for nuclear weapons use, because of their smaller individual size and relative lack of fall-out.

### 2NC Link – Military Spinoffs

#### Fusion energy research causes military spinoffs that cause prolif

Andre Gsponer and Jean-Pierre Hurni, Physics PhDs, Indep. Scientific Research Inst., 1-23-2004, “ITER:The International ThermonuclearExperimental Reactorand theNuclear Weapons Proliferation Implicationsof Thermonuclear-Fusion Energy Systems,” <http://cdsweb.cern.ch/record/707446/files/0401110.ps.gz?version=1>

Moreover, many ancillary technologies associated with thermonuclear fusion and high-energy beams are of great military importance: High-power radio-frequency generation for radars and electromagnetic warfare, superconductivity and cryogenics for outer-space military platforms, high magnetic field genera-tion for magnetic compression and pure-fusion explosives, pulsed-power technol-ogy for flash x-ray radiography and electromagnetic guns, heatproof and heavy-irradiation-proof materials and electronic devices for conventional and nuclear explosives, micro- and nano-technology for mass-producing fourth-generation nuclear weapons, etc. In the following sections several of these military applications will be describedin some details. They will generally come about as examples of implications (or“spin-offs”) of various schemes which have a theoretical potential to become asource of thermonuclear energy if some intrinsic limitations are overcome. Mostof the time, these spin-offs will not be directly connected to nuclear weapons orproliferation per se. However, in all cases, it will be seen that the military and proliferation impacts are sufficiently important to be of serious concern, especially in non-nuclear-weapon States, because research on these ambiguous technologies can be legitimized by their theoretical potential as future sources of energy. To conclude this section, and before proceeding to a systematic analysis offusion energy systems, it is important to remark that it is a legitimate right forall countries to pursue some exploratory research on all possible scientific devel-opments that might have a revolutionary impact on military technology. In thisrespect, it is precisely in the area where fission, fusion and high-energy beamtechnologies overlap that the potential for new types of weapons is the greatest.Moreover, if this set of now relatively standard technologies is extended to in-clude more advanced atomic and nuclear processes (see Table 1), we see that thereis a relatively large number of physical processes available, which all have thepotential to release large amount of energy on a short time scale, and which aretherefore amenable to the design of new types of military explosives. This can beseen as a confirmation that atomic and nuclear physics are relatively new sciences,and an indication that many surprising discoveries are still possible, with manyimplications for new types of nuclear explosives.

### 2NC Ban Fusion CP

#### Pulling out of ITER independently collapses global fusion research

Renewable Power News, 6-23-2011, “Fusion Energy: The Truth,” <http://www.renewablepowernews.com/archives/2580>

Non-technical factors, for instance, financial support, politics, public awareness, economic status, other means of power generation, etc. play a vital part in the advancement of fusion power too. Large funding and industrial dedication to push the advancement of fusion energy could be possible as existing fossil fuel extraction is costly and not environmental friendly. On the contrary, other forms of energy revolution or an improvement in energy competence and maintenance that leads to a reduction in energy use could turn previous research efforts to waste. Moreover, political dispute between countries involved in joint projects like ITER could put all past achievements in ruins. Comparing the financial support other fields receive, the endowment for fusion energy is rather low – the U.S. government spends roughly $250 million each year in this field. Although the long-term funding of ITER is quite eminent, other research sites are facing financial difficulties, and this may jeopardize the evolution of fusion energy.

#### Banning fusion research checks weaponization

Arjun Makhijani, Ph.D. and Pres. Inst. for Energy and Environmental Research, and Hisham Zerriffi, Project Scientist, 7-15-1998, “Dangerous Thermonuclear Quest: The Potential of Explosive Fusion Research for the Development of Pure Fusion Weapons,” IEER, http://ieer.org/resource/reports/dangerous-thermonuclear-quest/

8. Once ignition has been demonstrated at a laboratory level, it will be difficult to contain the development of pure fusion weapons. Fusion weapon proliferation controls will be far more difficult than with fission weapons because the materials are not currently under the same level of international control and because more of the relevant literature is non-classified. In fact, pure fusion weapons would by-pass most of the system of international non-proliferation safeguards. Political pressures to develop such weapons would also be likely to intensify. 9. The main mechanism to prevent a radically new and dangerous nuclear weapons situation from developing in the world is to ban the construction of machines that could achieve ignition of thermonuclear plasma without a fission trigger. Devices that use high explosives either directly or indirectly as part of the driver pose special dangers because they could be converted to practical weapons with less difficulty once feasibility is established. Other less restrictive mechanisms could include a ban on the use of tritium in devices involving the use of high explosives.

#### Pulling US funding collapses ITER

John P. Holdren, Energy Prof @ Berkeley, July 1995, “The U.S. Program of Fusion Energy Research and Development”, Fusion Review Pane, http://science.energy.gov/~/media/fes/fesac/pdf/1990-99/1995\_jul.pdf

In addition to developing the strategy just described for a fusion R&D program funded at about $320 million per year, we also have attempted to envision a program that could preserve key priorities at a still lower budget level of about $200 million per year. We find that this cannot be done. Reducing the U.S. fusion R&D program to such a level would leave room for nothing beyond the core program of theory and medium-scale experiments described above - no contribution to an international ignition experiment or materials test facility, no TPX, little exploitation of the remaining scientific potential of TFTR, and little sense of progress toward a fusion energy goal. With complete U.S. withdrawal, international fusion collaboration might well collapse - to the great detriment of the prospects for commercializing fusion energy as well as the prospects for future U.S. participation in major scientific and technological collaborations of other kinds. These severe consequences - deeply damaging to an important and fruitful field of scientific and technological development, to the prospects for achieving practical fusion energy, and to international collaboration in science and technology more generally - are too high a price to pay for the budgetary savings involved.

# 1NR

#### Turns agriculture

Alfonso Serrano 12, Bitter Harvest: U.S. Farmers Blame Billion-Dollar Losses on Immigration Laws, Time, 9-21-12, http://business.time.com/2012/09/21/bitter-harvest-u-s-farmers-blame-billion-dollar-losses-on-immigration-laws/

The Broetjes and an increasing number of farmers across the country say that a complex web of local and state anti-immigration laws account for acute labor shortages. With the harvest season in full bloom, stringent immigration laws have forced waves of undocumented immigrants to flee certain states for more-hospitable areas. In their wake, thousands of acres of crops have been left to rot in the fields, as farmers have struggled to compensate for labor shortages with domestic help.¶ “The enforcement of immigration policy has devastated the skilled-labor source that we’ve depended on for 20 or 30 years,” said Ralph Broetje during a recent teleconference organized by the National Immigration Forum, adding that last year Washington farmers — part of an $8 billion agriculture industry — were forced to leave 10% of their crops rotting on vines and trees. “It’s getting worse each year,” says Broetje, “and it’s going to end up putting some growers out of business if Congress doesn’t step up and do immigration reform.”¶ (MORE: Why Undocumented Workers Are Good for the Economy)¶ Roughly 70% of the 1.2 million people employed by the agriculture industry are undocumented. No U.S. industry is more dependent on undocumented immigrants. But acute labor shortages brought on by anti-immigration measures threaten to heap record losses on an industry emerging from years of stiff foreign competition. Nationwide, labor shortages will result in losses of up to $9 billion, according to the American Farm Bureau Federation.

#### **Obama’s CIR is key to all aspect of heg---[competitiveness, hard and soft power]**

Nye 12 Joseph S. Nye, a former US assistant secretary of defense and chairman of the US National Intelligence Council, is University Professor at Harvard University. “Immigration and American Power,” December 10, Project Syndicate, http://www.project-syndicate.org/commentary/obama-needs-immigration-reform-to-maintain-america-s-strength-by-joseph-s--nye

CAMBRIDGE – The United States is a nation of immigrants. Except for a small number of Native Americans, everyone is originally from somewhere else, and even recent immigrants can rise to top economic and political roles. President Franklin Roosevelt once famously addressed the Daughters of the American Revolution – a group that prided itself on the early arrival of its ancestors – as “fellow immigrants.”¶ In recent years, however, US politics has had a strong anti-immigration slant, and the issue played an important role in the Republican Party’s presidential nomination battle in 2012. But Barack Obama’s re-election demonstrated the electoral power of Latino voters, who rejected Republican presidential candidate Mitt Romney by a 3-1 majority, as did Asian-Americans.¶ As a result, several prominent Republican politicians are now urging their party to reconsider its anti-immigration policies, and plans for immigration reform will be on the agenda at the beginning of Obama’s second term. Successful reform will be an important step in preventing the decline of American power.¶ Fears about the impact of immigration on national values and on a coherent sense of American identity are not new. The nineteenth-century “Know Nothing” movement was built on opposition to immigrants, particularly the Irish. Chinese were singled out for exclusion from 1882 onward, and, with the more restrictive Immigration Act of 1924, immigration in general slowed for the next four decades.¶ During the twentieth century, the US recorded its highest percentage of foreign-born residents, 14.7%, in 1910. A century later, according to the 2010 census, 13% of the American population is foreign born. But, despite being a nation of immigrants, more Americans are skeptical about immigration than are sympathetic to it. Various opinion polls show either a plurality or a majority favoring less immigration. The recession exacerbated such views: in 2009, one-half of the US public favored allowing fewer immigrants, up from 39% in 2008.¶ Both the number of immigrants and their origin have caused concerns about immigration’s effects on American culture. Demographers portray a country in 2050 in which non-Hispanic whites will be only a slim majority. Hispanics will comprise 25% of the population, with African- and Asian-Americans making up 14% and 8%, respectively.¶ But mass communications and market forces produce powerful incentives to master the English language and accept a degree of assimilation. Modern media help new immigrants to learn more about their new country beforehand than immigrants did a century ago. Indeed, most of the evidence suggests that the latest immigrants are assimilating at least as quickly as their predecessors.¶ While too rapid a rate of immigration can cause social problems, over the long term, immigration strengthens US power. It is estimated that at least 83 countries and territories currently have fertility rates that are below the level needed to keep their population constant. Whereas most developed countries will experience a shortage of people as the century progresses, America is one of the few that may avoid demographic decline and maintain its share of world population.¶ For example, to maintain its current population size, Japan would have to accept 350,000 newcomers annually for the next 50 years, which is difficult for a culture that has historically been hostile to immigration. In contrast, the Census Bureau projects that the US population will grow by 49% over the next four decades.¶ Today, the US is the world’s third most populous country; 50 years from now it is still likely to be third (after only China and India). This is highly relevant to economic power: whereas nearly all other developed countries will face a growing burden of providing for the older generation, immigration could help to attenuate the policy problem for the US.¶ In addition, though studies suggest that the short-term economic benefits of immigration are relatively small, and that unskilled workers may suffer from competition**,** skilled immigrants can be important to particular sectors – and to long-term growth. There is a strong correlation between the number of visas for skilled applicants and patents filed in the US. At the beginning of this century, Chinese- and Indian-born engineers were running one-quarter of Silicon Valley’s technology businesses, which accounted for $17.8 billion in sales; and, in 2005, immigrants had helped to start one-quarter of all US technology start-ups during the previous decade. Immigrants or children of immigrants founded roughly 40% of the 2010 Fortune 500 companies.¶ Equally important are immigration’s benefits for America’s soft power. The fact that people want to come to the US enhances its appeal, and immigrants’ upward mobility is attractive to people in other countries. The US is a magnet, and many people can envisage themselves as Americans, in part because so many successful Americans look like them. Moreover, connections between immigrants and their families and friends back home help to convey accurate and positive information about the US.¶ Likewise, because the presence of many cultures creates avenues of connection with other countries, it helps to broaden Americans’ attitudes and views of the world in an era of globalization. Rather than diluting hard and soft power, immigration enhances both.¶ Singapore’s former leader, Lee Kwan Yew, an astute observer of both the US and China, argues that China will not surpass the US as the leading power of the twenty-first century, precisely because the US attracts the best and brightestfrom the rest of the world and melds them into a diverse culture of creativity. China has a larger population to recruit from domestically, but, in Lee’s view, its Sino-centric culture will make it less creative than the US.¶ That is a view that Americans should take to heart. If Obama succeeds in enacting immigration reform in his second term, he will have gone a long way toward fulfilling his promise to maintain the strength of the US.

### AT: Manufacturing Turn

#### Not key to the economy

Chapman, 12 -- Tribune editorial board member

(Steve, "Manufacturing an economic myth," Chicago Tribune, 3-18-12, articles.chicagotribune.com/2012-03-18/news/ct-oped-0318-chapman-20120318\_1\_manufacturing-sector-rick-santorum-products, accessed 10-3-12)

Manufacturing accounts for a **shrinking slice** of the total economy mainly because as we grow wealthier, we spend a smaller portion of our income on physical products, like carsand appliances, and a bigger one on services, from health care to cellphone contracts to restaurant meals. That phenomenon holds across the developed world. It's the result of the free market at work, endlessly shifting resources to accommodate changes in consumer demand. Politicians don't think they should tell Americans to eat at Burger King instead of Chipotle, or buy baseball bats instead of soccer balls. They didn't insist we keep our typewriters when personal computers came along. For the most part, our leaders take it as normal and sensible to defer to consumer demand, rather than try to dictate it. Given that, why do they think they ought to rig the tax code to push consumption dollars from services, which Americans want, to goods, which they don't want quite so much? Why should they divert investment from more popular businesses to less popular ones? That's what the measures offered by Santorum and Obama would do. The point is to ease the tax burden of manufacturers at the expense of other companies, on the superstition that the former are more valuable than the latter. It's hard to see the fairness or the economic logic. When the president unveiled his proposal, Jade West of the National Association of Wholesaler-Distributors complained to The New York Times, "My guys are totally freaked out by manufacturing getting a different tax rate than we do. They're not more important in the economy than retail or distribution or anything else." In fact, manufacturing is bound to be a diminishing share of any advanced economy. Obama and Santorum can fling money into the teeth of that trend. But any time politicians want to resist powerful and beneficial economic forces, bet on the economic forces.

#### No impact to dollar hegemony, but the disad turns it anyway

Adam Kritzer 10 is the lead editor of the Forex Blog and contributor to other leading financial news sites. B.A. in Economics from Penn, "Dollar Returns to Favor as World’s Reserve Currency" March 16 www.forexblog.org/2010/03/dollar-returns-to-favor-as-worlds-reserve-currency.html

Rumor has it that the Dollar is about to make a run. As the credit crisis slowly subsides, (currency) investors are once again looking at the long-term, and they like what they see when it comes to the Dollar.¶ For those that care to remember, 2008 was a great year for the Dollar, as the credit crisis precipitated an increase in risk aversion, and investors realized that despite its pitfalls, the Dollar was (and still is) the most stable and really the only viable global reserve currency. [This reversed a trend which had essentially been in place since the inception of the Euro in 1999]. In 2009, meanwhile, the Dollar resumed its multi-year decline, and many analysts were quick to label the rally of 2008 as an aberration.¶ Then came the debt crises, first in Dubai, then in Greece. Suddenly, a handful of smaller EU countries appeared vulnerable to fiscal crises. Japan officially became the first of the Aaa economies to receive a downgrade in its credit rating. The British Pound is dealing with crises on both the political and economic fronts. According to Moody’s, “The ratings of the Aaa governments — which also include Britain, France, Spain and the Nordic countries — are currently ’stable’…But…their ‘distance-to-downgrade’ has in all cases substantially diminished.” Suddenly, the Greenback doesn’t look so bad.¶ I want to point out that in forex, everything is relative. (Novice) forex investors are often baffled by how sustained economic and financial crises don’t immediately result in currency depreciation. The explanation is that when the crises are worse in (every) other countries, the base currency still looks attractive.¶ This is precisely the case when it comes to the US Dollar. To be sure, the economy is still flawed, financial markets have yet to fully to recover, the federal budget deficit topped $1.8 Trillion in 2009, and government finances seem close to the breaking point. Moody’s has also identified the US as a candidate for a ratings downgrade. And yet, when you look at the situation in every other currency that currently rivals the US for reserve currency status, the Dollar still wins hands down.¶ Its economy is the world’s largest. So are its financial markets, which are also the deepest and most liquid. Its sovereign finances are still manageable from the standpoint of debt-to-GDP and interest-to-revenue ratios. It is the only currency whose circulation can even come close to meeting the needs of global trade. Summarized S&P – when it confirmed the AAA credit rating of the US, “The dollar’s widespread acceptance stems from the U.S. economy’s fundamental strength, which in our view comes from the economy’s size and the flexibility of labor and product markets. We view U.S. banking and capital markets to be dynamic and unfettered relative to their peers.”¶ That’s why auctions of US Treasury bonds remain heavily oversubscribed (demand exceeds supply), despite the rock-bottom interest coupons. China has reaffirmed its commitment to Treasuries (what other choice does it have), confirmed by some forensic accounting work. Gold might continue to rally. So will other commodities, for all I know. Emerging market currencies are still in good shape as well, but none of these will seriously rival the US Dollar for a long-time, if ever. In short, when it comes to the other majors, the Dollar is still King: “You can say whatever you want, but the dollar is the currency of last resort. It’s the currency people want in a crisis.”

### AT: Economy Resilient

#### Causes global protectionism --- collapses trade and undercuts resiliency of the economy

Harris & Burrows 9 Mathew, PhD European History @ Cambridge, counselor of the U.S. National Intelligence Council (NIC) and Jennifer, member of the NIC’s Long Range Analysis Unit “Revisiting the Future: Geopolitical Effects of the Financial Crisis” http://www.ciaonet.org/journals/twq/v32i2/f\_0016178\_13952.pdf

As markets prove truly global in reach and risk, as margins progressively thin, and states assume ever-more market presence, the fictional barriers between ‘‘economic’’ and ‘‘foreign’’ policy will be increasingly difficult, even dangerous, to maintain. Finance and markets are now high politics. Mere days after the G-20 convened in Washington and promised to ‘‘refrain from raising new barriers to investment or to trade,’’ Brazil supported hikes in Mercosur common external tariffs on a range of goods, China tightened its dollar-peg and announced a new round of export tax-breaks, India levied a new duty on iron and steel manufactures, and Russian leaders increased auto import tariffs. Inability to hold ground on these old and familiar problems will exacerbate progress on new, arguably more difficult tasks such as managing stimulus efforts, coordinating their eventual drawdown, and not least, undertaking any meaningful financial regulation. Against these odds, and in face of untold consequences of failure, the price of admission onto the international high table, whether indeed the G-20 or some successor entity, must be more than aggregate GDP, and include increased responsibility for shouldering global burdens if new institutions are to be effective.

### AT: PC Doesn’t Exist/Not Key (Hirsh)

#### Political capital is critical and he has limited time

Nakamura 2/20 David is a writer for the Washington Post. “Obama says he has a year to get stuff done,” 2013, http://www.washingtonpost.com/blogs/post-politics/wp/2013/02/20/in-interview-obama-says-he-has-a-year-to-get-stuff-done/

President Obama said Wednesday he’s eager to move quickly to enact his second-term agenda, acknowledging that he has a severely limited time frame before the political world begins thinking about the next election cycle in 2014 and beyond.¶ Obama told a San Francisco television station that he wants to “get as much stuff done as quickly as possible.”¶ “Once we get through this year, then people start looking at the mid-terms and after that start thinking about the presidential election,” Obama said during a brief interview with KGO, an ABC affiliate. “The American people don’t want us thinking about elections, they want us to do some work. America is poised to grow in 2013 and add a lot of jobs as long as Washington doesn’t get in the way.”¶ Obama’s remarks were an acknowledgement that a second-term president’s ability to use his political capital faces rapidly diminishing returns, highlighting the high stakes of his bids to strike deals with Congress on issues from tax reform, budget cuts, immigration reform and gun control.

#### **PC is vital to transform rhetorical support into actual CIR**

Shifter 12/27 Michael is the President of Inter-American Dialogue. “Will Obama Kick the Can Down the Road?” 2012, http://www.thedialogue.org/page.cfm?pageID=32&pubID=3186

Not surprisingly, Obama has been explicit that reforming the US’s shameful and broken immigration system will be a top priority in his second term. There is every indication that he intends to use some of his precious political capital – especially in the first year – to push for serious change. The biggest lesson of the last election was that the “Latino vote” was decisive. No one doubts that it will be even more so in future elections. During the campaign, many Republicans -- inexplicably -- frightened immigrants with offensive rhetoric. But the day after the election, there was talk, in both parties, of comprehensive immigration reform. ¶ Despite the sudden optimism about immigration reform, there is, of course, no guarantee that it will happen. It will require a lot of negotiation and deal-making. Obama will have to invest a lot of his time and political capital -- twisting some arms, even in his own party. Resistance will not disappear.

#### Previous immigration reform failed because Obama spent PC on other issues and couldn’t arm-twist the GOP effectively---their ev doesn’t account for the GOP’s natural tendency toward intransigence which makes PC true in the context of immigration

Earl Ofari Hutchinson 2-1, author and political analyst, associate editor of New America Media, host of the weekly Hutchinson Report on KPFK-Radio and the Pacifica Network, and KTYM Radio Los Angeles, 2/1/13, “No Risk for President Obama in Immigration Reform Fight,” http://www.huffingtonpost.com/earl-ofari-hutchinson/no-risk-for-obama\_b\_2591792.html

But Obama even as his popularity numbers slightly fell among Latinos did not totally ignore the issue. He lashed the GOP for torpedoing comprehensive immigration reform legislation in Congress on the two occasions when it appeared that an immigration bill might be reintroduced.¶ Obama was not to blame that this didn't happen. The crushing problems and bruising fights over deficit reduction, spending, health care reform, coupled with high soaring gas prices and the jobless crisis were endless and time consuming. The fights required every bit of his political capital and arm twisting to make any headway against an obstructionist, intransigent and petty GOP determined to make him pay a steep political price for every inch of legislative ground he sought to gain.¶ The 2012 election changed only one thing with the GOP. That was its in your face, xenophobic rants against illegals supposedly stealing jobs from Americans and breaking the law. GOP leaders had no choice but to tamp down their saber rattle immigration rhetoric for the simple fact that Latino voters punished the party mightily in 2012 for that rhetoric, and sent an even stronger signal that it would continue to punish the GOP if it didn't change at least its tone on immigration. The 2012 election changed one other thing. It gave Obama the long sought and awaited opening he needed to go full throttle on immigration reform. ¶ The election result was not the only strong point for Obama on reform. In 2007, then President George W. Bush was widely and unfairly blamed for making a mess of the immigration reform fight in Congress by not pushing hard enough for passage of the bill. Immigrant rights groups lambasted Republican senators for piling crippling demands for tight amnesty, citizenship and border security provisions in the bill. Leading Republican presidential contenders didn't help matters by flatly opposing the bill as much too soft on amnesty and border enforcement. ¶ This did much to kill whatever flickering hope there was for the bill's passage. This undid the inroads that Bush made in the 2000 and 2004 presidential elections when he scored big with Latino voters. A big part of that then was due to the perception (and reality) that Bush would push hard for immigration reform. But the GOP didn't learn a thing from this. It was almost as if Bush's Latino vote ramp up was an aberration. The GOP's metallic ear on immigration culminated in the idiotic quip from GOP presidential loser Mitt Romney that the best way to solve the immigration crisis was for undocumented workers to "self-deport." ¶ Obama's battle for the Latino vote in 2012 was never intended to head off any mass defection of Latino voters to the GOP. There was never any chance of that. The polls that showed Latinos less than enthusiastic about Obama also showed absolutely no enthusiasm for any GOP would-be presidential candidate, let alone that there would be a massive vote for GOP candidates. ¶ Still, Obama's frontal challenge to the GOP to do something about immigration reform is not only a long overdue move to right a long simmering policy wrong, but a move that if handled right can do much to shove the wrenching issue of what to do about the nation's millions that are here without papers, and are here to stay, off the nation's political table. There's absolutely no risk, only gain, for Obama in taking the point on immigration reform to try and make that happen.

### AT: Winners Win (Hirsh)

#### Can’t win on energy

Eisler 12 Matthew is a Researcher @ the Chemical Heritage Foundation. “Science, Silver Buckshot, and ‘All of The Above’” April 2, 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.

#### Winners lose---PC’s not renewable, is zero-sum, and diminishes fast

Ryan 9 Selwyn, Professor Emeritus and former Director, Institute of Social and Economic Research, University of the West Indies, “Obama and political capital,” 1/18 http://www.trinidadexpress.com/index.pl/article\_opinion?id=161426968

Like many, I expect much from Obama, who for the time being, is my political beast of burden with whom every other politician in the world is unfavourably compared. As a political scientist, I however know that given the structure of American and world politics, it would be **difficult for him to deliver half of what he has promised**, let alone all of it. Reality will **force him to make many "u" turns** and detours which may well land him in quick sand. Obama will, however, begin his stint with a **vast accumulation of political capital**, perhaps more than that held by any other modern leader. Seventy-eight per cent of Americans polled believe that his inauguration is one of the most historic the country will witness. Political capital is, however, a lumpy and **fast diminishing asset** in today's world of instant communication, which once misspent, is **rarely ever renewable**. The world is full of political leaders like George Bush and Tony Blair who had visions, promised a lot, and probably meant well, but who **did not know how to husband** the **political capital** with which they were provided as they assumed office. They squandered it as quickly as they emptied the contents of the public vaults. Many will be watching to see how Obama manages his assets and liabilities register. Watching with hope would be the white young lady who waved a placard in Obama's face inscribed with the plaintive words, "I Trust You." Despite the general optimism about Obama's ability to deliver, many groups have already begun to complain about being betrayed. Gays, union leaders, and women have been loud in their complaints about being by-passed or overlooked. Some radical blacks have also complained about being disrespected. Where and when is Joshua going to lead them to the promised land, they ask? When is he going to pull the troops out of Iraq? Civil rights groups also expect Obama to dis-establish Guantanamo as soon as he takes office to signal the formal break with Dick Cheney and Bush. They also want him to discontinue the policy which allows intelligence analysts to spy on American citizens without official authorisation. In fact, Obama startled supporters when he signalled that he might do an about-turn and continue this particular policy. We note that Bush is signalling Obama that keeping America safe from terrorists should be his top priority item and that he, Bush, had no regrets about violating the constitutional rights of Americans if he had to do so to keep them safe. Cheney has also said that he would do it again if he had to. The safety of the republic is after all the highest law. Other groups-sub-prime home owners, workers in the automobile sector, and the poor and unemployed generally all expect Obama to work miracles on their behalf, which of course he cannot do. Given the problems of the economy which has not yet bottomed out, **some promises have to be deferred** beyond the first term. Groups, however, expect that the promise made to them during the campaign must be kept. Part of the problem is that almost every significant social or ethnic group believes that it was instrumental in Obama's victory. White women felt that they took Obama over the line, as did blacks generally, Jews, Hispanics, Asians, rich white men, gays, and young college kids, to mention a few of those whose inputs were readily recognisable. Obama also has a vast constituency in almost every country in the world, all of whom expect him to save the globe and the planet. Clearly, he is the proverbial "Black Knight on a White Horse." One of the "realities" that Obama has to face is that **American politics is not a winner-take-all system**. It is pluralistic vertically and horizontally, and getting **anything done politically**, even when the President and the Congress are controlled by the same party, **requires groups to negotiate, bargain and engage in serious horse trading.** No one takes orders from the President who can only use moral or political suasion and promises of future support for policies or projects. The system was in fact deliberately engineered to prevent overbearing majorities from conspiring to tyrannise minorities. The system is not only institutionally diverse and plural, but socially and geographically so. As James Madison put it in Federalist No 10, one of the foundation documents of republicanism in America, basic institutions check other basic institutions, classes and interests check other classes and interests, and regions do the same. All are grounded in their own power bases which they use to fend off challengers. The coalitions change from issue to issue, and there is no such thing as party discipline which translated, means you do what I the leader say you do. Although Obama is fully aware of the political limitations of the office which he holds, he is fully aware of the vast stock of political capital which he currently has in the bank and he evidently plans to enlarge it by drawing from the stock held by other groups, dead and alive. He is clearly drawing heavily from the caparisoned cloaks of Lincoln and Roosevelt. Obama seems to believe that by playing the all-inclusive, multipartisan, non-ideological card, he can get most of his programmes through the Congress without having to spend capital by using vetoes, threats of veto, or appeals to his 15 million strong constituency in cyberspace (the latent "Obama Party").

#### Winners lose specifically for Obama’s second term

Walsh 12 Ken covers the White House and politics for U.S. News. “Setting Clear Priorities Will Be Key for Obama,” 12/20, 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.

### AT: Thumpers

#### It’s top of the agenda and will pass---comes before guns and economy

Pimentel 2/15 Joseph is a writer at Asian Journal. “Proponents of comprehensive immigration reform hope for resolution in August,” 2013, http://www.asianjournal.com/community/community-news/19469-proponents-of-comprehensive-immigration-reform-hope-for-resolution-in-august.html

LOS ANGELES – Pro-immigration advocates are hopeful that the government will pass a comprehensive immigration reform (CIR) legislation by August, giving relief to the more than 11 million undocumented individuals in the United States.¶ During a New America Media national telebriefing: Tracking Immigration Reform in 2013 on Thursday, proponents of CIR believe this is the year – and have set August as its target date - that reform legislation has to pass or the issue may languish again.¶ “That is an ambitious timeline but I believe I think it’s one that is possible,” said Angela Kelley, vice president for Immigration Policy and Advocacy, Center for American Progress.¶ “Those of us who have been fighting for reform for all these years, it is one that we must push and frankly, demand. Time is not our friend. The closer you get to the end of the year, the harder it is to get (Senate and House of Representative) members to do anything,” Kelley added.¶ Comprehensive immigration reform has been a polarizing issue, mired in Washington politics for years with both sides unable to get anything done. This year it appeared CIR would once again take a backseat as other issues like gun control, and the economy have been placed on top.¶ Heading into his second term, President Barack Obama has placed immigration reform on top of his agenda -- doing a speech about the issue in Las Vegas and mentioning it again during his State of the Union address.¶ “We know what needs to be done,” said Obama during his state of the union speech. “As we speak, bipartisan groups in both chambers are working diligently to draft a bill, and I applaud their efforts. Now let’s get this done. Send me a comprehensive immigration reform bill in the next few months, and I will sign it right away.”¶ Obama is looking at his legacy and leading the charge on this issue, said Kelley.¶ Frank Sharry of America’s Voice, an immigration policy group, said unlike years past when Republicans and Democrats constantly butted heads over the issue, now “both parties have a political imperative to get comprehensive immigration reform passed the goal line.”

#### **It’s top of the docket**

Papich 2/6 Michael is a writer for The Pendulum. “Immigration reform returns to legislative forefront,” 2013, http://www.elonpendulum.com/2013/02/immigration-reform-returns-to-legislative-forefront/

Four years ago, it was the stimulus package and the health care bill. Now, it’s immigration reform. Recent proposals from the Senate and the president may make immigration reform the first big legislative push of Barack Obama’s next four years.¶ A bipartisan committee of eight senators put out a framework for an immigration reform bill Jan. 28. Among other things, the proposal includes a system to provide undocumented immigrants currently in the United States a way to obtain “probationary legal status” after completing a background check and paying various fines and taxes. To receive a green card, these individuals would complete mandatory English and civics courses, show a history of employment and undergo further background checks.

#### Push for CIR happening now

Seldin 2/6 Jeff is a writer for Voice of America. “Battle for US Immigration Reform Gathers Steam,” 2013, http://www.voanews.com/content/battle-for-us-immigration-reform-moves-on-ahead-of-state-of-the-union/1598101.html

U.S. President Barack Obama is expected to make immigration reform a priority in his State of the Union Address. But already, talk of tackling this controversial issue is gaining momentum.¶ There are an estimated 11-million illegal immigrants in the United States with more still hoping to cross the border.¶ Claudia Hernandez came here as a child, and like many in her situation, she feels she belongs in the U.S. ¶ "I have been here more than half of my life, and I respect the United States. This is my country," she said.¶ Only days into his second term, President Obama began the push for change.¶ "The time has come for common-sense, comprehensive immigration reform," he stated. "The time is now."¶ Already, Congress has begun to hold hearings.¶ And a bipartisan group of senators, including former Republican presidential candidate John McCain, is pushing ahead with a plan of its own.

#### It’s the top priority

Becker and Palmes 2/7 Bernie and Amie are writers @ The Hill. “Obama 'prepared, eager and anxious' for sequester fight with Republicans,” 2013, http://thehill.com/homenews/administration/281741-obama-prepared-eager-and-anxious-for-gop-in-sequester-fight

Obama also stressed that immigration reform would be a “top priority” and that he was heartened that both Republicans and Democrats were already working hard on the issue.¶ “Now, is the time. I recognize that the politics aren’t always easy,” Obama said, adding that part of the country’s strength is “our history of attracting talent from all around the world.”

###  2NC---AT: Sequestration/Tax Reform Pounder

#### Obama’s not spending PC on sequestration

RCP 2/20 Real Clear Politics, Alexis Simendinger. “Obama Presses His Sequester Case, But Who's Listening?” 2013, http://www.realclearpolitics.com/articles/2013/02/20/obama\_presses\_his\_sequester\_case\_but\_whos\_listening\_117076.html

Republicans complain Obama has shown no serious leadership, no new ideas, and no willingness to negotiate directly with the opposing party. Asked why the president will not talk to Republicans directly about sequestration, the White House said Obama’s door is always open.¶ “The obstacle thus far to compromise has been the adamant refusal by Republicans to agree to a balanced approach to deficit reduction, a balanced approach that the American people support, that Democrats, independents and even Republicans outside of Washington support,” Carney said.¶ In Obama’s view, he is communicating with Republicans. He talks to them through television, via interviews and speeches, and uses social media to reach their constituents. What he doesn’t use to hammer out accords are White House conference rooms, or telephones (although he called Sens. John McCain, Marco Rubio and Lindsey Graham to discuss immigration reform Tuesday).¶ Vice President Joe Biden, the White House Congress-whisperer, is not involved in any secret talks on Capitol Hill, and won’t be pulled off the bench until the GOP concedes on taxes, the president’s aides suggested Tuesday.¶ The GOP may remain unmoved by the president’s warnings about looming devastation and job losses. But Obama is betting that Americans can raise enough of a ruckus to be heard. Granted, there are just nine days until yet another Washington budget deadline.

#### He’s not actually spending PC---just trying to look good in the public’s eye

Cillizza 2/19 Chris is a writer for the Washington Post. “The sequester is inevitable. So why is President Obama still talking about it?” 2013, http://www.washingtonpost.com/blogs/the-fix/wp/2013/02/19/the-sequester-is-inevitable-so-why-is-president-obama-still-trying-to-avert-it/

But, it would be a mistake to assume that Obama’s emphasis on the need to avert the sequester means that he believes that a deal can be made to do that between now and March 1. He doesn’t.¶ Remember that Obama has always had a pragmatic political streak — his decision to reverse course in the 2008 presidential race and forego public financing being one obvious example — and, since the collapse of the grand bargain talks in the summer of 2011, he has become a far more cynical (and politically successful) operator.¶ Seen through that lens — and that’s the lens you should see all of Obama’s moves these days — what the president is doing with his repeated public emphasis on the sequester is laying the groundwork to win the political argument over the cuts in a few weeks time.¶ Here’s the reality of the sequester: No one outside of Washington knows a) what it is and b) what it will do.¶ But, that will change on March 1 when the $1.2 trillion in cuts — granted, they will be spread out over the next decade but still — hit. While many of the cuts will be slow to take effect, there is expected to be a direct and quick impact on the federal workforce and the defense industry. The reverberations from those events — and the resultant news coverage — will almost certainly shine a light on just what the sequester is and what it will do if left in place for the next ten years.¶ When people start paying attention to the sequester, President Obama wants to make sure that he has the political high ground in the blame game. These two public statements over the past few weeks — not to mention his State of the Union address — allow him to tell people that he warned Congress of the dangers of allowing the sequester to happen and they chose to ignore him. It’s an “I told you so” moment.

### 2NC---AT: Gun Control Pounder

#### Biden’s pushing guns, not Obama, and immigration comes first

Potts 2/21 Tracie is a writer for WWLP News. “Immigration, guns, or the budget?” 2013, http://www.wwlp.com/dpp/news/politics/immigration-guns-or-the-budget

(NBCNC) - Vice president Biden speaks at a gun violence conference in Connecticut today - in the same place 20 children died when a gunman burst into their school. ¶ Even with big budget cuts are looming, the White House is trying to keep the pressure on Congress to deal with gun violence. ¶ In Connecticut today, Vice President Biden will likely make this point again: "The weapon used by the young man used to killing those 20 innocent, beautiful babies, up in Newtown, that weapon is not necessary for your self-defense," said Vice President Joe Biden. ¶ But it's these comments that raised eyebrows. "Buy a shotgun, buy a shotgun[.] Put that double-barreled shotgun, and fire two blasts outside the house," said Vice President Joe Biden. ¶ The White House explained. "The point he was making is that you do not need a military-style assault weapon, and that a shotgun would do the trick," said Jay Carney, White House Press Secretary. ¶ But a ban on assault weapons is unlikely. "An assault weapons ban will not pass the Congress of the United States[.] "Increased background checks, closing loopholes, other things like that. That's fine," said Senator John McCain, (R) Arizona. ¶ But the question is whether gun control will even come up for a vote. Right now, Washington is laser-focused on preventing those $85 billion in budget cuts, now just days away. ¶ Then there's immigration reform. "My hope is that we can get votes on all these items," said President Barack Obama. ¶ Immigration caused heated exchanges at John McCain's town hall in Arizona. ¶ And it could eclipse any quick action on gun control.

#### He’s given up on gun control---merely rhetorical support

Lender 2/16 Jon is a writer at The Hartford Courant. “Obama's 'Candid Admission Of Defeat' On Gun Control?” 2013, http://articles.courant.com/2013-02-16/news/hc-guns-congress-newtown-20130216\_1\_gun-restrictions-gun-control-executive-orders

The most powerful moment in President Barack Obama's State of the Union address last Tuesday came when he told members of Congress that the victims of the Dec. 14 Newtown school massacre and other killings "deserve a vote" on his legislative proposals to curb gun violence.¶ "The families of Newtown deserve a vote. The families of Aurora deserve a vote," Obama said, to tumultuous applause. "If you want to vote no, that's your choice. But these proposals deserve a vote."¶ Supporters of gun control hailed the ringing call for action and said Newtown has given historic momentum to the effort to pass federal firearms restrictions – but not every advocate found encouragement in the president's words.¶ "It was … a very sad, candid admission of defeat, in my view — because the President is a smart guy, and he knows … that the votes aren't there," said former Connecticut congressman Toby Moffett, a strong supporter of the wide array of gun-control proposals Obama made in mid-January.¶ If Obama thought he had the votes to get his legislation through Congress, he might have mentioned specific proposals in his speech — which he didn't — and probably would have pushed harder for passage than merely asking that they come to a vote, Moffett said in an interview two days after Obama's speech.¶ Lacking the needed votes, the best Obama could do was try to get opponents to go on the record as voting "no," Moffett said — because, in his view, it will probably take a sustained effort for years to overcome the powerful opposition to stronger gun restrictions, and a big part of that will be "to make votes against gun control into a political liability." The way to begin that process is to "start taking names," he said.¶ Moffett talked by phone from Washington, D.C., where he has been a lobbyist most of the time since 1983, when he ended eight years as a liberal Democratic member of the U.S. House representing the former 6th District in central Connecticut. He has been giving free strategic advice on gun control to church leaders since the Newtown massacre.¶ "This is a multi-year fight, and a generational fight, and it's going to take time," he argued. By "generational," he said he meant that when a new generation of younger people come to think about an issue differently — which takes time — it is easier to change long-entrenched attitudes and laws. An analogy is what happened with same-sex marriage, he said.¶ Moffett said he is close with a number of Democratic members of Congress who support gun-control, and they tell him candidly that initial constituent comments in favor of gun restrictions after Dec. 14 had been replaced weeks later by "mail and emails … all running against doing anything."¶ "Thank goodness that we have a President who issued … 29 executive orders" last month to impose gun restrictions, Moffett said. "Within those executive orders there are a lot of good things about stepped-up enforcement. Now it has to be followed by funding, and so Obama's challenge, with the budget being as tight as it is, is to try to shift money over to the appropriate enforcement, and beefed-up background checks, and the other things he can do under those executive orders."¶ 'Dance Marathon'¶ On Jan. 29, Moffett startled many gun-control advocates when he wrote an article called "The Congressional 'Dance' on Gun Control" for the online Huffington Post. In it, he said the "fight can be won," but "it just won't happen quickly," and it will be a "dance marathon" lasting years.¶ In Thursday's interview, he elaborated on that theme in the context of Obama's national speech two days earlier. "This is going to be a long dance, and …right now the dance is not going our way — and I think that's basically what Obama was suggesting. But he couldn't say it in the State of the Union."¶ Clearly, Moffett sees a colder reality than the one experienced by more than 5,000 gun-control supporters who rallied enthusiastically at the State Capitol in Hartford last Thursday for similar gun restrictions being considered at the state level.¶ Moffett said it's best to face facts about Congress: the U.S. House is Republican-controlled, and it's possible that the most ambitious proposals by Obama — reinstatement of a national assault-weapons ban, and restriction of ammunition magazines to 10 rounds of ammunition, for example — may not ever come to a vote in that chamber.¶ And even in the Senate, where Democrats control 55 seats, the President can't count on all Democrats backing him, and if Republicans filibuster the issue, it would be hard to muster the 60 votes for cloture to end the stall, Moffett said.

### Will Pass

#### Will pass---bipartisan support and Obama push

Samay 2/21 Sahara is a reporter at Samay Live. “Obama is hoping to sign immigration reform bill,” 2013, Factiva

US President Barack Obama is encouraged by the progress made in the US Congress on comprehensive immigration reform and hoped that a bill in this regard would soon land up on his table for signature.¶ "As the (US) President has made clear, he is encouraged by and hopeful about the process underway in the Senate, the bipartisan process led by the so-called Gang of Eight (a group of eight Senators), towards achieving a comprehensive immigration reform bill that could pass the Senate -- and hopefully pass the House, and land on his desk for his signature," the White House Press Secretary Jay Carney told reporters here yesterday.¶ "He (Obama) prefers that option to any other, and he is very encouraged by the progress that's been made so far. He thought his conversations with Senate Democrats involved in this process last week were very productive, and he felt the same about his conversations with Senate Republicans yesterday," Carney said referring to the telephonic conversations the US President had with top three Republican lawmakers, a day earlier.¶ Responding to questions, Carney said there is not much disagreement among various parties when it comes to the need to pursue enhanced border security as part of comprehensive immigration reform.¶ "That's part of why it's called comprehensive. So we look forward, to continuing to work with Congress, work with the Senate as they pursue bipartisan comprehensive immigration reform legislation," he said.¶ Carney said that the prospects of success in this regard can be easily reflected from the comments of Republican Senator Mario Rubio."But we encourage the Senate to keep working because this is a significant priority. It's a priority that has in the past enjoyed broad bipartisan support, and that we believe is, once again, enjoying that kind of support," the White House Press Secretary said.

#### Reject their pessimism---prospects for passage are strong

Trinko 2/19 Katrina is a writer for the National Review. “Rubio Still Optimistic about Bipartisan Immigration Reform,” 2013, http://www.nationalreview.com/corner/341070/rubio-still-optimistic-about-bipartisan-immigration-reform-katrina-trinko

Despite the flurry of negative press coverage suggesting that immigration reform is in jeopardy, the Rubio team remains optimistic that bipartisan legislation can pass.¶ While Senate Republicans who aren’t part of the immigration Senate gang have been fairly quiet on the topic of immigration, Rubio’s team stresses that the legislation — which won’t be released until March — is not dead. “Private conservations have been very positive,” says Rubio press secretary Alex Conant of other Republican senators. “People are understandably waiting to see the legislation before they commit one way or the other.” But the White House immigration plan that was leaked this weekend didn’t help. “To the extent we’re trying to build a coalition of conservatives who will support this plan, conservatives are going to be less likely to want to support it if they think President Obama’s just going to pull the rug out from underneath us on it,” says Conant.

#### There’s strong momentum---labor/business compromise proves

Grant 2/21 David is a writer for the Christian Science Monitor. “Behind-the-scenes deal pushes immigration reform closer to reality,” 2013, <http://www.csmonitor.com/USA/Politics/2013/0221/Behind-the-scenes-deal-pushes-immigration-reform-closer-to-reality>

A compromise agreement announced Thursday between the nation’s largest labor union and the top advocate for American business underscores the enormous momentum now behind immigration reform.¶ The agreement touches on what was seen to be potentially one of the biggest stumbling blocks in the immigration reform debate – namely, how the country should handle the flow of low-skilled, temporary foreign workers.¶ In finding middle ground, the AFL-CIO and the US Chamber of Commerce – two powerful organizations often at loggerheads – have taken a “strong step forward” in resolving the issue, says Ali Noorani, executive director of the National Immigration Forum. Moreover, they have added to the impression that important stakeholders – seeing immigration reform as increasingly likely – are putting aside public posturing in order to hammer out solutions. ¶ “This particular slice of the pie is the most important piece: What does our immigration system look like moving forward?” Mr. Noorani says. “Every day, [the Chamber and the AFL-CIO] are going to continue to put more meat on these bones.... For them to agree, even on the bones, means that they've been engaged in a really serious negotiation.”¶ Praise for the deal came from both sides of the aisle – House majority leader Eric Cantor (R) of Virginia and Sen. Charles Schumer (D) of New York. "We are very hopeful that an agreement can be reached on a specific proposal in the next few weeks," said Senator Schumer, a member of the bipartisan Senate group working on an immigration compromise, in a statement.

### AT: Murphy

#### The bill solves

Rojas 2/1 Leslie is a writer for Southern California Public Radio. “Immigrant visa backlogs: How will reform plans address long waits?” 2013, http://www.scpr.org/blogs/multiamerican/2013/02/01/12336/immigrant-visa-backlogs-how-do-both-reform-plans-p/

The immigration reform plans President Obama and the U.S. Senate proposed this week would change the way this country legally admits immigrants and workers. And that means tackling the problem of visa backlogs.¶ The process for entering the United States via the family-sponsored visa category is onerous to applicants - especially to would-be immigrants from certain countries. In the family-sponsored category, the Philippines consistently tops the list for the nation in which immigrants sponsored by siblings and other relatives must wait longest to enter the United States. It's not unusual for them to wait two decades or more.¶ Mexico runs a close second. While the waits aren't quite as bad for immigrants from China and India, they are still excruciatingly long. Same goes for other hopeful immigrants, particularly those from Asian countries; of the top eight nations with the most people on waiting lists to enter the U.S., six of these are Asian countries.¶ What do President Obama, and the bipartisan Senate coalition, plan to do about it? First, from the White House plan:¶ The proposal seeks to eliminate existing backlogs in the family-sponsored immigration system by recapturing unused visas and temporarily increasing annual visa numbers. The proposal also raises existing annual country caps from 7 percent to 15 percent for the family-sponsored immigration system. It also treats same-sex families as families by giving U.S. citizens and lawful permanent residents the ability to seek a visa on the basis of a permanent relationship with a same-sex partner. The proposal also revises current unlawful presence bars and provides broader discretion to waive bars in cases of hardship.¶ The Senate plan acknowledges that the current system "has created substantial visa backlogs which force families to live apart, which incentivizes illegal immigration." It continues:¶ Our new immigration system must be more focused on recognizing the important characteristics which will help build the American economy and strengthen American families. Additionally, we must reduce backlogs in the family and employment visa categories so that future immigrants view our future legal immigration system as the exclusive means for entry into the United States.

#### Squo solves---USCIS procedures have been streamlined

Greene 13 Samantha is a writer for the American Council on International Personnel. “ACIP Applauds USCIS Effort to Streamline U.S. Immigration System,” 1/7, http://www.acip.com/NWSRM\_ACIP\_Applauds\_USCIS\_Effort\_to\_Streamline\_US\_Immigration\_System

Washington, D.C. – The American Council on International Personnel (ACIP) today applauded U.S. Citizenship and Immigration Services (USCIS) for its effort to streamline regulations with the release of the first volume of its newly centralized USCIS Policy Manual. Intended to replace the current Adjudicator’s Field Manual and USCIS Policy Memoranda website, the new Policy Manual will concentrate all immigration laws and regulations in one location, which should save employers time and resources.¶ ¶ “We commend USCIS for the launch of this important effort to streamline and modernize the U.S. immigration system,” said ACIP Executive Director Lynn Shotwell. “One central repository for immigration policies should allow U.S. employers to spend less time deciphering complicated laws and regulations and more time growing their businesses and driving job creation.”¶ ¶ The new Policy Manual, developed with input from both internal and external agency stakeholders, including ACIP, will be released in a series of volumes for each area of immigration law the agency covers. The first volume, on Citizenship and Naturalization, was released today. Agency staff are being trained on the new Manual and a series of webinars are being held for external stakeholders.¶ ¶ “Modernizing the U.S. immigration system and improving customer service are critical to U.S. competitiveness,” said Shotwell. “We look forward to continued collaboration with the agency to ensure the U.S. immigration system is efficient and predictable for all U.S. employers.”

### AT: XO Solves (Nakamura)

#### Only Congress can enact comprehensive reforms AND XO’s will be rolled back

Lerer 2/10 Lisa is a writer at Bloomberg. “Obama State of Union Means Executive Power for Defiant Congress,” 2013, http://www.bloomberg.com/news/2013-02-11/obama-poised-to-skirt-congress-to-seal-legacy-in-new-term-agenda.html

Already, plans are being laid to unleash new executive orders, regulations, signing statements and memorandums designed to push Obama’s programs forward and cement his legacy, according to administration aides and allies.¶ “The big things that we need to get done, we can’t wait on,” said White House senior adviser Dan Pfeiffer. “If we can take action, we will take action.”¶ The tactic carries political risk, beyond the backlash it will spark from congressional Republicans. Advisers say the president -- who already faces charges from Republicans that he is concentrating too much power in the White House -- remains cautious about getting too far ahead of public opinion. And executive orders can be overturned by a future president a lot easier than can legislation.¶ What’s more, Obama will still need to work through Congress to deal with some of the nation’s biggest concerns, including tax and spending issues as well as any comprehensive changes in the immigration system.

#### XO’s only change border enforcement, not visas

Lillis 2/16 Mike is a writer at The Hill. “Dems: Obama can act unilaterally on immigration reform,” 2013, http://thehill.com/blogs/regwatch/administration/283583-dems-recognize-that-obama-can-act-unilaterally-on-immigration-reform

Not all immigration-reform supporters think Obama has so much space to move on immigration without Congress.¶ Rep. Henry Cuellar (Texas), vice-chairman of the Democratic Steering and Policy Committee, said the president has some license to make border security moves and spending decisions.¶ "But pretty much he's done what he can do right now," Cuellar said Friday, "and after that it's up to Congress to address the rest of the issues."

## PPPL Advantage

#### Fusion research for EMALS is done at DIII-D, not the PPPL

David Baldwin, Fusion Power Associates, 4-28-2004, “General Atomics Fusion Effort Leads to Navy Application,” http://fpa.ucsd.edu/ARC04/fpn04-29.shtml

The Naval Air Warfare Center Aircraft Division awarded General Atomics (GA) a contract for the System Development and Demonstration phase of the Electromagnetic Aircraft Launch System (EMALS).

EMALS will replace the existing steam-driven catapults, providing a revolutionary advance in carrier launch operations. According to a GA press release, "the design will provide significant reductions in workload, greatly reducing manning for future launcher operations and maintenance. It will be less stressful to the aircrew and aircraft; and will require significantly less maintenance and onboard personnel, with correspondingly greatly reduced life-cycle costs." The EMALS system's first deployment will be on the next-generation carrier, the CVN-21. Mike Reed, Vice President of General Atomics' Electromagnetic Systems Division, stated, "Our team is thrilled with the award of the EMALS SDD phase contract and at having the opportunity to place this major advanced electric EMALS system on the next-generation carrier. We appreciate the significance of changing this vital aircraft launch system from steam to electric power. Reed went on to credit the development of GA's winning EMALS technology to the skills and basic technologies developed under General Atomics' fusion research program. General Atomics operates and is the host institution for the Department of Energy's DIII-D National Fusion Facility. DIII-D is the nation's largest magnetic fusion experiment. The GA press release states, "The purpose of the DIII-D device and program is to further the fundamental science of reaching and maintaining the conditions necessary for fusion (the energy source of the stars) on earth. While steady progress toward the ultimate goal of practical fusion energy is being made, the advances made on DIII-D and other facilities like it around the world have yielded important benefits in many other areas. The EMALS project is perhaps one of the more striking examples of this." "The attainment of fusion conditions in a device such as DIII-D requires extremely precise control of the discharge of large amounts of pulsed power" said David Baldwin, Senior Vice President and leader of General Atomics' Energy Group. "The major challenge of the EMALS system is exactly that: delivering precisely controlled amounts of pulsed power to the electromagnetic system that accelerates the airplanes off of the carrier deck. The unique skills developed by DIII-D technicians and scientists in this and related areas led directly to GA's winning approach to this challenge." Baldwin continued: "I am extremely proud of this latest example of fusion energy research yielding unexpected benefits to the nation." General Atomics, founded in 1955, specializes in diversified research, development, and manufacturing in defense, energy, and other advanced technologies. Affiliated manufacturing and commercial service companies include General Atomics Aeronautical Systems, Inc., which builds the Predator(r) family of unmanned aerial vehicles, and General Atomics Electronic Systems, Inc.