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#### Financial incentives must disburse federal funds for energy production—mandates and regulations are indirect incentive—that crushes limits

Webb 93 (Sessional lecture – Faculty of Law @ University of Ottawa, ’93 (Kernaghan, 31 Alta. L. Rev. 501)

One of the obstacles to intelligent discussion of this topic is the tremendous potential for confusion about what is meant by several of the key terms involved. In the hopes of contributing to the development of a consistent and precise vocabulary applying to this important but understudied area of regulatory activity, various terms are defined below. In this paper, "financial incentives" are taken to mean **disbursements18** **of** **public** **funds** or contingent commitments to individuals and organizations, intended to encourage, support or induce certain behaviours in accordance with express public policy objectives. They take the form of **grants, contributions**, repayable contributions, **loans, loan guarantees and** insurance, subsidies, procurement contracts and **tax expenditures.19** Needless to say, the ability of government to achieve desired behaviour may vary with the type of incentive in use: up-front disbursements of funds (such as with contributions and procurement contracts) may put government in a better position to dictate the terms upon which assistance is provided than contingent disbursements such as loan guarantees and insurance. In some cases, the incentive aspects of the funding come from the conditions attached to use of the monies.20 In others, the mere existence of a program providing financial assistance for a particular activity (eg. low interest loans for a nuclear power plant, or a pulp mill) may be taken as government approval of that activity, and in that sense, an incentive to encourage that type of activity has been created.21 Given the wide variety of incentive types, it will not be possible in a paper of this length to provide anything more than a cursory discussion of some of the main incentives used.22 And, needless to say, the comments made herein concerning accountability apply to differing degrees depending upon the type of incentive under consideration. By limiting the definition of financial incentives to initiatives where public funds are either disbursed or contingently committed, a large number of regulatory programs with incentive effects which exist, but in which no money is forthcoming,23 are excluded from direct examination in this paper. Such programs might be referred to as indirect incentives. Through elimination of indirect incentives from the scope of discussion, the definition of the incentive instrument becomes both more manageable and more particular. Nevertheless, it is possible that much of the approach taken here may be usefully applied to these types of indirect incentives as well.24 Also excluded from discussion here are social assistance programs such as welfare and ad hoc industry bailout initiatives because such programs are not designed primarily to encourage behaviours in furtherance of specific public policy objectives. In effect, these programs are assistance, but they are not incentives.

**For is a term of exclusion – requiring direct action upon**

US CUSTOMS COURT 39 AMERICAN COLORTYPE CO. v. UNITED STATES C. D. 107, Protest 912094-G against the decision of the collector of customs at the port of New York UNITED STATES CUSTOMS COURT, THIRD DIVISION 2 Cust. Ct. 132; 1939 Cust. Ct. LEXIS 35 The same reasons used by the appellate court may be adopted in construing the language of the statute herein involved. If the words "for industrial use" mean no more than the words "articles of utility," there could be no reason for inserting the additional words "for industrial use" in the paragraph. Therefore, it must be held that the [\*135] new language "for industrial use" was intended to have a different meaning from the words "articles of utility," as construed in the case of Progressive Fine Arts Co. v. United States, [\*\*8] supra. Webster's New International Dictionary defines the word "industrial" as follows: Industrial. 1. Relating to industry or labor as an economic factor, or to a branch or the branches of industry; of the nature of, or constituting, an industry or industries \* \* \* . The transferring of the scenes on an oil painting to a printed copy is a branch of industry under the definition above quoted. Some of the meanings of the preposition "for" signify intent, as shown by the following definition in the same dictionary: For. 2. Indicating the end with reference to which anything is, acts, serves, or is done; as: a. As a preparation for; with the object of; in order to be, become, or act as; conducive to. \* \* \*. d. Intending, or in order, to go to or in the direction of. Therefore, the words "articles for industrial use" in paragraph 1807 imply that Congress intended to exclude from that provision articles either purchased or imported with the intention to use the same in industry for manufacturing purposes.

#### Contextually Feed in tariffs are indirect and distinct from financial incentives – prefer this evidence because it is comparative

Joanna **Lewis and** Ryan **Wiser** – Gtown STIA Prof / LAWRENCE BERKELEY NATIONAL LABORATORY – November 20**05**, Fostering a Renewable Energy Technology Industry: An International Comparison of Wind Industry Policy Support Mechanisms, <http://eetd.lbl.gov/ea/emp/reports/59116.pdf>

Policy measures to support wind industry development can be grouped into two categories: direct and indirect measures. Direct measures refer to policies that specifically target local wind manufacturing industry development, while indirect measures are policies that support wind power utilization in general and therefore indirectly create an environment suitable for a local wind manufacturing industry (by creating sizable, stable markets for wind power). The discussion that follows covers both of these types of measures, and is a summary of the more detailed country case studies provided in Lewis and Wiser (2005). **4.1. Direct Support Mechanisms** Policies that directly support local wind turbine or components manufacturers can be crucial in countries where barriers to entry are high and competition with international leaders is difficult. A variety of policy options exist to directly support local wind power technology manufacturing, and several policy options have proven effective, as demonstrated in a number of countries (Table 4). These various policy mechanisms do not all target the same goal; some provide blanket support for both international and domestic companies to manufacture locally, while others provide differential support to domestically-owned wind turbine or components manufacturers. Most countries have employed a mix of the following policy tools. 13 Table 4. Policy Measures to Support Wind Power, Country Comparison Direct Policies Primary Countries Where Implemented Local content requirements Spain, China, Brazil, Canadian provinces Financial and tax incentives Canada, Australia, China, US states, Spain, China, Germany, Denmark Favorable customs duties Denmark, Germany, Australia, India, China Export credit assistance Denmark, Germany Quality certification Denmark, Germany, USA, Japan, India, China Research and development All countries to varying degrees; notable programs in Denmark, Germany, US, Netherlands Local Content Requirements The most direct way to promote the development of a local wind manufacturing industry is by requiring the use of locally manufactured technology in domestic wind turbine projects. A common form of this policy mandates a certain percentage of local content for wind turbine systems installed in some or all projects within a country. Such policies force wind companies interested in selling to a domestic market to look for ways to shift their manufacturing base to that country or to outsource components used in their turbines to domestic companies. Unless the mandate is specifically targeted to domestically owned companies, it will have the blanket effect of encouraging local manufacturing regardless of company nationality. Local content requirements are currently being used in the wind markets of Spain, Canada, Brazil and China. Spanish government agencies have long mandated the incorporation of local content in wind turbines installed on Spanish soil; the creation of Gamesa in 1995 can be traced in part to these policies. Even today, local content requirements are still being demanded by several of Spain’s autonomous regional governments that “see local wealth in the wind”—in Navarra alone, it is estimated that its 700 MW of wind power has created 4000 jobs (WPM, October 2004:45). Other regions, including Castile and Leon, Galicia and Valencia, insist on local assembly and manufacture of turbines and components before granting development concessions (WPM, October 2004:6). The Spanish government has clearly played a pro-active role in kickstarting a domestic wind industry, and the success of Gamesa and other manufacturers is very likely related to these policies. At least one provincial government in Canada—Quebec—is pursuing aggressive local content requirements in conjunction with wind farms developed in its region. In May 2003, Hydro-Quebec issued a call for tenders for 1000 MW of wind for delivery between 2006 and 2012 which included a local content requirement; this 1000 MW call was twice the size initially planned by the utility, but it was doubled by the Quebec government with the hope of contributing to the economic revival of the Gaspe Peninsula (WPM, May 2003:35; WPM, April 2004:41). The government also insisted that Quebec’s wind power development support the creation of a true provincial industry that included local manufacturing and job creation by requiring that 40% of the total cost of the first 200 MW be spent in the region—a proportion that rises to 50% for the next 100 MW and 60% for the remaining 700 MW (WPM, May 2003:35; April 2004:41). In addition, the government stipulated that the turbine nacelles be assembled in the region, and that project developers include in their project bidding documents a statement from a turbine manufacturer guaranteeing that it will set up assembly facilities in the region (WPM, May 2003:35). GE was selected to provide the turbines for a total of 990 MW of proposed projects 14 upon its agreement to meet a 60% local content requirement, and is currently establishing three manufacturing facilities in Canada (WPM, June 2005:36). In October 2005, another call for tenders was released, this time for 2000 MW to be installed between 2009-2013. This call requires that 30% of the cost of the equipment must be spent in the Gaspe region and 60% of the entire project costs must be spent within Quebec Province (Hydro-Quebec, 2005). The Brazilian government has also pursued policies governing wind farm development that include stringent local content requirements, primarily through the recent Proinfa legislation (the Incentive Program for Alternative Electric Generation Sources) that offers fixed-price electricity purchase contracts to selected wind projects. Starting in January 2005, the Proinfa legislation requires 60% of the total cost of wind plant goods and services to be sourced in Brazil; only companies that can prove their ability to meet these targets can take part in the project selection process. In addition, from 2007 onwards, this percentage increases to 90% (Cavaliero and DaSilva, 2005). China has also been using local content requirements in a variety of policy forms. China’s 1997 “Ride the Wind Program” established two Sino-foreign joint venture enterprises to domestically manufacture wind turbines; the turbines manufactured by these enterprises under technology transfer arrangements started with a 20 percent local content requirement and a goal of an increase to 80 percent as learning on the Chinese side progressed (Lew, 2000). China’s recent large government wind tenders, referred to as wind concessions, have a local content requirement that has been increased to 70% from an initial 50% requirement when the concession program began in 2003. Local content is also required to obtain approval of most other wind projects in the country, with the requirement recently increased from 40% to 70%. Local content requirements require a large market size in order to lure foreign firms to undertake the significant investments required in local manufacturing. If the market is not sufficiently sizable or stable, or if the local content requirements are too stringent, then the advantages of attracting local manufacturing may be offset by the higher cost of wind equipment that results. Some concerns of this nature have already been raised in Brazil, where only one wind turbine manufacturer appears currently able to meet the local content requirements. The potential negative impact of local content requirements on turbine costs has also been raised in Canada and China. These experiences suggest that local content requirements can work, but should generally be applied in a gradual, staged fashion and only in markets with sufficient market potential. Financial and Tax Incentives Preference for local content and local manufacturing can also be encouraged without being mandated through the use of both financial and tax incentives. Financial incentives may include awarding developers that select turbines made locally with low-interest loans for project financing, or providing financial subsidies to wind power generated with locally-made turbines. Tax incentives can be used to encourage local companies to get involved in the wind industry through, for example, tax credits or deductions for investments in wind power technology manufacturing or research and development. Alternatively, a reduction in sales, value-added-tax (VAT), or income tax for buyers or sellers of domestic wind turbine technology (or production) can increase the competitiveness of domestic manufacturers. In addition, a tax deduction could be permitted for labor costs within the local wind industry. Tax or financial incentives can also be applied to certain company types, such as joint ventures between foreign and local companies, in 15 order to promote international cooperation and technology transfer in the wind industry, and to specifically encourage some local ownership of wind turbine manufacturing facilities. Germany’s 100MW/250MW program provided a 10-year federal generation subsidy for projects that helped to raise the technical standard of German wind technology, and over twothirds of the total project funding for this subsidy went to projects using German-built turbines (Johnson and Jacobsson, 2003). Regional support for German industrial efforts with a bias towards local wind manufacturers have been reported as well (Connor, 2004). A further German policy that may have preferentially supported German turbine technology was the large-scale provision of “soft” loans (loans that are available significantly below market rates) for German wind energy projects. Canada has implemented a tax credit on wages paid out to local labor forces in an attempt to encourage large wind turbine manufacturers to shift jobs to Canada. To provide a further incentive for local manufacturing, a Quebec provincial government program also offers a 40% tax credit on labor costs to wind industries located in the region, and a tax exemption for the entire manufacturing sector through 2010 (WPM, June 2003:40). Spain’s production tax credit on windpowered electricity (supplemented by incentives offered in at least one province) is granted only to turbines that meet local content requirements (WPM, February 2001:20). In India, the excise duty is exempted for parts used in the manufacture of electric generators (Rajsekhar et al., 1999). Australia (at the national and provincial levels), China, and a number of US states have also employed a variety of different tax incentives to encourage localization of wind manufacturing. China provides a reduced VAT on joint venture wind companies to encourage technology transfer (NREL, 2004). China has also used financial incentives to promote domestic wind industry development since its 1997 “Ride the Wind Program,” which allocated new technology funds to two government-facilitated joint venture enterprises to domestically manufacture wind turbines. The Danish Government’s Wind Turbine Guarantee also offered long-term financing of large projects using Danish-made turbines and guaranteed the loans for those projects, significantly reducing the risk involved in selecting Danish turbines for a wind plant. Favorable Customs Duties Another way to create incentives for local manufacturing is through the manipulation of customs duties to favor the import of turbine components over the import of entire turbines. This creates a favorable market for firms (regardless of ownership structure) trying to manufacture or assemble wind turbines domestically by allowing them to pay a lower customs duty to import components than companies that are importing full, foreign-manufactured turbines. Customs duties that support local turbine manufacturing by favoring the import of components over full turbines have been used in Denmark, Germany, Australia, India, and China (Rajsekhar et al., 1999; Liu et al., 2002). This type of policy may be challenged in the future, however, as it could be seen to create a trade barrier and therefore be illegal for WTO member countries to use against other member countries. Export Credit Assistance Governments can support the expansion of domestic wind power industries operating in overseas markets through export credit assistance, thereby providing differential support to locally-owned manufacturers. Though such assistance may also come under WTO’s fire, export assistance can be in the form of low-interest loans or “tied-aid” given from the country where the turbine manufacturer is based to countries purchasing technology from that country. Export credit 16 assistance or development aid loans tied to the use of domestic wind power technology have been used by many countries, but most extensively by Germany and Denmark, encouraging the dissemination of Danish and German technology, particularly in the developing world. For example, the Danish International Development Agency (DANIDA) has offered direct grants and project development loans to qualified importing countries for use of Danish turbines. Quality Certification A fundamental way to promote the quality and credibility of an emerging wind power company’s turbines is through participation in a certification and testing program that meets international standards. There are currently several international standards for wind turbines in use, the most common being the Danish approval system and ISO 9000 certification. Standards help to build consumer confidence in an otherwise unfamiliar product, help with differentiation between superior and inferior products and, if internationally recognizable, are often vital to success in a global market. Denmark was the first country to promote aggressive quality certification and standardization programs in wind turbine technology and is still a world leader in this field; quality certification and standardization programs have since been used in Denmark, Germany, Japan, India, the USA, and elsewhere, and are under development in China. They were particularly valuable to Denmark in the early era of industry development when they essentially mandated the use of Danish-manufactured turbines, since stringent regulations on turbines that could be installed in Denmark made it very difficult for outside manufacturers to enter the market. Research and Development (R&D) Many studies have shown that sustained public research support for wind turbines can be crucial to the success of a domestic wind industry, and such efforts can and typically do differentially support locally owned companies. R&D has often been found to be most effective when there is some degree of coordination between private wind companies and public institutions like national laboratories and universities (Sawin, 2001; Kamp, 2002). For wind turbine technology, demonstration and commercialization programs in particular can play a crucial role in testing the performance and reliability of new domestic wind technology before those turbines go into commercial production. R&D funding has been allocated to wind turbine technology development by every country mentioned in this paper, with the success of R&D programs for wind technology seemingly more related to how the funding was directed than the total quantity of funding. Although the US has put more money into wind power R&D than any other country, for example, an early emphasis on multi-megawatt turbines and funding directed into the aerospace industry are thought (in retrospect) to have rendered US funding less effective in the early years of industry development than the Danish program (the same has been said about early German and Dutch R&D programs). Denmark’s R&D budget, although smaller in magnitude than some other countries, is thought to have been allocated more effectively among smaller wind companies developing varied sizes and designs of turbines in the initial years of industry development (Sawin, 2001; Kamp, 2002). 17 **4.2. Indirect Support Mechanisms** Earlier we demonstrated that success in a domestic market may be an essential foundation for success in the international marketplace, and that fundamental to growing a domestic wind manufacturing industry is a stable and sizable domestic market for wind power. Achieving a sizable, stable local market requires aggressive implementation of wind power support policies. The policies discussed below aim to create a demand for wind power at the domestic level. Feed-in Tariffs Feed-in tariffs, or fixed prices for wind power set to encourage development (Lauber, 2004; Rowlands, 2005; Sijm, 2002; Cerveny and Resch, 1998), have historically offered the most successful foundation for domestic wind manufacturing, as they can most directly provide a stable and profitable market in which to develop wind projects. The level of tariff and its design characteristics vary among countries. If well designed, including a long term reach and sufficient profit margin, feed-in tariffs have been shown to be extremely valuable in creating a signal of future market stability to wind farm investors and firms looking to invest in long-term wind technology innovation (Sawin, 2001; Hvelplund, 2001). As discussed earlier, Germany, Denmark and Spain have been the most successful countries at creating sizable, stable markets for wind power; all three of these countries also have a history of stable and profitable feed-in tariff policies to promote wind power development. The early US wind industry was also supported by a feed-in tariff in the state of California, though this policy was not stable for a lengthy period. Among the twelve countries emphasized in this paper, the Netherlands, Japan, Brazil, and some of the Indian and Chinese provinces have also experimented with feed-in tariffs, with varying levels of success.

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**C. Prefer our interpretation**

**1. Limits - Broad definitions could include 40 different mechanisms**

Moran, 86 **-** non-resident fellow at the Center for Global Development and holds the Marcus Wallenberg Chair at the School of Foreign Service at Georgetown University(Theodore, Investing in Development: New Roles for Private Capital?, p. 29 - googlebooks) Guisinger finds that if “incentives” are broadly defined to include tariffs and trade controls along with tax holidays, subsidized loans, cash grants, and other fiscal measures, they comprise more than forty separate kinds of measures. Moreover, the author emphasizes, the value of an incentive package is just one of several means that governments use to lure foreign investors. Other methods—for example, promotional activities (advertising, representative offices) and subsidized government services—also influence investors’ location decisions. The author points out that empirical research so far has been unable to distinguish the relative importance of fundamental economic factors and of government policies in decisions concerning the location of foreign investment—let alone to determine the effectiveness of individual government instruments.

2. **Ground – They do not spend federal money, this eliminates key ground on spending, politics, and trade-off debates – it also allows them to have highly specific evidence about their mechanism – they acquire additional solvency.**

**D. Topicality is a voting issue – if it were not the affirmative could run the same case year after year or unbeatable truths like sexual discrimination is harmful.**

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#### Natural gas prices high now- glut being drained

Day and Fitzgerald 3/18 (Matt Day And Drew Fitzgerald, Wall Street Journal, “Natural-Gas Futures Touch 16-Month High on Continued Cold Weather”, <http://online.wsj.com/article/SB10001424127887324323904578368261349032602.html>, March 18, 2013)

NEW YORK--Natural-gas futures soared to their highest price since October 2011 as investors bet that cold March weather would boost demand for the heating and power-plant fuel. The late-winter chill across most of the country has stirred demand for gas-fired heating at a time of year when temperatures typically climb and natural-gas use falls. Stockpiles of the fuel have dwindled at a faster-than-expected pace, reducing the odds that a glut would form later this year. Preliminary reports also suggest that drillers are throttling back on production, almost a year after concerns about too much supply pushed prices to decade lows. The winter season is coming to an end and the energy market readies for a slowdown in the need for heating fuels, but natural gas prices are up by 9%. MarketWatch's Jim Jelter discusses why demand for natural gas will increase in the future. (Photo: Getty Images) "We've been waiting for supply to sort of turn over," said Teri Viswanath, director of commodities strategy at BNP Paribas BNP.FR -1.72% . "This may be a sign that we've finally reined in our shale-gas growth." Natural gas for April delivery climbed as high as $3.965 a million British thermal unit in electronic trading on the New York Mercantile Exchange. That was the highest intraday level since Oct. 31, 2011. The front-month contract gave back some of those gains, ending 1 cent, or 0.3%, higher at $3.882/mmBtu. The rise brings relief to natural-gas drillers that have been battered by low prices. Coal-mining companies are also cheering, as increasingly expensive natural gas means utilities may return to the competing power-plant fuel. For consumers, a sustained rally in natural gas could lead to higher home-heating and electricity bills down the line. The rally comes as U.S. gas stockpiles, which hit all-time highs this time last year, have fallen by wider-than-normal amounts for five straight weeks, surprising analysts and traders who expected to exit the high-demand winter-heating season with plenty of gas in storage. In past years, late-winter rallies have fizzled when falling demand caused stockpiles to quickly build. A late-winter chill across most of the country is pushing up natural-gas prices. Above, a man shovels a Brooklyn sidewalk this month. "The size of the withdrawals that we've seen over the past month or so have really given prices the 'oompf' they need" to rally, Schneider Electric SU.FR -0.39% energy consultant Matt Smith said. Gas output from the lower 48 U.S. states fell 1.1% in December, the biggest month-on-month drop since February 2012, according to data from the Energy Information Administration. Falling stockpiles and production have turned speculators bullish on natural gas. Money managers such as hedge funds last week held more bets that natural-gas futures prices would rise than bets they would decline for the first time since November, according to data from the U.S. Commodity Futures Trading Commission.

#### Renewables lower natural gas prices- reduce demand

PR Newswire ‘12 (2012, <http://www.prnewswire.com/news-releases/new-national-study-shows-efficiency-and-renewables-can-provide-immediate-relief-from-high-natural-gas-prices-71038257.html>, “New National Study Shows Efficiency and Renewables Can Provide Immediate Relief from High Natural Gas Prices, September 8, 2012)

New investments in energy efficiency and renewable energy generation could begin lowering natural gas prices immediately and help retain manufacturing jobs, a study prepared by the American Council for an Energy-Efficient Economy (ACEEE) released today shows. The Energy Foundation (EF) commissioned ACEEE to prepare the study, Impacts of Energy Efficiency and Renewable Energy on Natural Gas Markets, to determine whether efficiency and renewables would produce significant price reductions and cost savings by reducing demand for natural gas. "This study shows that we can quickly reduce wholesale natural gas prices 10-20 percent and save consumers over $75 billion in the next five years," stated David Wooley, Vice President of the Energy Foundation. "The fastest, surest way to give gas and electricity consumers relief from spiking energy prices is to enact state and federal policies to expand renewable power generation and to help consumers install more efficient electric and gas appliances, heating and cooling systems." Specific policy solutions outlined in the study include: update state and federal appliance efficiency standards; require electric utilities to use more renewable power generation; expand rebates and grants to consumers to improve equipment efficiency and install clean on-site power generation; expand federal research and development support for emerging efficiency and renewable generation technologies; and establish tax credits for efficiency and renewable energy investments. "The study, which is based on a scientific analysis of natural gas markets, outlines the specific benefits that energy efficiency and renewables would provide to our economy by reducing the high energy costs borne by consumers and industry," explained Dr. Neal Elliott, Industry Program Director at ACEEE and co-author of the study. "Contrary to what many are saying, there is something we can do about natural gas prices right now. Increased efficiency and renewable energy can reduce natural gas prices quickly and affordably." According to the study, lower natural gas prices and consumption would save consumers $15 billion/year nationally from 2004 to 2008 for cumulative savings of over $75 billion over the next five years. This translates into an average residential household savings of $96 per year on natural gas bills. Additional savings would occur from lower electricity bills. "Along with a robust and diverse supply of energy, increased efficiency is clearly a critically important component of our response to the natural gas crisis," said Peter Molinaro, Dow's Vice President of Government Affairs. "Affordable and available natural gas is critical to the health of American industry, our economy, and the environment. Leaders in the public and private sector need to do everything they can to spur investment in more efficient insulation, appliances, motors, heating and cooling systems, lighting, and clean on-site generation." An increasing share of the electricity generated in the U.S., particularly in the Northeast, South, and on the West Coast, comes from natural gas-fired power plants. The analysis shows that natural gas expenditures by electric power generators would decrease by $6.2 billion in 2004 and by as much as $10.4 billion by 2008. This reduction in natural gas expenditures would reduce electricity rates in these regions, an additional benefit for electric power consumers. ACEEE's Elliott noted that rapidly rising gas prices are forcing industries to close or move production to other countries. The study shows that higher levels of energy efficiency and renewable energy would stem this decline. He added, "Energy efficiency and renewable energy investments help employment in the manufacturing sector because they reduce natural gas prices and help preserve U.S.-based jobs that rely on natural gas as a manufacturing feedstock. They also create substantial numbers of jobs in construction, installation, and component manufacturing." Natural gas is used as a fuel and raw material for a wide range of products including fertilizer, plastics, chemicals, and steel. In the wake of the northeastern blackout in August, Wooley of the Energy Foundation said that the policies that help reduce energy prices are consistent with steps needed to avoid future electric system failures. "Energy efficiency and distributed renewable generation lower peak demand on the electric transmission system and reduce the risk of system failures. They make our electric supply more secure without increasing our dependence on fossil fuel imports."

#### Low prices cause a Russian gas coalition with rogue nations

Hulbert ‘12 – Johns Hopkins University energy policy professor (Matthew, Central European University Public Policy department head (American graduate school based in Hungary), "Why America Can Make or Break A New Global Gas World," Forbes, 8-5-12, www.forbes.com/sites/matthewhulbert/2012/08/05/why-america-can-make-or-break-a-new-global-gas-world/print/, accessed 9-22-12, mss)

But it’s not all bad news for Russia. The first point is that most consumers (especially continental Europeans) are labouring under the illusion that spot markets mean cheap prices. What they miss, is that setting gas prices based on gas fundamentals has got nothing to do with being cheap – it’s purely about achieving a cost reflective price for whatever the markets (and fundamentals) suggest gas should be. Gas on gas competition might well have positive medium term effects on price given marginal costs of production are generally cheaper than oil. But there are never any guarantees. If anything, prices could initially be far more volatile than those associated with piped gas given the cyclical nature of the beast, not to mention adapting to new upstream investment regimes unable to fall back on the oil ‘certainties’ of old. But assuming these initial hurdles are jumped and gas markets are politically allowed to bed in, that’s where the real fun and games start. As much as consumers think they’ve taken the political sting out of gas producers tails, spot markets could actually give producers far more leverage to manipulate prices, either on a collective or bilateral basis. When you take a quick look at the map, it’s clear to see supply side dynamics are essentially oligopolistic in Europe, a position that Russia might decide to capitalise on. The question is whether Russia would have the nerve to go for it, or be able to take the ideological leap of faith needed to explore and exploit a potentially lucrative new world of gas benchmarks? Much would depend on pricing pressures involved and how far convergence has got, but the lower prices go, the more compelling prospect supply side collusion would become. Warning shots along such lines have been repeatedly fired by the GECF (even if often behind closed doors) with Russia, Algeria, Iran and Venezuela all wanting to recalibrate markets back towards producer interests. Obviously someone would have to shoulder initial opportunity costs and absorb likely free riding, enforce quotas and restrict new market entry at the fringe. They would also need to find a swing producer, that many have long thought would be Qatar, but actually, flags up a huge opportunity for Russia here. Instead of issuing empty threats to flood markets or decimate upstream investments, independent gas benchmarks might just provide Moscow with sufficient incentive to do what it should always have done: get to grips with the fact that US shale has made Russia a price taker in Europe (and Asia), and start developing LNG prospects to reclaim control of global gas fundamentals. Despite sitting on over **30% of global gas supplies**, Russian LNG production accounts for less than 5% of global share. Moscow has let itself become a fringe player in a global gas world. A ridiculous statement when you consider Russia is the gas equivalent to Saudi Arabia for oil. Developing Shtokman, Sakhalin and indeed Bazhenov and Achimov fields will undoubtedly put some people’s nose out of joint, but given Russia’s own unconventional reserves are estimated to be ten times larger than the whole of Europe, it still has the time (and potential) to **break anybody in the field** on volume to dictate long term prices. If global gas benchmarks are the way of the future, then we should at least be aware that Russia has the potential to play a pivotal role as the swing LNG producer of the world. The initial 62 million tonnes of LNG Shtokman and Sakhalin should hold, tells us as much.

#### That turns heg

Fang, 12 -- Rice University political science professor, Ph.D. (Songying, and Amy Jaffe, Baker Institute for Public Policy energy studies fellow, and Ted Temzelides, PhD, Rice University economics professor, "New Alignments? The Geopolitics of Gas and Oil Cartels and the Changing Middle East," Jan 2012, www.bakerinstitute.org/publications/EF-pub-GasOilCartels-012312.pdf, accessed 9-23-12, mss)

Throughout the modern period, resource producers have sought to form coalitions in order to enhance their economic power. One of the most successful coalitions is the Organization of Petroleum Exporting Countries (OPEC), which rose to global influence in the 1970s amid intemational shortages of oil. In the last five years, one of the most striking developments in the global energy landscape has been the dramatic rise in the prospects for natural gas as a global fuel. Enthusiasm for this fuel source is gaining momentum, and the likelihood that natural gas will play a major strategic role in the world economy is growing. The new gusto for natural gas is partly a product of its many attractive attributes (particularly its relatively low-carbon emissions when compared with other fossil fiiels), and partly a result of its growing availability, as rising supplies from shale become available in North America. Russia, one of the world's largest natural gas reserve holders, was quick to respond to this growth in global natural gas demand by building new pipelines, as well as lobbying for a gas cartel to counterbalance the competitive market influence resulting from rising shale gas supplies. Simultaneously, as it focused on the geopolitical leverage it could achieve as a petro-exporter, Russia expressed interest in joining OPEC formally.' If Russia were able to form either a gas or oil coalition with other important exporters from the Middle East, it would significantly change the way that the energy markets operate and, consequently, influence the geopolitics of energy and international relations more generally. In this study, we investigate three related questions raised by the above observations. First, what is the likelihood that Russia will be successful in creating new coalitions in energy markets in the near future? Russia's aggressive use of its own energy exports as a tool of statecraft and diplomatic leverage in recent years has reintroduced fears of an "energy weapon" that could be wielded in international discourse. It has been argued that tightening energy markets could raise the benefits and possible chances of success for an energy exporting country that, alone or in combination with others, is trying to wrest political concessions by threatening to cut off energy supplies. Such an event would present a challenge for the international economy, and it could even lead to military conflict.2 Second, even if new coalitions involving Russia are not imminent, in light of the recent political developments in the Middle East, how would the likelihood of the coalitions change as a result of the evolving relationship between the United States and the major resource producers in the region? Finally, in the event that prolific shale gas resources prevent energy markets from tightening further and indeed reverse the trend, will low-cost major oil and gas exporters such as Russia, Qatar, or Saudi Arabia engage in price war tactics? Oil and gas production from shale is vulnerable to competitive pressures due to its high costs of recovery technique. energy markets from tightening further and indeed reverse the trend, will low-cost major oil and gas exporters such as Russia, Qatar, or Saudi Arabia engage in price war tactics? Oil and gas production from shale is vulnerable to competitive pressures due to its high costs of recovery technique. Historically, the United States' close security relations with two major energy suppliers in the Mideast-Saudi Arabia (the world's largest oil exporter) and Qatar (the world's largest liquefied natural gas exporter)-have limited Russia's ability to achieve resource rent-seeking alliances in the Middle East. In recent years, however, Russia has tried to tap its large energy resource endowments to reassert its place as a global superpower.3 However, such exports have not been well received by important members of OPEC, and the public discussion of Russia joining OPEC has made little progress.4 Similarly, Russia's initial efforts to create a gas cartel have been unsuccessful. In 2009, Russian gas industry leader Alexander Medvedev suggested that a gas troika of Iran, Qatar, and Russia consider joint "projects that could be implemented by the three countries in gas production and transportation."5 Addressing a December 23, 2008, gathering of the Gas Exporting Countries Forum (GECF), a loose grouping of natural gas producers, Prime Minister Vladimir Putin hinted that a gas producer group might be rent-seeking. Because the cost of extracting gas was rising sharply, Putin contended that "the era of cheap energy resources, of cheap gas, is of course coming to an end."Still, while Russia has, at the highest levels, approached the leadership of its biggest liquefied natural gas (LNG) or pipeline gas competitors in Iran, Libya, Algeria, and Qatar, so far it has failed to create convincing partnerships that could serve as the basis for cartelization.

#### Collapse of hegemony causes global war

Brooks, Ikenberry, and Wohlforth ’13 (Stephen, Associate Professor of Government at Dartmouth College, John Ikenberry is the Albert G. Milbank Professor of Politics and International Affairs at Princeton University in the Department of Politics and the Woodrow Wilson School of Public and International Affairs, William C. Wohlforth is the Daniel Webster Professor in the Department of Government at Dartmouth College “Don’t Come Home America: The Case Against Retrenchment,” International Security, Vol. 37, No. 3 (Winter 2012/13), pp. 7–51)

A core premise of deep engagement is that it prevents the emergence of a far more dangerous global security environment. For one thing, as noted above, the United States’ overseas presence gives it the leverage to restrain partners from taking provocative action. Perhaps more important, its core alliance commitments also deter states with aspirations to regional hegemony from contemplating expansion and make its partners more secure, reducing their incentive to adopt solutions to their security problems that threaten others and thus stoke security dilemmas. The contention that engaged U.S. power dampens the baleful effects of anarchy is consistent with influential variants of realist theory. Indeed, arguably the scariest portrayal of the war-prone world that would emerge absent the “American Pacifier” is provided in the works of John Mearsheimer, who forecasts dangerous multipolar regions replete with security competition, arms races, nuclear proliferation and associated preventive war temptations, regional rivalries, and even runs at regional hegemony and full-scale great power war. 72 How do retrenchment advocates, the bulk of whom are realists, discount this benefit? Their arguments are complicated, but two capture most of the variation: (1) U.S. security guarantees are not necessary to prevent dangerous rivalries and conflict in Eurasia; or (2) prevention of rivalry and conflict in Eurasia is not a U.S. interest. Each response is connected to a different theory or set of theories, which makes sense given that the whole debate hinges on a complex future counterfactual (what would happen to Eurasia’s security setting if the United States truly disengaged?). Although a certain answer is impossible, each of these responses is nonetheless a weaker argument for retrenchment than advocates acknowledge. The first response flows from defensive realism as well as other international relations theories that discount the conflict-generating potential of anarchy under contemporary conditions. 73 Defensive realists maintain that the high expected costs of territorial conquest, defense dominance, and an array of policies and practices that can be used credibly to signal benign intent, mean that Eurasia’s major states could manage regional multipolarity peacefully without the American pacifier. Retrenchment would be a bet on this scholarship, particularly in regions where the kinds of stabilizers that nonrealist theories point to—such as democratic governance or dense institutional linkages—are either absent or weakly present. There are three other major bodies of scholarship, however, that might give decisionmakers pause before making this bet. First is regional expertise. Needless to say, there is no consensus on the net security effects of U.S. withdrawal. Regarding each region, there are optimists and pessimists. Few experts expect a return of intense great power competition in a post-American Europe, but many doubt European governments will pay the political costs of increased EU defense cooperation and the budgetary costs of increasing military outlays. 74 The result might be a Europe that is incapable of securing itself from various threats that could be destabilizing within the region and beyond (e.g., a regional conflict akin to the 1990s Balkan wars), lacks capacity for global security missions in which U.S. leaders might want European participation, and is vulnerable to the influence of outside rising powers. What about the other parts of Eurasia where the United States has a substantial military presence? Regarding the Middle East, the balance begins to swing toward pessimists concerned that states currently backed by Washington— notably Israel, Egypt, and Saudi Arabia—might take actions upon U.S. retrenchment that would intensify security dilemmas. And concerning East Asia, pessimism regarding the region’s prospects without the American pacifier is pronounced. Arguably the principal concern expressed by area experts is that Japan and South Korea are likely to obtain a nuclear capacity and increase their military commitments, which could stoke a destabilizing reaction from China. It is notable that during the Cold War, both South Korea and Taiwan moved to obtain a nuclear weapons capacity and were only constrained from doing so by a still-engaged United States. 75 The second body of scholarship casting doubt on the bet on defensive realism’s sanguine portrayal is all of the research that undermines its conception of state preferences. Defensive realism’s optimism about what would happen if the United States retrenched is very much dependent on its particular—and highly restrictive—assumption about state preferences; once we relax this assumption, then much of its basis for optimism vanishes. Specifically, the prediction of post-American tranquility throughout Eurasia rests on the assumption that security is the only relevant state preference, with security defined narrowly in terms of protection from violent external attacks on the homeland. Under that assumption, the security problem is largely solved as soon as offense and defense are clearly distinguishable, and offense is extremely expensive relative to defense. Burgeoning research across the social and other sciences, however, undermines that core assumption: states have preferences not only for security but also for prestige, status, and other aims, and they engage in trade-offs among the various objectives. 76 In addition, they define security not just in terms of territorial protection but in view of many and varied milieu goals. It follows that even states that are relatively secure may nevertheless engage in highly competitive behavior. Empirical studies show that this is indeed sometimes the case. 77 In sum, a bet on a benign postretrenchment Eurasia is a bet that leaders of major countries will never allow these nonsecurity preferences to influence their strategic choices. To the degree that these bodies of scholarly knowledge have predictive leverage, U.S. retrenchment would result in a significant deterioration in the security environment in at least some of the world’s key regions. We have already mentioned the third, even more alarming body of scholarship. Offensive realism predicts that the withdrawal of the American pacifier will yield either a competitive regional multipolarity complete with associated insecurity, arms racing, crisis instability, nuclear proliferation, and the like, or bids for regional hegemony, which may be beyond the capacity of local great powers to contain (and which in any case would generate intensely competitive behavior, possibly including regional great power war). Hence it is unsurprising that retrenchment advocates are prone to focus on the second argument noted above: that avoiding wars and security dilemmas in the world’s core regions is not a U.S. national interest. Few doubt that the United States could survive the return of insecurity and conflict among Eurasian powers, but at what cost? Much of the work in this area has focused on the economic externalities of a renewed threat of insecurity and war, which we discuss below. Focusing on the pure security ramifications, there are two main reasons why decisionmakers may be rationally reluctant to run the retrenchment experiment. First, overall higher levels of conflict make the world a more dangerous place. Were Eurasia to return to higher levels of interstate military competition, one would see overall higher levels of military spending and innovation and a higher likelihood of competitive regional proxy wars and arming of client states—all of which would be concerning, in part because it would promote a faster diffusion of military power away from the United States. Greater regional insecurity could well feed proliferation cascades, as states such as Egypt, Japan, South Korea, Taiwan, and Saudi Arabia all might choose to create nuclear forces. 78 It is unlikely that proliferation decisions by any of these actors would be the end of the game: they would likely generate pressure locally for more proliferation. Following Kenneth Waltz, many retrenchment advocates are proliferation optimists, assuming that nuclear deterrence solves the security problem. 79 Usually carried out in dyadic terms, the debate over the stability of proliferation changes as the numbers go up. Proliferation optimism rests on assumptions of rationality and narrow security preferences. In social science, however, such assumptions are inevitably probabilistic. Optimists assume that most states are led by rational leaders, most will overcome organizational problems and resist the temptation to preempt before feared neighbors nuclearize, and most pursue only security and are risk averse. Confidence in such probabilistic assumptions declines if the world were to move from nine to twenty, thirty, or forty nuclear states. In addition, many of the other dangers noted by analysts who are concerned about the destabilizing effects of nuclear proliferation—including the risk of accidents and the prospects that some new nuclear powers will not have truly survivable forces—seem prone to go up as the number of nuclear powers grows. 80 Moreover, the risk of “unforeseen crisis dynamics” that could spin out of control is also higher as the number of nuclear powers increases. Finally, add to these concerns the enhanced danger of nuclear leakage, and a world with overall higher levels of security competition becomes yet more worrisome. The argument that maintaining Eurasian peace is not a U.S. interest faces a second problem. On widely accepted realist assumptions, acknowledging that U.S. engagement preserves peace dramatically narrows the difference between retrenchment and deep engagement. For many supporters of retrenchment, the optimal strategy for a power such as the United States, which has attained regional hegemony and is separated from other great powers by oceans, is offshore balancing: stay over the horizon and “pass the buck” to local powers to do the dangerous work of counterbalancing any local rising power. The United States should commit to onshore balancing only when local balancing is likely to fail and a great power appears to be a credible contender for regional hegemony, as in the cases of Germany, Japan, and the Soviet Union in the midtwentieth century. The problem is that China’s rise puts the possibility of its attaining regional hegemony on the table, at least in the medium to long term. As Mearsheimer notes, “The United States will have to play a key role in countering China, because its Asian neighbors are not strong enough to do it by themselves.” 81 Therefore, unless China’s rise stalls, “the United States is likely to act toward China similar to the way it behaved toward the Soviet Union during the Cold War.” 82 It follows that the United States should take no action that would compromise its capacity to move to onshore balancing in the future. It will need to maintain key alliance relationships in Asia as well as the formidably expensive military capacity to intervene there. The implication is to get out of Iraq and Afghanistan, reduce the presence in Europe, and pivot to Asia— just what the United States is doing. 83 In sum, the argument that U.S. **security** commitments are unnecessary **for peace** is countered by a lot of scholarship, including highly influential realist scholarship. In addition, the argument that Eurasian peace is unnecessary for U.S. security is weakened by the potential for a large number of nasty security consequences as well as the need to retain a latent onshore balancing capacity that dramatically reduces the savings retrenchment might bring. Moreover, switching between offshore and onshore balancing could well be difªcult. Bringing together the thrust of many of the arguments discussed so far underlines the degree to which the case for retrenchment misses the underlying logic of the deep engagement strategy. By supplying reassurance, deterrence, and active management, the United States lowers security competition in the world’s key regions, thereby preventing the emergence of a hothouse atmosphere for growing new military capabilities. Alliance ties dissuade partners from ramping up and also provide leverage to prevent military transfers to potential rivals. On top of all this, the United States’ formidable military machine may deter entry by potential rivals. Current great power military expenditures as a percentage of GDP are at historical lows, and thus far other major powers have shied away from seeking to match top-end U.S. military capabilities. In addition, they have so far been careful to avoid attracting the “focused enmity” of the United States. 84 All of the world’s most modern militaries are U.S. allies (America’s alliance system of more than sixty countries now accounts for some 80 percent of global military spending), and the gap between the U.S. military capability and that of potential rivals is by many measures growing rather than shrinking. 85

### 1NC

#### Counterplan: The National Oceanic and Atmospheric Administration should:

#### release sulfate aerosols sufficient to increase Earth’s albedo by two percent, distributed over time, near the tropical upward branch of the stratospheric circulation system,

#### adjust albedo enhancement as necessary as data becomes available based on the results,

#### and should not stop abruptly without taking into account the effect on carbon sinks, or without the ability to quickly restart if necessary.

#### Text: the Economic Development Administration should create a national network of advanced industries innovation hubs.

#### Counterplan solves warming- natural albedo enhancement and best climate science prove

Ikle, CSIS distinguished scholar, and Wood, Hoover Institute research fellow, 2008

[Fred, undersecretary of defense for policy for President Ronald Reagan and director of the Arms Control and Disarmament Agency for Presidents Richard Nixon and Gerald Ford, and Lowell, "Climatic Engineering," The National Interest, l/n, accessed 9-6-10, mss]

Moreover, climate scientists now warn us we cannot be sure that the envisaged future emission controls would stabilize the climate anywhere close to its present state. Instead, we are told that substantially more warming is “locked in” by what has already transpired. We clearly need to find more promising ways to address the whole global warming issue. The policies discussed to date in the global warming conferences have addressed only half the arena for remedial action—the inside of the “greenhouse.” They seek to end the accumulation of greenhouse gases (principally carbon dioxide and methane) within the atmosphere, where these gasses entrap infrared radiation rising from the Earth-surface and lower atmosphere. This entrapment is akin to the glass cover of a greenhouse that keeps the planted vegetables warmer than if they were left exposed to the open air, by admitting the shorter wavelengths of sunlight while reflecting back into the greenhouse the longer wavelengths of thermal infrared radiation and thus preventing the loss of “trapped” heat. The other arena for action is outside of the “greenhouse.” It offers opportunities for reducing global warming by increasing the fraction of incoming sunlight that is reflected outward by the upper atmosphere back into space. Expressed in the metaphoric language of the “greenhouse effect”, this type of climate geoengineering would put a parasol over the greenhouse to scatter away roughly 2 percent of incoming sunlight, instead of letting this small fraction impinge on our planet’s biosphere through the “greenhouse roof” (which in fact is the Earth’s lower atmosphere). In the language of climate science, such geoengineering would increase by a few percent the Earth’s albedo—the ratio of incoming sunlight reflected back into space relative to the total inbound from the Sun.4 Nature routinely varies the local values of the Earth’s albedo by **substantial** amounts, with clouds being the most familiar and quantitatively most important reflective entities, and ice- and snow-covered regions the next most significant. Episodically, large regions of our planet have been cooled for several years by major volcanic eruptions, which inject millions of tons of fine particulate material—mostly sulfate aerosols—into the stratosphere, where they increase the albedo until they’re slowly removed by natural processes. For instance, the Mount Pinatubo eruption in 1991 caused a cooling of most of the Earth for a few years, of a magnitude which was roughly equivalent to reversing half of the total global warming that occurred during the **entire** twentieth century. The idea of artificially increasing the Earth’s albedo is not new. In 1992, a report by the National Academy of Sciences found the prospect of lower stratospheric-based albedo enhancement to be “feasible, economical, and capable. . . .” And it doesn’t necessarily have unpleasant side effects. Professor Paul Crutzen, who received the Nobel Prize for his work on atmospheric ozone, wrote in 2005 that climate geoengineering with sulfate aerosols sufficient to offset the global warming caused by a doubling of the atmospheric carbon dioxide content (which might occur by 2100) would probably do less damage to the upper stratospheric ozone layer than did the Mount Pinatubo volcanic eruption in 1991.

#### Innovation hubs solve manufacturing

Saha and Muro 1/14 (Devashree Saha and Mark Muro, Brookings, “Cut to Invest: Create a Nationwide Network of Advanced Industries Innovation Hubs”, <http://www.brookings.edu/research/papers/2013/01/14-federalism-series-advanced-industries-hubs>, January 14, 2013)

Congress should authorize the build-out of a national network of advanced industries (AI) innovation hubs, expanding on the modest beginnings now being made through the Department of Energy’s Energy Innovation Hubs program and the Department of Commerce’s National Network for Manufacturing Innovation (NNMI) initiative. Functioning as regional centers of excellence, the new hubs would focus on cross-cutting innovation and technology deployment challenges of critical interest to advanced industries by drawing universities, community colleges, state and local governments, and other actors into strong industry-led partnerships. The creation and appropriate funding of at least 25 such hubs would greatly accelerate the pace of innovation and new-product development in the nation’s advanced industries and so strengthen their long-term competitiveness.

#### Absent the counterplan the plan fails

Saha and Muro 1/14 (Devashree Saha and Mark Muro, Brookings, “Cut to Invest: Create a Nationwide Network of Advanced Industries Innovation Hubs”, <http://www.brookings.edu/research/papers/2013/01/14-federalism-series-advanced-industries-hubs>, January 14, 2013)

In the aftermath of the Great Recession, the United States needs to transition from an economic model focused on finance and consumption toward a “next economy” model oriented toward innovation, engineering, and production. Such a model promises to increase the nation’s productivity, drive export growth, and provide good-paying jobs. Advanced industries—characterized by dynamic R&D and engineering-intensive industrial concerns—must be a focal point of this new direction. Delivering products and services in industries ranging from aerospace and space to auto assembly, advanced energy systems, IT, and medical devices, AIs comprise over 10 percent of the overall economy, generate 45 percent of U.S. goods exports, and support over 4 million high-skilled, and several million more ancillary, jobs. All too often with advanced industries, companies fail to make adequate investments in innovation because the benefits are undetermined, the risks are too high, and the project timelines too extended. A national network of innovation hubs would address these challenges by greatly accelerating the pace of innovation and new-product development. Nor is that all. A prime site of R&D activity in the U.S. economy, AIs punch well above their weight in building and expanding national and regional economic competitiveness. Innovations in AIs—such as photonics technology with applications in optical communications, medical diagnostics, semiconductors, optical imaging, and the now ubiquitous GPS technology—tend to ripple across the economy and drive broader productivity. As a result, AIs contribute inordinately to the competitiveness of the nation’s critical traded sectors, which will be crucial in helping the United States to balance its foreign trade. Simply put, the U.S. economy will not regain its full vitality and preeminence without a strong push to extend the leadership of AIs.

### 1NC

#### The United States Supreme Court ought to give sanction to the setting of rates substantially above the avoided cost rate for the production .

#### This solves the case

D.A. Barber, 10-23-12 (regular correspondent for two Southern Arizona business publications and spent five years writing for the University of Arizona’s Report on Research. “U.S. Feed-in Tariffs will Increase PV Demand”, Energy Trend)

While FIT programs are far and few between in the United States, the city of Los Angeles launched a feed-in tariff on April 3, 2012, to support 150MW of new rooftop solar installations. The move by the second largest U.S. city is expected to draw attention to other successful regional FIT programs in the nation where most energy policy is usually initiated on a state rather than federal level.¶ U.S. FIT Policy¶ FITs have not been instituted nationally in the United States even though the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) calls them the most effective policy for renewable energy growth. The 2010 NREL report, "A Policymaker's Guide to Feed-in Tariff Policy Design," defines a feed-in tariff program as a group of policies that "encourage, rapid, sustained, and widespread renewable energy development." According to NREL, FITs were directly responsible for 75 percent of all PV and 45 percent of all wind development worldwide. FITs resulted in installation of 15,000MW of PV and 55,000MW of wind power between 2000 and 2009 in the European Union, compared to the U.S. with 25,000MW of wind and 1,250MW of PV where there is no national FIT policy. In fact, the largest of the full-scale, European-style FIT in all of North America is actually in Ontario, Canada. Ontario's FIT is unique in that it includes a requirement that the PV equipment must be locally-produced, which has led to a number of international solar firms moving factories specifically to that Canadian province.¶ Instead of FITs, 31 of the 50 U.S. states have passed individual “renewable portfolio standard” (RPS) policies that mandate local utilities to purchase or generate a certain percentage of their electricity from renewable energy sources.¶ The few feed-in tariffs that have been enacted recently in regions of the United States differ widely from each other as well as from the successful European FIT model. Nevertheless, those few states currently with FITs have been somewhat successful in developing renewable energy and attracting PV installation investors. But getting there has been a long struggle since there has been avid opposition from electric utility companies in many states to enacting FITs.¶ The first form of what could be called a U.S. “feed-in tariff” was implemented under the 1978 National Energy Act (NEA), which was enacted to encourage energy conservation and the development of renewable energy. One part of NEA is the Public Utility Regulatory Policies Act (PURPA) which includes a provision that requires utilities to purchase electricity generated from independent power producers at rates not to exceed their “avoided cost,” basically the cost that a utility would sustain to provide that same amount of electrical power. While PURPA has been interpreted in different ways, certain states such as California began offering “Standard Offer Contracts” to renewable power producers which sparked the wind energy industry in that state. But by the 1990s, opposition to PURPA by many large utilities - many operating in monopoly environments - stemmed from its encouragement of non-utility power generation.¶ Basically, PURPA has always been interpreted as increasing competition in the U.S. electricity industry and the new concept of feed-in tariffs is part of that interpretation. But in October 2010, the U.S. Federal Energy Regulatory Commission (FERC) declared that individual states have the authority to implement feed-in tariffs through PURPA. California’s three largest investor-owned electric utilities: Pacific Gas and Electric Company; San Diego Gas and Electric Company; and Southern California Edison filed a request for a new hearing or annulment to this order on November 22, 2010. But on January 20, 2011, FERC issued a ruling that clarified the authority of U.S. states to implement multi-tiered feed-in tariffs based on avoided cost and denied the utility challenge for a re-hearing. Los AngelesFIT Program Launched¶ Currently, most of L.A.’s renewable power is generated outside the city and brought to the area via the grid. But the Los Angeles City Council cleared the way for the launch of a rooftop solar-energy FIT program on April 3, 2012, making LA the largest city in the nation to adopt such a program. The new law allows the L. A. Department of Water and Power (DWP) to initiate the “CLEAN LA Solar” program, which gives local property owners the right to sell solar power generated from L.A.’s vast, underused rooftop and parking lot space back to the utility. It is also designed to help the city and state meet set renewable power requirements.¶ CLEAN LA Solar was set in motion in 2008, when Mayor Antonio Villaraigosa called for a FiT program to be created in Los Angeles. The Los Angeles Business Council (LABC) had also been advocating the program since 2009, releasing a report that indicated the CLEAN LA Solar program with a 150MW FIT would create 4,500 jobs, generate economic activity amounting to $500 million and offset 2.25 million tons of carbon dioxide by 2016.¶ DWP now estimates that the FIT may average about 18 cents per kilowatt-hour. The first 75MW of the program is expected to come on line in 2012, with the second 75MW phase expected to be in place by 2016. The 150MW of solar electricity generated is estimated to be enough to power 34,000 L.A. homes.¶ State and City FIT Programs¶ The new Los Angeles FIT policy comes on the heels of a regional trend that started in Gainesville, Florida, which initiated the nation’s first FIT in 2009. Since that launch that city has seen a 3,400 percent increase in solar power capacity with about 11.5MW of installed PV capacity – the largest per capita rate of solar. ¶ More recently, LA and some other regional feed-in tariffs have adopted a new name for feed-in tariffs, preferring to call them CLEAN (Clean Local Energy Accessible Now) contracts. When the Palo Alto City Council (in California’s “Silicon Valley”) approved a feed-in tariff plan in March 2012 to buy power from customers who install solar panels on their roofs, they dubbed it with the CLEAN acronym. Under the program, the City of Palo Alto Utilities will pay 14 cents per kilowatt-hour under 20-year contracts. While the pilot project is only open to large commercial PV projects, Palo Alto plans to expand it to homeowners.¶ Since the 2009 Gainesville program, a small number of other local and state FIT or CLEAN programs have been rolled out. Vermont adopted a feed-in tariff policy based on the cost of generation in 2009 and Maine adopted a cost-based FIT the same year, which also includes a cap on the total payment level. In 2010, the Sacramento Municipal Utility District and San Antonio’s City Public Service utility implemented their own FITs specifically to encourage PV use. Also in 2010, Hawaii began offering a feed-in tariff program that pays 21.8 cents/kWh for excess power produced in home PV systems and fed into the grid. The state implemented the FIT as part of Hawaii's goal of generating 70 percent of its electricity from renewable energy by 2030.¶ The state of Rhode Island passed a limited feed-in tariff system that was signed into law on June 29, 2011. That statute sets an annual target of the 15-year “Distributed Generation Standard Offer Contracts” for wind, PV and biogas of 5MW in 2011, 20MW in 2012, 30MW in 2013 and 40MW in 2014.¶ Other regional metro utilities, including the Long Island Power Authority and Fort Collins, Colorado, utility have also announced plans to launch FIT programs in 2012.¶ Feed-in tariffs have been associated with a large growth in solar power and while some European countries are pulling back on FIT programs, others have expanded. Most recently, a national feed-in tariff for solar projects was issued in China at about us$0.15 per kWh.¶ While there is not likely to be a national FIT policy in the United States any time soon, a handful of U.S. states and metropolitan areas have passed FIT policies – some modeled after Germany’s 2004 Renewable Energy Sources Act and Ontario’s 2006 Standard Offer Contract. FIT advocates continue to pursue action at the state and local level, resulting in renewable energy policies varying widely within the United States as they do in the European Union. This was true with RPS policies, which have only been passed at the state level since political efforts to pass a national RPS in energy legislation have consistently failed. For the U.S. deep in an election year and cut-backs in solar programs, the sparse FIT programs emerging are keeping the solar industry afloat in some regions.¶ The recent move towards FITs in Los Angeles and Palo Alto is expected to set the stage for other large cities to do the same. Indeed, Long Island, New York, and Fort Collins, Colorado, have already indicated their plans to go this route this year.¶ While government incentives encouraging solar investments continue to drive the global solar market, these programs are drying up in the U.S. which could explain the sudden burst of FIT activity through utility companies with the inspiration that it will help spur development and PV installations. This is also driven by states which have deadlines for utilities to meet a mandated RPS because buying power from homeowners and businesses with PVs help them meet those goals. This move towards FITs is a dramatic policy trend shift for many and some utilities are still fighting the concept. Since feed-in tariffs and RPS targets are complimentary, the states to watch - and utility companies operating within their cities - are those which are fast approaching their RPS deadlines. It is those areas which have the potential for the next FIT programs to become active. And since most recent feed-in tariff proposals have specifically targeted PVs, it is those same cities and states that have the greatest rooftop PV marketing potential for module companies.

### Politics

**Immigration will pass – capital’s key**

Sink and Mali 3-25. [Justin, Meghashyam, reporters, "Obama: 'The time has come' to move immigration reform in Congress" The HIll -- thehill.com/video/administration/290129-obama-the-time-has-come-to-move-immigration-reform]

Obama said he expects debate on an immigration bill to “begin next month” at a ceremony where 28 people, including 13 armed servicemembers, became citizens.¶ Bipartisan groups in both the House and Senate are moving closer to unveiling separate immigration reform proposals, and the president is hoping to build momentum for a deal.¶ “We've known for years that our immigration system is broken, that we're not doing enough to harness the talent and ingenuity of all those who want to work hard and find a place in America,” Obama said. “And after avoiding the problem for years, the time has come to fix it once and for all. The time has come for comprehensive, sensible immigration reform.”¶ Speaking from the East Room, Obama argued that immigration strengthens the country.¶ “It keeps us vibrant, it keeps us hungry, it keeps us prosperous. It is what makes us such a dynamic country,” he said. “If we want to keep attracting the best and the brightest, we've got to do a better job of welcoming them.”¶ Advocates for immigration reform see a real chance for legislation to pass Congress this year, despite opposition from some House GOP lawmakers, many of whom have said they will oppose measures that grant “amnesty” to illegal immigrants and have questioned proposed protections for gay or lesbian couples.¶ Immigration reform is a potent political issue for Obama, who won more than 70 percent of the Hispanic vote in 2012. Since that showing, a growing number of conservative lawmakers have signaled they would back immigration reform, including measures to provide a pathway to citizenship.¶ Groups aligned with Obama have signaled their intention of pressuring Congress.¶ On Monday, The New York Times reported that Organizing for Action — the political group born from the president's reelection campaign — will launch a new online effort featuring the stories of some 7,000 supporters, some of whom entered the country illegally.¶ The Senate’s “Gang of Eight” introduced their framework, calling for a pathway to citizenship, heightened border security, increased high-skilled immigration and a guest worker program, in January.¶ But since then, senators have been tied down in negotiations over the details of the plan, with many key issues still unresolved.¶ Obama said he wanted to see debate begin on a congressional bill by April.¶ “We are making progress, but we've got to finish the job, because this issue is not new,” Obama said. “Everyone pretty much knows what's broken, everyone knows how to fix it.”¶ At a briefing later Monday with reporters, White House spokesman Josh Earnest insisted that the White House did not hold the event over concern with the progress of negotiations.¶ "We are pleased with the progress they are reportedly making" in the Senate, Earnest said, adding that President Obama had been in touch with members of the Gang of Eight.¶ Earnest also dismissed criticism from freshman Sen. Ted Cruz (R-Texas), who suggested over the weekend that Obama secretly hoped talks would fall through, so Democrats could gain a political wedge for the 2014 midterm elections.¶ "There's no evidence to support those claims," Earnest said.¶ Members of the Senate group predict their plan could move forward when legislators return from a two-week Easter break.¶ A bipartisan House group has yet to share details of their proposals, but their work has already received general support from leaders in both parties.

**Plan undermines political capital**

**Dorsi, 12**

(Fellow, Phillips & Cohen LLP & JD-Harvard Law School, “Clean Energy Pricing and Federalism: Legal Obstacles and Options for Feed-in Tariffs,” Spring, 35 Environs Envtl. L. & Pol'y J. 173)

Although potentially challenging in the current Congress, establishing legislative authorization for a feed-in tariff could resolve most of the issues presented in this Article. A federally regulated feed-**i**n **t**ariff may be politically infeasible, and would be undesirable because of the variety of state and regional systems where it would need to apply. The need to take into account regional differences within a federal feed-in tariff scheme only adds to the political challenge. Additionally, since state commissions control the administrative infrastructure that implemented avoided cost rates for QFs under PURPA, state commissions could serve well again for feed-in tariffs. A simple legislative option to authorize feed-in tariffs would be to amend PURPA to permit states to set rates above avoided cost for particular units. Federal permission for state regulation carries the strongest defenses against court challenges because it waives the dormant Commerce Clause while displacing any federal preemption. Additionally, because the activity ultimately rests with the state, it does not risk a commandeering challenge. Such legislation would also render moot any utility's opportunity to challenge FERC's decision. If the federal government sought to direct state policy rather than to simply permit states to act, the federal government is limited, but has two primary options. First, the federal government could condition the grant of reasonably related funds to states on implementation of feed-in tariffs. The Court upheld this type of fiscal federalism with regard to highway funds and drinking age laws in South Dakota v. Dole. n125 Given current political conditions, such a policy seems politically challenging. A second option would be a cooperative federalism arrangement similar to the Clean Air Act. n126 Such an arrangement escapes the commandeering challenge by providing a backstop of federal [\*197] implementation should a state elect to not act. n127 Cooperative federalism in the model of the Clean Air Act, which codifies state plans in federal statutes, would also provide the opportunity to seek enforcement in federal courts. n128 However, in those instances where a state does not act, this policy would have the same faults as a federal feed-in tariff. What the federal government cannot do is require states to adopt feed-in tariffs. Given the recent treatment of FERC v. Mississippi, it is unlikely that the Supreme Court would even permit Congress to require that states consider establishing feed-in tariffs. Advocates should not pin their hopes for renewable energy policy on the federal government. Congress, rather than exploring these policies, has recently discussed the possible relaxation or abolition of efficiency standards in order to ensure that customers can continue to purchase incandescent light bulbs. n129 At the same time, states have expanded their support for renewable energy. For example, in April 2011, California Governor Jerry Brown signed new legislation requiring California utilities to obtain a third of their energy from renewable sources. n130 Given the greater promise of state-level commitment to environmental policy, it is **worth exploring the options for states to act if the federal government stands still**.

**That kills Obama’s immigration push**

Amy **Harder**, National Journal, 2/6/13, In Washington, Energy and Climate Issues Get Shoved in the Closet, www.nationaljournal.com/columns/power-play/in-washington-energy-and-climate-issues-get-shoved-in-the-closet-20130206

At a news conference where TV cameras in the back were nearly stacked on top of each other, an influential bipartisan group of five senators introduced legislation late last month to overhaul the nation’s immigration system. The room was so crowded that no open seats or standing room could be found. A week later, one senator, Republican Lisa Murkowski of Alaska, was standing at the podium in the same room to unveil her energy-policy blueprint. There were several open seats and just a few cameras. At least one reporter was there to ask the senator about her position on President Obama’s choice for Defense secretary, former Republican Sen. Chuck Hagel. “I’m doing energy right now,” Murkowski responded. “I’m focused on that.” Almost everyone else on Capitol Hill is focused on something else. Aside from the broad fiscal issues, Congress and the president are galvanizing around immigration reform. Four years ago, the White House prioritized health care reform above comprehensive climate-change legislation. The former will go down in history as one of Obama’s most significant accomplishments. The latter is in the perpetual position of second fiddle. “To everything,” Murkowski interjected fervently when asked by National Journal Daily whether energy and climate policy was second to other policies in Washington’s pecking order. Murkowski, ranking member of the Senate's Energy and Natural Resources Committee, said she hoped the Super Bowl blackout would help the public understand the importance of energy policy. “This issue of immigration: Why are we all focused on that? Well, it’s because the Republicans lost the election because in part we did not have the Hispanic community behind us,” Murkowski said this week. “What is it that brings about that motivation? Maybe it could be something like a gap in the Super Bowl causes the focus on energy that we need to have. I can only hope.” It will take more than hope. Elections have consequences, but so far the only kind of electoral consequence climate and energy policy has instigated is one that helped some lawmakers who supported cap-and-trade legislation to lose their seats in the 2010 midterm elections. For the pendulum to swing the other way—for lawmakers to lose their seats over not acting on climate and energy policy—seems almost unfathomable right now. Billions of dollars are invested in the fossil-fuel power plants, refineries, and pipelines that the country depends on today. The companies that own this infrastructure have a business interest in keeping things the way they are. Immigration reform doesn’t face such formidable interests invested in the status quo. “They [businesses] have employees—real, visible people—who they value and who they want to make legal as soon as possible,” said Chris Miller, who until earlier this year was the top energy and environment adviser to Senate Majority Leader Harry Reid, D-Nev. On energy and climate-change policy, Miller added, “You’re probably never going to have anything like the fence in the Southwest or the border-control issue that pushes action and debate on immigration, because climate-change impacts will likely continue to be more abstract in the public's mind until those impacts are so crystal-clear it’s too late for us to do anything.” Another, tactical reason helps build momentum on immigration and not on other issues. Obama can capitalize on immigration as it becomes more of a wedge issue within the GOP. On energy and climate policy, Obama faces a unified Republican Party. “The president has cracked the code on how to push his agenda items through. He learned from his victories on the payroll tax and the fiscal cliff that the key is to stake out the political high ground on issues that poll in his favor while exploiting the divisions within the GOP,” said a former Republican leadership aide who would speak only on the condition of anonymity. “With this in mind, the next logical place for him to go is immigration. Unlike issues like energy or tax reform where the GOP is united, he can claim a big win on immigration reform while striking a political blow to Republicans.”

**Immigration reform expands skilled labor --- spurs relations and economic growth in China and India**

Los Angeles **Times**, 11/9/**20**12 (Other countries eagerly await U.S. immigration reform, p. http://latimesblogs.latimes.com/world\_now/2012/11/us-immigration-reform-eagerly-awaited-by-source-countries.html)

"Comprehensive immigration reform will see expansion of skilled labor visas," predicted B. Lindsay Lowell, director of policy studies for the Institute for the Study of International Migration at Georgetown University. A former research chief for the congressionally appointed Commission on Immigration Reform, Lowell said he expects to see at least a fivefold increase in the number of highly skilled labor visas that would provide "a significant shot in the arm for India and China." There is widespread consensus among economists and academics that skilled migration fosters new trade and business relationships between countries and enhances links to the global economy, Lowell said. "Countries like India and China weigh the opportunities of business abroad from their expats with the possibility of brain drain, and I think they still see the immigration opportunity as a bigger plus than not," he said.

**US/India relations averts South Asian nuclear war**

Schaffer, Spring **200**2 (Teresita – Director of the South Asia Program at the Center for Strategic and International Security, Washington Quarterly, p. Lexis)

Washington's increased interest in India since the late 1990s reflects India's economic expansion and position as Asia's newest rising power. New Delhi, for its part, is adjusting to the end of the Cold War. As a result, both giant democracies see that they can benefit by closer cooperation. For Washington, the advantages include a wider network of friends in Asia at a time when the region is changing rapidly, as well as a stronger position from which to help calm possible future nuclear tensions in the region. Enhanced trade and investment benefit both countries and are a prerequisite for improved U.S. relations with India. For India, the country's ambition to assume a stronger leadership role in the world and to maintain an economy that lifts its people out of poverty depends critically on good relations with the United States.

### Solvency

#### No investors have sufficient start-up capital- or they go overseas- this devastates solvency

Freed and Stevens ’11 (Josh Freed is Vice President for the Third Way Clean Energy Program, Mae Stevens is a Policy Advisor for the Third Way Clean Energy Program, “Nothing Ventured: The Crisis in Clean Tech Investment”, <http://content.thirdway.org/publications/456/Third_Way_Report_-_Nothing_Ventured_The_Crisis_in_Clean_Tech_Investment.pdf>, November 2011)

Over the next decade, global demand for clean energy products is expected to exceed a whopping $2.3 trillion, providing a big economic opportunity for American companies and workers. The U.S. could invent, manufacture, and sell many of these clean tech goods. But to do this, we must understand the risk posed by the dramatic decline in private sector investment that helps make these clean tech inventions a reality—investment from venture capitalists, who are consistently a first major source of funding for early-stage companies. Venture capitalists fund a crucial step in taking new technology from a back of the envelope idea to a widely marketed business or consumer product. Venture investment in companies in the U.S. helps keep America competitive and leads ultimately to millions of new manufacturing jobs in America. And venture capital spreads widely through the economy—in 2010 alone, venture capitalists invested in more than 2,700 companies. Yet today, we’re in the middle of a quiet but severe crisis for clean tech venture investment. Using original research and secondary sources, this paper documents that crisis in detail, citing four major findings: a steep drop in U.S. venture investment; a corresponding decline in clean tech venture funding; a shift away from early-stage clean tech backing; and a striking expansion in clean tech investment by our global competitors. Taken together, these findings suggest stark consequences for the young companies that venture firms invest in, with the clean tech sector hit hard. That means the innovations we need now—to boost the economy, create demand for 21st century manufacturing, capture our slice of the clean tech market, and make clean energy as cheap as fossil fuels like oil, coal and natural gas—are being left on the drawing board. As a result, the U.S. is falling further behind in the global clean energy race. F I N D I N G # 1 U.S. venture investment has dropped sharply. In 2010, total venture capital (VC) firm investment was $22 billion, 26% below 2007 levels.In fact, according to analysis done by Third Way, the remarkable decline between 2007 and 2009 erased more than all of the gains made by all venture firms in the boom period between 2003 and 2007, as can be seen in Chart A below. Moreover, with venture capital, it is crucial to look both at the total amount invested and the number of firms receiving venture funding. Here too, the data are troubling—the overall number of VC investments fell by 18% in the same period.Whatever the reasons, such an uncontrolled collapse in the VC market isn’t good for investors, start-ups, or the economy as a whole. F I N D I N G # 2 Clean tech venture investment has also plummeted. The clean tech sector has been particularly vulnerable to, and seriously affected by, this drop in venture investment. There was a rapid rise in venture investment in clean tech that began in the 4th quarter of 2007, according to our analysis of investment data from Dow Jones VentureSource, displayed in Chart B below. During that period, Congress authorized ARPA-E (a new Department of Energy program to help spur clean energy innovation), and the Bush Administration began implementing loan guarantees for clean tech companies. Even small amounts of government support like these act as a vote of confidence in the clean tech industry and signal to investors that this is an area of future U.S. growth. Unfortunately, after this clean energy venture funding peaked in the 2nd quarter of 2008, it fell precipitously as capital disappeared when the economy slid into recession. Confidence and investment in this sector were temporarily restored in late 2009-early 2010 because government support in the Recovery Act acted as a signal to investors (similar to the signal sent by ARPA-E funding and the Bush Administration’s loan guarantees). But the clean tech financing roller coaster soon resumed with a steep drop in clean tech venture investment in the 2nd quarter of 2010. According to an analysis by Ernst & Young, investments in clean tech tumbled 44% from the 2nd quarter of 2010 to the 2nd quarter of 2011. Overall, the number of venture capital clean tech deals dropped 12% during the same period. As the number of deals and dollars invested fell, clean tech inventors strained to stay afloat. Some succumbed to the Valley of Death—the period when a company requires a large amount of funding to scale-up production of a new technology. Others simply could not raise sufficient start-up capital at a time when all venture—especially clean tech—is struggling. F I N D I N G # 3 There’s been a quick shift in clean tech funding away from start-ups. Compounding this startling drop in overall clean tech venture funding is an equally troubling trend: remaining investment in clean tech is moving toward the later, less-risky stages of innovation. Since the beginning of 2010, clean tech venture capital funding is increasingly shifting to late-stage investments, according to our analysis of investment data from Dow Jones VentureSource. In 2010 there were more late-stage deals than early-stage deals in clean tech—by a margin of 2 to 1—for the first time since 1999, as can be seen in Chart C. Investments in early stages of new technologies are particularly important. This is the point when companies have proven concepts and perhaps a small handful of customers, but they are not yet making a profit. Starved for cash, they cannot implement a business plan that reaches profitability without outside investment.Indeed, an earlystage company that cannot secure capital is likely to go bankrupt or move overseas where there is better access to funding. Either way, we risk the loss in economic benefits for the United States. Late-stage investments, where much of the clean tech venture is now flowing, are in maturing companies near or at profitability that are seeking a financial legup on their competitors. These companies have far more options to raise capital and are more likely to survive without an immediate infusion of new funds. F I N D I N G # 4 Our competitors are greatly expanding clean tech investment. As American clean tech investment declines, other countries are making more and more money available to clean tech entrepreneurs. 17 Foreign governments are enticing U.S. clean tech companies to move overseas with low interest loans, with generous repayment schemes, and promises by host governments to share in the costs of operating their factories. 18 A report by the United Nations Environment Programme and Bloomberg New Energy Finance found that, worldwide, investment in renewable energy hit a record $211 billion in 2010. 19 Venture investment in clean tech helped drive this growth, soaring 59% in 2010 to $2.4 billion. 20 This is part of a long-term global trend. Between 2004 and 2010, global venture investment in renewable energy rose 36%. 21 While the United States remains the dominant force in venture investment, a 2011 study by the Pew Charitable Trust’s Environmental Group warns that the rapid expansion of clean energy in Asia is driving investment east, away from the United States. 22 In many parts of the world, renewable energies are expanding, in terms of capital investment, diversity of projects, and geographical distribution. 23 For the first time, in history, more money has been invested in clean energy in developing countries than in developed economies. A survey of global climate policies by Deutsche Bank concluded that clean tech innovations are more likely to emerge and succeed in Brazil, China, India, Germany, and the United Kingdom than they are in the United States. These countries have used a combination of investments and national energy standards, feed-in tariffs, efficiency standards, and a carbon price to create domestic demand. 24 As Mark Fulton, Managing Director of the Energy Practice at Deutsche Bank, explained at a recent Third Way ideas forum, other countries have created policies that provide a clear path for investors and emerging technologies. Germany’s feed-in tariff has spurred solar development. The United Kingdom government is incentivizing offshore wind. China is putting a suite of policies in place to stimulate clean tech demand and deployment. “If you look at its peer group, the U.S. federal policy and the way it’s thinking about [clean energy] in America just is really different.” Our biggest competitor, China, has twice as many initiatives in place to boost clean tech development at the federal level than the U.S. These include a national renewable electricity standard, a feed-in tariff, a long-term governmentinvested “green bank,” and long-term funding programs. China now leads the world as both the largest source of, and destination for, clean energy investment. According to Ernst and Young, in 2011 China beat the U.S. in terms of its attractiveness for renewable energy investment for the first time. China attracted $54.4 billion clean energy financing in 2010, a 39% increase over 2009 and equal to the entire amount of clean energy investment worldwide in 2004. Such financing in the U.S. stagnated last year at $34.4 billion, approximately equal to 2007 levels. As Fulton noted: “[The Chinese are] going to be the scalers; America is going to get the benefits of that, but the real question is simply whether America, yet again, ends up importing everything from China.” C O N C L U S I O N Today, even as the $2.3 trillion global clean energy market emerges, American clean tech entrepreneurs are at risk. The loss of venture capital in the U.S. will not derail technological innovation in clean energy worldwide, but it could severely set back and undermine American-owned clean energy innovation. As we have illustrated, overall venture investment has plummeted since 2007. This, in turn, led to a sharp decrease in venture funding for clean tech innovations at all stages, but particularly earlier stage investments. Finally, this challenging investment environment has caused innovators to close their doors entirely, or to take their products overseas where they can find sufficient capital. Regardless of the cause, the U.S. is left without the economic rewards of these innovations. As venture firms struggle and investment recedes in the U.S., our international economic competitors—like China, India, Brazil, the United Kingdom, and Germany—are filling the gap. The crisis in clean tech venture capital today is a warning sign for the American economy. We must heed it and respond if we aspire to the kind of economic growth in the 21st century that we had in the 20th.

### Grid

#### No impact to grid collapse- segmented

Leger ’12 (Donna Leinwand Leger, USA Today, “Energy experts say blackout like India's is unlikely in U.S.,” <http://www.usatoday.com/news/nation/story/2012-07-31/usa-india-power-outage/56622978/1>, July 31, 2012]

A massive, countrywide power failure like the one in India on Tuesday is "extremely unlikely" in the United States, energy experts say. In India, three of the country's government-operated power grids failed Tuesday, leaving 620 million people without electricity for several hours. The outage, the second in two days in the country of 1.21 billion people, is the world's biggest blackout on record. The U.S. electricity system is segmented into three parts with safeguards that prevent an outage in one system from tripping a blackout in another system, "making blackouts across the country extremely unlikely," Energy Department spokeswoman Keri Fulton said. Early reports from government officials in India say excessive demand knocked the country's power generators offline. Experts say India's industry and economy are growing faster than its electrical systems. Last year, the economy grew 7.8% and pushed energy needs higher, but electricity generation did not keep pace, government records show. "We are much, much less at risk for something like that happening here, especially from the perspective of demand exceeding supply," said Gregory Reed, a professor of electric power engineering at University of Pittsburgh. "We're much more sophisticated in our operations. Most of our issues have been from natural disasters." The U.S. generates more than enough electricity to meet demand and always have power in reserve, Reed said. "Fundamentally, it's a different world here," said Arshad Mansoor, senior vice president of the Electric Power Research Institute in Washington and an expert on power grids. "It's an order of magnitude more reliable here than in a developing country." Grid operators across the country analyze power usage and generation, factoring outside factors such as weather, in real time and can forecast power supply and demand hour by hour, Mansoor said. "In any large, complex interactive network, the chance of that interconnection breaking up is always there," Mansoor said. "You cannot take your eye off the ball for a minute." Widespread outages in the U.S. caused by weather are common. But the U.S. has also had system failures, said Ellen Vancko, senior energy adviser for the Union of Concerned Scientists, based in Washington. On Aug. 14, 2003, more than 50 million people in the Northeast and Canada lost power after a major U.S. grid collapsed. The problem began in Ohio when a transmission wire overheated and sagged into a tree that had grown too close to the line, Vancko said. That caused other power lines to overheat until so many lines failed that the system shut itself down, she said. "That was less a failure of technology and more a failure of people, a failure of people to follow the rules," Vancko said. "There were a whole bunch of lessons learned." In 2005, in response to an investigation of the blackout, Congress passed a law establishing the North American Electric Reliability Corporation (NERC) to enforce reliability standards for bulk electricity generation.

#### Cyberattacks impossible – empirics and defenses solve

Rid ‘12 (Thomas Rid, reader in war studies at King's College London, is author of "Cyber War Will Not Take Place" and co-author of "Cyber-Weapons.", March/April 2012, “Think Again: Cyberwar”, http://www.foreignpolicy.com/articles/2012/02/27/cyberwar?page=full)

"Cyberwar Is Already Upon Us." No way. "Cyberwar is coming!" John Arquilla and David Ronfeldt predicted in a celebrated Rand paper back in 1993. Since then, it seems to have arrived -- at least by the account of the U.S. military establishment, which is busy competing over who should get what share of the fight. Cyberspace is "a domain in which the Air Force flies and fights," Air Force Secretary Michael Wynne claimed in 2006. By 2012, William J. Lynn III, the deputy defense secretary at the time, was writing that cyberwar is "just as critical to military operations as land, sea, air, and space." In January, the Defense Department vowed to equip the U.S. armed forces for "conducting a combined arms campaign across all domains -- land, air, maritime, space, and cyberspace." Meanwhile, growing piles of books and articles explore the threats of cyberwarfare, cyberterrorism, and how to survive them. Time for a reality check: Cyberwar is still more hype than hazard. Consider the definition of an act of war: It has to be potentially violent, it has to be purposeful, and it has to be political. The cyberattacks we've seen so far, from Estonia to the Stuxnet virus, simply don't meet these criteria. Take the dubious story of a Soviet pipeline explosion back in 1982, much cited by cyberwar's true believers as the most destructive cyberattack ever. The account goes like this: In June 1982, a Siberian pipeline that the CIA had virtually booby-trapped with a so-called "logic bomb" exploded in a monumental fireball that could be seen from space. The U.S. Air Force estimated the explosion at 3 kilotons, equivalent to a small nuclear device. Targeting a Soviet pipeline linking gas fields in Siberia to European markets, the operation sabotaged the pipeline's control systems with software from a Canadian firm that the CIA had doctored with malicious code. No one died, according to Thomas Reed, a U.S. National Security Council aide at the time who revealed the incident in his 2004 book, At the Abyss; the only harm came to the Soviet economy. But did it really happen? After Reed's account came out, Vasily Pchelintsev, a former KGB head of the Tyumen region, where the alleged explosion supposedly took place, denied the story. There are also no media reports from 1982 that confirm such an explosion, though accidents and pipeline explosions in the Soviet Union were regularly reported in the early 1980s. Something likely did happen, but Reed's book is the only public mention of the incident and his account relied on a single document. Even after the CIA declassified a redacted version of Reed's source, a note on the so-called Farewell Dossier that describes the effort to provide the Soviet Union with defective technology, the agency did not confirm that such an explosion occurred. The available evidence on the Siberian pipeline blast is so thin that it shouldn't be counted as a proven case of a successful cyberattack. Most other commonly cited cases of cyberwar are even less remarkable. Take the attacks on Estonia in April 2007, which came in response to the controversial relocation of a Soviet war memorial, the Bronze Soldier. The well-wired country found itself at the receiving end of a massive distributed denial-of-service attack that emanated from up to 85,000 hijacked computers and lasted three weeks. The attacks reached a peak on May 9, when 58 Estonian websites were attacked at once and the online services of Estonia's largest bank were taken down. "What's the difference between a blockade of harbors or airports of sovereign states and the blockade of government institutions and newspaper websites?" asked Estonian Prime Minister Andrus Ansip. Despite his analogies, the attack was no act of war. It was certainly a nuisance and an emotional strike on the country, but the bank's actual network was not even penetrated; it went down for 90 minutes one day and two hours the next. The attack was not violent, it wasn't purposefully aimed at changing Estonia's behavior, and no political entity took credit for it. The same is true for the vast majority of cyberattacks on record. Indeed, there is no known cyberattack that has caused the loss of human life. No cyberoffense has ever injured a person or damaged a building. And if an act is not at least potentially violent, it's not an act of war. Separating war from physical violence makes it a metaphorical notion; it would mean that there is no way to distinguish between World War II, say, and the "wars" on obesity and cancer. Yet those ailments, unlike past examples of cyber "war," actually do kill people. "A Digital Pearl Harbor Is Only a Matter of Time." Keep waiting. U.S. Defense Secretary Leon Panetta delivered a stark warning last summer: "We could face a cyberattack that could be the equivalent of Pearl Harbor." Such alarmist predictions have been ricocheting inside the Beltway for the past two decades, and some scaremongers have even upped the ante by raising the alarm about a cyber 9/11. In his 2010 book, Cyber War, former White House counterterrorism czar Richard Clarke invokes the specter of nationwide power blackouts, planes falling out of the sky, trains derailing, refineries burning, pipelines exploding, poisonous gas clouds wafting, and satellites spinning out of orbit -- events that would make the 2001 attacks pale in comparison. But the empirical record is less hair-raising, even by the standards of the most drastic example available. Gen. Keith Alexander, head of U.S. Cyber Command (established in 2010 and now boasting a budget of more than $3 billion), shared his worst fears in an April 2011 speech at the University of Rhode Island: "What I'm concerned about are destructive attacks," Alexander said, "those that are coming." He then invoked a remarkable accident at Russia's Sayano-Shushenskaya hydroelectric plant to highlight the kind of damage a cyberattack might be able to cause. Shortly after midnight on Aug. 17, 2009, a 900-ton turbine was ripped out of its seat by a so-called "water hammer," a sudden surge in water pressure that then caused a transformer explosion. The turbine's unusually high vibrations had worn down the bolts that kept its cover in place, and an offline sensor failed to detect the malfunction. Seventy-five people died in the accident, energy prices in Russia rose, and rebuilding the plant is slated to cost $1.3 billion. Tough luck for the Russians, but here's what the head of Cyber Command didn't say: The ill-fated turbine had been malfunctioning for some time, and the plant's management was notoriously poor. On top of that, the key event that ultimately triggered the catastrophe seems to have been a fire at Bratsk power station, about 500 miles away. Because the energy supply from Bratsk dropped, authorities remotely increased the burden on the Sayano-Shushenskaya plant. The sudden spike overwhelmed the turbine, which was two months shy of reaching the end of its 30-year life cycle, sparking the catastrophe. If anything, the Sayano-Shushenskaya incident highlights how difficult a devastating attack would be to mount. The plant's washout was an accident at the end of a complicated and unique chain of events. Anticipating such vulnerabilities in advance is extraordinarily difficult even for insiders; creating comparable coincidences from cyberspace would be a daunting challenge at best for outsiders. If this is the most drastic incident Cyber Command can conjure up, perhaps it's time for everyone to take a deep breath. "Cyberattacks Are Becoming Easier." Just the opposite. U.S. Director of National Intelligence James R. Clapper warned last year that the volume of malicious software on American networks had more than tripled since 2009 and that more than 60,000 pieces of malware are now discovered every day. The United States, he said, is undergoing "a phenomenon known as 'convergence,' which amplifies the opportunity for disruptive cyberattacks, including against physical infrastructures." ("Digital convergence" is a snazzy term for a simple thing: more and more devices able to talk to each other, and formerly separate industries and activities able to work together.) Just because there's more malware, however, doesn't mean that attacks are becoming easier. In fact, potentially damaging or life-threatening cyberattacks should be more difficult to pull off. Why? Sensitive systems generally have built-in redundancy and safety systems, meaning an attacker's likely objective will not be to shut down a system, since merely forcing the shutdown of one control system, say a power plant, could trigger a backup and cause operators to start looking for the bug. To work as an effective weapon, malware would have to influence an active process -- but not bring it to a screeching halt. If the malicious activity extends over a lengthy period, it has to remain stealthy. That's a more difficult trick than hitting the virtual off-button. Take Stuxnet, the worm that sabotaged Iran's nuclear program in 2010. It didn't just crudely shut down the centrifuges at the Natanz nuclear facility; rather, the worm subtly manipulated the system. Stuxnet stealthily infiltrated the plant's networks, then hopped onto the protected control systems, intercepted input values from sensors, recorded these data, and then provided the legitimate controller code with pre-recorded fake input signals, according to researchers who have studied the worm. Its objective was not just to fool operators in a control room, but also to circumvent digital safety and monitoring systems so it could secretly manipulate the actual processes. Building and deploying Stuxnet required extremely detailed intelligence about the systems it was supposed to compromise, and the same will be true for other dangerous cyberweapons. Yes, "convergence," standardization, and sloppy defense of control-systems software could increase the risk of generic attacks, but the same trend has also caused defenses against the most coveted targets to improve steadily and has made reprogramming highly specific installations on legacy systems more complex, not less.

#### No CCP collapse—the government represses instability

Pei ‘9 (Minxin, Senior Associate in the China Program at the Carnegie Endowment for International Peace, “Will the Chinese Communist Party Survive the Crisis?” Foreign Affairs. <http://www.foreignaffairs.com/articles/64862/minxin-pei/will-the-chinese-communist-party-survive-the-crisis>, March 12, 2009)

It might seem reasonable to expect that challenges from the disaffected urban middle class, frustrated college graduates, and unemployed migrants will constitute the principal threat to the party's rule. If those groups were in fact to band together in a powerful coalition, then the world's longest-ruling party would indeed be in deep trouble. But that is not going to happen. Such a revolutionary scenario overlooks two critical forces blocking political change in China and similar authoritarian political systems: the regime's capacity for repression and the unity among the elite. Economic crisis and social unrest may make it tougher for the CCP to govern, but they will not loosen the party's hold on power. A glance at countries such as Zimbabwe, North Korea, Cuba, and Burma shows that a relatively unified elite in control of the military and police can cling to power through brutal force, even in the face of abysmal economic failure. Disunity within the ruling elite, on the other hand, weakens the regime's repressive capacity and usually spells the rulers' doom. The CCP has already demonstrated its remarkable ability to contain and suppress chronic social protest and small-scale dissident movements. The regime maintains the People's Armed Police, a well-trained and well-equipped anti-riot force of 250,000. In addition, China's secret police are among the most capable in the world and are augmented by a vast network of informers. And although the Internet may have made control of information more difficult, Chinese censors can still react quickly and thoroughly to end the dissemination of dangerous news. Since the Tiananmen crackdown, the Chinese government has greatly refined its repressive capabilities. Responding to tens of thousands of riots each year has made Chinese law enforcement the most experienced in the world at crowd control and dispersion. Chinese state security services have applied the tactic of "political decapitation" to great effect, quickly arresting protest leaders and leaving their followers disorganized, demoralized, and impotent. If worsening economic conditions lead to a potentially explosive political situation, the party will stick to these tried-and-true practices to ward off any organized movement against the regime.

#### China unsustainable- collapse inevitable

Dickson ’12 (Micah Dickson, SeekingAlpha, Investor Trading Online News, “The Cracks In The Great Economic Wall Of China”, November 27, 2012)

China has just gone through their once in a decade power transition. While the transition of power has appeared to have gone smoothly, it does not mean that the challenges facing China have diminished at all. Xi Jinping and his regime face a host of challenges. These challenges vary from economic to societal in nature. The current course China is on is utterly unsustainable. The question is, can the new Chinese leadership make the necessary reforms to keep the country from a political and economic collapse? Investors must consider the size and scope of the challenges facing China as they make decisions on where to allocate their assets for the coming year. Economic Challenges Any true economic growth is based upon investors and consumers acting on information. The accuracy of that information can decide if that economic growth is sustainable or not. Many of the basic economic numbers coming from China have largely been called into question. Li Kepiang, possible future premier of China, said in 2012 that the GDP figures were "man-made". There has also been documented cases of the growth in many Chinese industries being quite different from the overall GDP numbers that are reported. Unfortunately, China's state owned enterprises are becoming a prime example of the failure of accurate information from China itself. State owned enterprises are filled with Communist Party leaders who use them to bolster the Party's power. Included in the list of state owned enterprises are banks that provide loans to businesses. These businesses include other non-financial state owned enterprises. These loans are given at lower interest rates and in unlimited amounts. This incestuous relationship gives state owned enterprises an advantage over other smaller enterprises inside the country. Besides being incredibly corrupt, this system has led to what has been referred to as "zombie companies". These are companies that should be going bankrupt because they are unable to repay their debt. The Chinese government is not allowing these companies to go bankrupt. Instead the state owned banks are being forced to continue to lend money to the enterprises despite their inability to repay the debt. Matthew Boesler from the Business Insider commented on the effects of these practices in this way, "This is causing a deterioration in asset quality on banks' balance sheets, and increases the chances that the government will have to bail them out down the road". Some estimate that the debt to equity ratio of many state owned enterprises exceed 230%. This is a staggering figure. Even with all of these negative developments, the "official" amount of non-performing loans in the Chinese banking sector is only 0.9%. This obvious contradiction is why so many of the numbers out of China are deceptions. The banking sector numbers are not the only numbers that are troubling. The state owned enterprises have been showing weakness for a while. These enterprises make up 40% to 50% of GDP. From 2001 to 2009, these state owned enterprises made 5.8 trillion Renminbi (RMB). This would equal $931.1 billion in the United States. Normally, this would be a tale of their success. But if you remove the government subsidies for that same time period, the real average return on equity for the state owned enterprises would be a negative 6.29%. These problems are compounded by a growing real estate bubble. Part of China's growth has come from the government's investment in the building of infrastructure. Robin Banerji and Patrick Jackson of the BBC describe the expansion like this, "The country is said to have built the equivalent of Rome every two months in the past decade". The problem with this rapid expansion is that supply is beginning to overtake demand. Satellite images are showing entire Chinese cities empty many years after their construction. The World Bank's Holly Krambeck gave a frightening example of this in the city of Chenggong. She says, "In Chenggong, there are more than 100,000 new apartments with no occupants". This is becoming the story all over China as new buildings, office spaces, and other projects are lying empty due to the lack of occupants able to fill these empty structures. These factors should cause investors to be cautious about their positions in China. A red flag to any investor should be the inability for Chinese companies to be audited by firms outside of China. If these large economic challenges are not addressed, China may see anemic economic growth as Japan did in the 1990s or worse, an economic catastrophe that could rock the world markets as investors begin to move their capital to other parts of the world. This could be hastened by the growing perception of many in the United States, China's largest customer, that companies that do business there are hurting American workers. Political Turmoil China is currently finishing their once in a decade transition of political leadership. This however has not come without serious hiccups in the road. There is serious tension inside the Chinese hierarchy which is beginning to reveal itself. As Dean Cheng reported about the 2012 National People's Congress session, "As this year's session came to a close, outgoing Premier Wen Jiabao warned of the potential for chaos and cited the Cultural Revolution of 1966-1976". This statement immediately preceded the ousting of Chongqing Party Secretary Bo Xilai from the Communist Party. Bo, his wife, and many extended family members were also charged with a variety of crimes including corruption, murder, and adultery. His populist tone and rising star in the Communist Party made him an attractive candidate for higher office and many reports say he was campaigning for a position on the CCP Politburo Standing Committee. This committee is the most important and power part of the Chinese leadership. Bo's rising star quickly extinguished after his former police chief tried to defect to the United States. Because of how common corruption is inside the Party, many find it strange that Bo Xilai was ousted and charged so quickly and publicly. Dean Cheng makes this comment regarding the scandal: "Such major developments-occurring in the midst of one of China's most public political events-suggest that Chinese politics are in major turmoil." While the event with Bo Xilai is scandalous, it is an extension of the ongoing concern of many inside the Party of the increasing corruption and the deterioration of the perceived legitimacy of the Party. Premier Wen, who is exited his position during this most recent transition has even publicly called for the power of the Communist Party to be reduced. In the 2011 World Economic Forum in Davos, Switzerland, Premier Wen was quoted as saying: A ruling Party's most important duty is to follow the constitution and the law, and restrict its activities within the constitution and the law…. This requires changes in the use of the Party as a substitute for the government and in the phenomenon of over-concentration of power. For this, we need to reform the leadership system of the Party and the country. But these reforms will be close to impossible to carry out as the 70 wealthiest members of the National People's Congress are ten times wealthier than the top 660 government officials here in the United States. This is due to the fact that state owned enterprises are run by members of the National People's Congress or by a close relative of those members. Any reforms would mean these members would have to give up their sources of wealth and power. As we've seen in many cases, economic troubles can strain political relations even further. If China does not make changes, the corruption and decadence in the ruling Communist Party could become the scapegoat for any "hard landing" China experiences. If China experiences a hard landing, it would lead to the second largest economy in the world falling into political chaos. This would create uncertainty that would trump the uncertainty experienced from the problems in the European Union. Societal Challenges The political problems in China are compounded by the fact that there is growing unrest among the average citizen in China. The largest problem is that of forced evictions by the Chinese government. After the Financial Crisis of 2008, the Chinese government began implementing an extremely large stimulus package. The main thrust of the stimulus package is to build up infrastructure across the country. In order to do this, many Chinese cities are forcibly and violently evicting citizens who live on land that is going to be used for new government building projects. The stories of these forced evictions have caused outrage throughout the Chinese population. An example of how outraged many citizens are is the Chinese fishing village of Wukan. The citizens of the village became fed up with land grabs from the government. In response, they rushed the offices of the local government during a protest. After the protest, one of the protest leaders died while in custody. This led to the village ousting the Communist Party leadership in the village and democratically electing local leaders. While this rebellion is an extreme example, what caused the outrage is still there and is becoming prevalent among the Chinese people. Land grabs are not the only problems, income disparity, working conditions, and many more social ills are beginning to bubble over. In 2010, China experienced 180,000 protests, riots, and mass demonstration. This is staggering. Unfortunately, many of the complaints are too narrow to begin a nationwide movement that will cause sweeping reforms inside China. That will not last for long. More and more of the protest leaders admit that the underlying problem with the country is the one party system that has dominated the government for so long. This growing public anger combined with the political turmoil inside the country could combine to create a deadly chemical reaction. Conclusion The Chinese model is quickly becoming a potential Chinese nightmare. While it has created incredible wealth inside China, it has created a monster that does not seem to be able to make the necessary changes. China has to go back to the path of reforms that Deng began in 1970s in which their economy becomes freer. Unfortunately, the incredible corruption that has sprang up from China's economic growth is beginning to insulate itself. Communist Party leaders have shown hostility toward any change. Investors must consider these factors when looking toward China for the growth that is missing in the United States. While that growth may be advantageous in the short to medium term, it could be an incredibly risky bet in the long term. If China does not address its economic, political, and societal challenges, the Great Wall that is the rising Chinese economy may have a mighty fall.

### Warming

#### United States not key to solve warming

Grose ‘3-15 (Thomas K., National Geographic News Writer, “As U.S. Cleans Its Energy Mix, It Ships Coal Problems Abroad”

Ready for some good news about the environment? Emissions of carbon dioxide in the United States are declining. But don't celebrate just yet. A major side effect of that cleaner air in the U.S. has been the further darkening of skies over Europe and Asia. The United States essentially is exporting a share of its greenhouse gas emissions in the form of coal, data show. If the trend continues, the dramatic changes in energy use in the United States—in particular, the switch from coal to newly abundant natural gas for generating electricity—will have only a modest impact on global warming, observers warn. The Earth's atmosphere will continue to absorb heat-trapping CO2, with a similar contribution from U.S. coal. It will simply be burned overseas instead of at home. "Switching from coal to gas only saves carbon if the coal stays in the ground," said John Broderick, lead author of a study on the issue by the Tyndall Center for Climate Change Research at England's Manchester University. The U.S. Energy Information Administration (EIA) released data this week showing that United States coal exports hit a record 126 million short tons in 2012, a 17 percent increase over the previous year. Overseas shipments surpassed the previous high mark set in 1981 by 12 percent. The United States clearly is using less coal: Domestic consumption fell by about 114 million tons, or 11 percent, largely due to a decline in the use of coal for electricity. But U.S. coal production fell just 7 percent. The United States, with the world's largest coal reserves, continued to churn out the most carbon-intensive fuel, producing 1 billion tons of coal from its mines in 2012. Emissions Sink The EIA estimates that due largely to the drop in coal-fired electricity, U.S. carbon emissions from burning fossil fuel declined 3.4 percent in 2012. If the numbers hold up, it will extend the downward trend that the U.S. Environmental Protection Agency (EPA) outlined last month in its annual greenhouse gas inventory, which found greenhouse gas emissions in 2011 had fallen 8 percent from their 2007 peak to 6,703 million metric tons of CO2 equivalent (a number that includes sources other than energy, like methane emissions from agriculture). In fact, if you don't count the recession year of 2009, U.S. emissions in 2011 dropped to their lowest level since 1995. President Barack Obama counted the trend among his environmental accomplishments in his State of the Union address last month: "Over the last four years, our emissions of the dangerous carbon pollution that threatens our planet have actually fallen." The reason is clear: Coal, which in 2005 generated 50 percent of U.S. electricity, saw its share erode to 37.4 percent in 2012, according to EIA's new short-term energy outlook. An increase in U.S. renewable energy certainly played a role; renewables climbed in those seven years from 8.7 percent to 13 percent of the energy mix, about half of it hydropower. But the big gain came from natural gas, which climbed from 19 percent to 30.4 percent of U.S. electricity during that time frame, primarily because of abundant supply and low prices made possible by hydraulic fracturing, or fracking. The trend appears on track to continue, with U.S. coal-fired plants being retired at a record pace. But U.S. coal producers haven't been standing still as their domestic market has evaporated. They've been shipping their fuel to energy-hungry markets overseas, from the ports of Norfolk, Baltimore, and New Orleans. Although demand is growing rapidly in Asia—U.S. coal exports to China were on track to double last year—Europe was the biggest customer, importing more U.S. coal last year than all other countries combined. The Netherlands, with Europe's largest port, Rotterdam, accepted the most shipments, on pace for a 24 jump in U.S. coal imports in 2012. The United Kingdom, the second largest customer, saw its U.S. coal imports jump more than 70 percent. The hike in European coal consumption would appear to run counter to big government initiatives across the Continent to cut CO2 emissions. But in the European Union, where fracking has made only its initial forays and natural gas is still expensive, American coal is, well, dirt cheap. European utilities are now finding that generating power from coal is a profitable gambit. In the power industry, the profit margin for generating electricity from coal is called the "clean dark spread"; at the end of December in Great Britain, it was going for about $39 per megawatt-hour, according to Argus. By contrast, the profit margin for gas-fired plants—the "clean spark spread"—was about $3. Tomas Wyns, director of the Center for Clean Air Policy-Europe, a nonprofit organization in Brussels, Belgium, said those kinds of spreads are typical across Europe right now. The EU has a cap-and-trade carbon market, the $148 billion, eight-year-old Emissions Trading System (ETS). But it's in the doldrums because of a huge oversupply of permits. That's caused the price of carbon to fall to about 4 euros ($5.23). A plan called "backloading" that would temporarily extract allowances from the market to shore up the price has faltered so far in the European Parliament. "A better carbon price could make a difference" and even out the coal and gas spreads, Wyns said. He estimates a price of between 20 and 40 euros would do the trick. "But a structural change to the Emissions Trading System is not something that will happen very quickly. A solution is years off." The Tyndall Center study estimates that the burning of all that exported coal could erase fully half the gains the United States has made in reducing carbon emissions. For huge reserves of shale gas to help cut CO2 emissions, "displaced fuels must be reduced globally and remain suppressed indefinitely," the report said. Future Emissions It is not clear that the surge in U.S. coal exports will continue. One reason for the uptick in coal-fired generation in Europe has been the looming deadline for the EU's Large Combustion Plant Directive, which will require older coal plants to meet lower emission levels by the end of 2015 or be mothballed. Before that phaseout begins, Wyns says, "there is a bit of a binge going on." Also, economic factors are at work. Tyndall's Broderick said American coal companies have been essentially selling surplus fuel overseas at low profit margins, so there is a likelihood that U.S. coal production will decrease further. The U.S. government forecasters at EIA expect that U.S. coal exports will fall back to about 110 million tons per year over the next two years, due to economic weakness in Europe, falling international prices, and competition from other coal-exporting countries. The Paris-based International Energy Agency (IEA) calls Europe's "coal renaissance" a temporary phenomenon; it forecasts an increasing use of renewables, shuttering of coal plants, and a better balance between gas and coal prices in the coming years. But IEA does not expect that the global appetite for coal will slacken appreciably. The agency projects that, by 2017, coal will rival oil as the world's primary energy source, mainly because of skyrocketing demand in Asia. U.S. coal producers have made clear that they aim to tap into that growing market.

#### No impact – warming will take centuries and adaptation solves

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

These statements arelargely alarmist and misleading. Although climate change is a serious problem that deserves attention, society’s immediate behavior has an extremely low probability of leading to catastrophic consequences**.** The science and economicsof climate change is quite clear that emissions over the next few decades will lead to onlymild consequences. The severe impacts predicted by alarmists require a century (or two in the case of Stern 2006) of no mitigation. Many of the predicted impacts assume there will be no or little adaptation. The net economic impacts from climate change over the next 50 years will be small regardless. Most of the more severe impacts will take more than a century or even a millennium to unfold and many of these **“**potential” impacts will never occur because people will adapt. It is not at all apparent that immediate and dramatic policies need to be developed to thwart long‐range climate risks. What is needed are long‐run balanced responses.

#### No modeling or momentum

Mead '10 (Walter Russell, senior fellow for U.S. foreign policy at the Council on Foreign Relations, The Death of Global Warming, <http://blogs.the-american-interest.com/wrm/2010/02/01/the-death-of-global-warming/>, February 1, 2010)

The global warming movement as we have known it is dead. Its health had been in steady decline during the last year as the once robust hopes for a strong and legally binding treaty to be agreed upon at the Copenhagen Summit faded away. By the time that summit opened, campaigners were reduced to hoping for a ‘politically binding’ agreement to be agreed that would set the stage for the rapid adoption of the legally binding treaty. After the failure of the summit to agree to even that much, the movement went into a rapid decline. The movement died from two causes: bad science and bad politics. After years in which global warming activists had lectured everyone about the overwhelming nature of the scientific evidence, it turned out that the most prestigious agencies in the global warming movement were breaking laws, hiding data, and making inflated, bogus claims resting on, in some cases, no scientific basis at all. This latest story in the London Times is yet another shocker; the IPCC’s claims that the rainforests were going to disappear as a result of global warming are as bogus and fraudulent as its claims that the Himalayan glaciers would melt by 2035. It seems as if a scare story could grab a headline, the IPCC simply didn’t care about whether it was reality-based. With this in mind, ‘climategate’ — the scandal over hacked emails by prominent climate scientists — looks sinister rather than just unsavory. The British government has concluded that University of East Anglia, home of the research institute that provides the global warming with much of its key data, had violated Britain’s Freedom of Information Act when scientists refused to hand over data so that critics could check their calculations and methods. Breaking the law to hide key pieces of data isn’t just ‘science as usual,’ as the global warming movement’s embattled defenders gamely tried to argue. A cover-up like that suggests that you indeed have something to conceal. The urge to make the data better than it was didn’t just come out of nowhere. The global warmists were trapped into the necessity of hyping the threat by their realization that the actual evidence they had — which, let me emphasize, all hype aside, is serious, troubling and establishes in my mind the need for intensive additional research and investigation, as well as some prudential steps that would reduce CO2 emissions by enhancing fuel use efficiency and promoting alternative energy sources — was not sufficient to get the world’s governments to do what they thought needed to be done. Hyping the threat increasingly doesn’t look like an accident: it looks like it was a conscious political strategy. Now it has failed. Not everything that has come out of the IPCC and the East Anglia Climate Unit is false, but enough of their product is sufficiently tainted that these institutions can best serve the cause of fighting climate change by stepping out of the picture. New leadership might help, but everything these two agencies have done will now have to be re-checked by independent and objective sources. The global warming campaigners got into this mess because they had a deeply flawed political strategy. They were never able to develop a pragmatic approach that could reach its goals in the context of the existing international system. The global warming movement proposed a complex set of international agreements involving vast transfers of funds, intrusive regulations in national economies, and substantial changes to the domestic political economies of most countries on the planet. As it happened, the movement never got to the first step — it never got the world’s countries to agree to the necessary set of treaties, transfers and policies that would constitute, at least on paper, a program for achieving its key goals. Even if that first step had been reached, the second and third would almost surely not have been. The United States Congress is unlikely to pass the kind of legislation these agreements would require before the midterm elections, much less ratify a treaty. (It takes 67 senate votes to ratify a treaty and only 60 to overcome a filibuster.) After the midterms, with the Democrats expected to lose seats in both houses, the chance of passage would be even more remote — especially as polls show that global warming ranks at or near the bottom of most voters’ priorities. American public opinion supports ‘doing something’ about global warming, but not very much; support for specific measures and sacrifices will erode rapidly as commentators from Fox News and other conservative outlets endlessly hammer away. Without a commitment from the United States to pay its share of the $100 billion plus per year that poor countries wanted as their price for compliance, and without US participation in other aspects of the proposed global approach, the intricate global deals fall apart. Since the United States was never very likely to accept these agreements and ratify these treaties, and is even less prepared to do so in a recession with the Democrats in retreat, even “success” in Copenhagen would not have brought the global warming movement the kind of victory it sought — although it would have created a very sticky and painful political problem for the United States. But even if somehow, miraculously, the United States and all the other countries involved not only accepted the agreements but ratified them and wrote domestic legislation to incorporate them into law, it is extremely unlikely that all this activity would achieve the desired result. Countries would cheat, either because they chose to do so or because their domestic systems are so weak, so corrupt or so both that they simply wouldn’t be able to comply. Governments in countries like China and India aren’t going to stop pushing for all the economic growth they can get by any means that will work — and even if central governments decided to move on global warming, state and local authorities have agendas of their own. The examples of blatant cheating would inevitably affect compliance in other countries; it would also very likely erode what would in any case be an extremely fragile consensus in rich countries to keep forking over hundreds of billions of dollars to poor countries — many of whom would not be in anything like full compliance with their commitments. For better or worse, the global political system isn’t capable of producing the kind of result the global warming activists want. It’s like asking a jellyfish to climb a flight of stairs; you can poke and prod all you want, you can cajole and you can threaten. But you are asking for something that you just can’t get — and at the end of the day, you won’t get it. The grieving friends and relatives aren’t ready to pull the plug; in a typical, whistling-past-the-graveyard comment, the BBC first acknowledges that even if the current promises are kept, temperatures will rise above the target level of two degrees Celsius — but let’s not despair! The BBC quotes one of its own reporters: “BBC environment reporter Matt McGrath says the accord lacks teeth and does not include any clear targets on cutting emissions. But if most countries at least signal what they intend to do to cut their emissions, it will mark the first time that the UN has a comprehensive written collection of promised actions, he says.”

No scarcity impact

Allouche ‘11 (Jeremy Allouche, research Fellow, water supply and sanitation @ Institute for Development Studies, former professor – MIT, PhD in International Relations from the Graduate Institute of International Studies [“The sustainability and resilience of global water and food systems: Political analysis of the interplay between security, resource scarcity, political systems and global trade,” Food Policy, Volume 36, Supplement 1, Pages S3–S8, Science Direct, January 2011)

The question of resource scarcity has led to many debates on whether scarcity (whether of food or water) will lead to conflict and war. The underlining reasoning behind most of these discourses over food and water wars comes from the Malthusian belief that there is an imbalance between the economic availability of natural resources and population growth since while food production grows linearly, population increases exponentially. Following this reasoning, neo-Malthusians claim that finite natural resources place a strict limit on the growth of human population and aggregate consumption; if these limits are exceeded, social breakdown, conflict and wars result. Nonetheless, it seems that most empirical studies do not support any of these neo-Malthusian arguments. Technological change and greater inputs of capital have dramatically increased labour productivity in agriculture. More generally, the neo-Malthusian view has suffered because during the last two centuries humankind has breached many resource barriers that seemed unchallengeable. Lessons from history: alarmist scenarios, resource wars and international relations In a so-called age of uncertainty, a number of alarmist scenarios have linked the increasing use of water resources and food insecurity with wars. The idea of water wars (perhaps more than food wars) is a dominant discourse in the media (see for example Smith, 2009), NGOs (International Alert, 2007) and within international organizations (UNEP, 2007). In 2007, UN Secretary General Ban Ki-moon declared that ‘water scarcity threatens economic and social gains and is a potent fuel for wars and conflict’ (Lewis, 2007). Of course, this type of discourse has an instrumental purpose; security and conflict are here used for raising water/food as key policy priorities at the international level. In the Middle East, presidents, prime ministers and foreign ministers have also used this bellicose rhetoric. Boutrous Boutros-Gali said; ‘the next war in the Middle East will be over water, not politics’ (Boutros Boutros-Gali in Butts, 1997, p. 65). The question is not whether the sharing of transboundary water sparks political tension and alarmist declaration, but rather to what extent water has been a principal factor in international conflicts. The evidence seems quite weak. Whether by president Sadat in Egypt or King Hussein in Jordan, none of these declarations have been followed up by military action. The governance of transboundary water has gained increased attention these last decades. This has a direct impact on the global food system as water allocation agreements determine the amount of water that can used for irrigated agriculture. The likelihood of conflicts over water is an important parameter to consider in assessing the stability, sustainability and resilience of global food systems. None of the various and extensive databases on the causes of war show water as a casus belli. Using the International Crisis Behavior (ICB) data set and supplementary data from the University of Alabama on water conflicts, Hewitt, Wolf and Hammer found only seven disputes where water seems to have been at least a partial cause for conflict (Wolf, 1998, p. 251). In fact, about 80% of the incidents relating to water were limited purely to governmental rhetoric intended for the electorate (Otchet, 2001, p. 18). As shown in The Basins At Risk (BAR) water event database, more than two-thirds of over 1800 water-related ‘events’ fall on the ‘cooperative’ scale (Yoffe et al., 2003). Indeed, if one takes into account a much longer period, the following figures clearly demonstrate this argument. According to studies by the United Nations Food and Agriculture Organization (FAO), organized political bodies signed between the year 805 and 1984 more than 3600 water-related treaties, and approximately 300 treaties dealing with water management or allocations in international basins have been negotiated since 1945 ( [FAO, 1978] and [FAO, 1984]). The fear around water wars have been driven by a Malthusian outlook which equates scarcity with violence, conflict and war. There is however no direct correlation between water scarcity and transboundary conflict. Most specialists now tend to agree that the major issue is not scarcity per se but rather the allocation of water resources between the different riparian states (see for example [Allouche, 2005], [Allouche, 2007] and [Rouyer, 2000]). Water rich countries have been involved in a number of disputes with other relatively water rich countries (see for example India/Pakistan or Brazil/Argentina). The perception of each state’s estimated water needs really constitutes the core issue in transboundary water relations. Indeed, whether this scarcity exists or not in reality, perceptions of the amount of available water shapes people’s attitude towards the environment (Ohlsson, 1999). In fact, some water experts have argued that scarcity drives the process of co-operation among riparians ( [Dinar and Dinar, 2005] and [Brochmann and Gleditsch, 2006]). In terms of international relations, the threat of water wars due to increasing scarcity does not make much sense in the light of the recent historical record. Overall, the water war rationale expects conflict to occur over water, and appears to suggest that violence is a viable means of securing national water supplies, an argument which is highly contestable. The debates over the likely impacts of climate change have again popularised the idea of water wars. The argument runs that climate change will precipitate worsening ecological conditions contributing to resource scarcities, social breakdown, institutional failure, mass migrations and in turn cause greater political instability and conflict ( [Brauch, 2002] and [Pervis and Busby, 2004]). In a report for the US Department of Defense, Schwartz and Randall (2003) speculate about the consequences of a worst-case climate change scenario arguing that water shortages will lead to aggressive wars (Schwartz and Randall, 2003, p. 15). Despite growing concern that climate change will lead to instability and violent conflict, the evidence base to substantiate the connections is thin ( [Barnett and Adger, 2007] and [Kevane and Gray, 2008]).

### Water

#### Double bind- either the environment is resilient or its destruction is inevitable

Lazarus ‘10 (Richard J. Lazarus, prof of law at Georgetown University Law Center, “Human Nature, the Laws of Nature, and the Nature of Environmental Law” 24 VA. ENVTL. L.J. 231-261, January 2010)

Some environmental pollution is, of course, unavoidable. Basic human life requires the consumption of the surrounding natural environment. While the First Law of Thermodynamics provides for the conservation of energy (and classical physics for the conservation Of mass),16 the Second Law provides for the inevitable increases in entropy that result from human activity. The term "entropy" refers to the degree of disorder in a system. For instance, as energy is transformed from one form to another, some energy is lost as heat; as the energy decreases, the disorder in the system, and hence the entropy, increases. IS Natural resource destruction and environmental contamination is a form of entropy. Disorder in the ecosystem is increased when common resources such as air and water are polluted. Disorder is likewise increased whenever complex natural resources are broken down into smaller parts. In consuming natural resources to provide the basic necessities of energy, food, shelter, and clothing, humankind necessarily increases entropy in parts of the ecosystem in the form of polluted global resources and destroyed natural resources. Fundamental human biological processes compel it. Human life depends, as life does in many animals, on a series of chemical reactions within the cells of the human body capable of breaking down complex chemical compounds such as glucose into its component parts of carbon dioxide and water.19 The technical name of the necessary biochemical process for the breakdown of glucose is carbohydrate catabolism, which itself consists of three major stages: glycosis, citric acid cycle (known as the "Krebs cycle") and phosphorylation.20 For the purposes of this essay, however, what is important for the nonscientific reader to understand is how these many biochemical processes ultimately depend on the breaking down of more complex and ordered chemical compounds into less complex and more disordered chemical elements. Some natural resource destruction and environmental pollution are necessarily implicated by such processes. As energy is transformed from one form to another, natural resources are consumed and contamination of existing natural resources results. To the extent, moreover, that it is human nature to seek to survive, it is human nature to undertake activities that cause such natural resource destruction and environmental pollution. That central threshold proposition should be noncontroversial. What is no doubt more controversial is whether it is similarly human nature to consume the natural environment in a nonsustainable fashion. Garrett Hardin's classic article "The Tragedy of the Commons," published in Science in 1968,21 offers a disturbing answer to that question. Although Hardin's central thesis is well-known, it is worth emphasis here by repetition: The tragedy of the commons develops in this way. Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. Such an arrangement may work reasonably satisfactorily for centuries because tribal wars, poaching, and disease keep the numbers of both man and beast well below the carrying capacity of the land. Finally, however, comes the day of reckoning, that is, the day when the long-desired goal of social stability becomes a reality. At this point, the inherent logic of the commons remorselessly generates tragedy. As a rational being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks, "What is the utility to me of adding one more animal to my herd?" . .. [T]he rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another. .. But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit-in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.22 Hardin describes his thesis in the limited context of human nature faced with a pasture for animal grazing, but it all too easily extends with potentially catastrophic results to many contemporary environmental settings. The expansive reach of modern technology has turned the once seemingly infinite into the finite. Populations of ocean fisheries can be irreversibly destroyed. Underground aquifers of drinking water supplies can be forever lost. And, of course, potentially destructive global climate change may occur from increased loadings of carbon to the atmosphere from anywhere in the globe. Modern technology also has its limits, as the nation was tragically reminded in the aftermath of Hurricane Katrina this past year. Modern technology allowed for the development of a major metropolitan area where nature, standing alone, would have precluded any such possibility. New Orleans was largely below sea level and existed only by grace of a complex series of levees designed to keep water from flowing along its natural course. Even when properly constructed, such levees are no match, however, for the enormous force of hurricanes like Katrina, especially when thousands of acres of surrounding wetlands, which might have otherwise provided some natural protection from flood waters, are filled to satisfy ever-rising demands for residential, commercial, and industrial development. The upshot: the devastation of a city, the loss of human life, and the destruction of an invaluable aquatic ecosystem by floodwaters laden with toxic contaminants.23 Hardin's central insight regarding the implications of human nature for the natural environment extends much further, however, than to just the potential tragic destruction of resource commons. Each of the individual actors in Hardin's proffered tragedy cause ruin to all because of their inability to look beyond the here and now. They perceive well their own, present short-term needs. They are unable to apprehend and take into account the longerterm implications for individual persons at other times or in other places. Even if presented by information detailing those broader spatial and temporal impacts, they would be unable on their own to temper their own immediate actions as necessary to avoid the resource common's tragic destruction. The risks facing New Orleans have been well-known for decades. Yet, short-term needs always trumped government's willingness and ability to expend the massive resources necessary to guard against long-term, low-risk events, even if of potentially catastrophic consequences.z4 More recent research into behavioral psychology and human cognitive biases offers contemporary confirmation of Hardin's basic thesis. Experimental research shows that humans strongly favor avoidance of immediate costs over less immediate, longerterm, and distant risks. Dubbed by some a "myopia" bias, scientists argue that a strong basic desire to avoid immediate costs is present throughout nature and is deeply rooted in evolutionary biology.25 Others similarly argue that human genetic evolution has systematically favored consumerism and materialism, *i.e.,* the so-called "selfish gene. "26 When, over thousands of years ago, human beings relied on hunting and gathering to get their next meal, long-term planning was of little value. After all, without a means of preserving food, there was little reason to plan. It was better to consume what one found when one found it, especially when there was no assurance that more would be found tomorrow. "Our brains were built for a world in which the currency of the day did lose value over time. Put simply: food rotS."27 "[N]ature created within us a short-sighted set of moral instincts."28 Selfish shortsightedness and materialism became dominant tendencies in the competition with other species for survival. "Rather than leave some precious energy lying around to mold or be stolen, put it in your stomach and have your body convert the food into an energy savings account. "29 The drive for survival arguably extended to the production of heirs-survival by the passing of genes to one's children-and the accumulation of material wealth often seen as a necessary prerequisite for successful reproduction. *3D* And, "even though wealth may not relate to babies in an industrialized world, our instincts come from a time when concerns over material possessions were crucial."31 One commentator has gone so far as to suggest, provocatively, that "[h]uman failings, such as those that some call the Seven Deadly Sins, may all derive from our evolutionary traps. "32

## 2NC

### Solvency NOAA

### Solvency Run

#### AND- Specific placement and method ensure solvency with no ecological costs- AND don’t evaluate any of their evidence unless its specific our exact mechanism

Crutzen, National Center of Atmospheric Research director and Nobel Prize-winning chemist, 2006

[Paul, "ALBEDO ENHANCEMENT BY STRATOSPHERIC SULFUR INJECTIONS: A CONTRIBUTION TO Resolve a Policy Dilemma," http://www.cogci.dk/news/Crutzen\_albedo enhancement\_sulfur injections.pdf, accessed 9-3-10, mss]

By far the preferred way to resolve the policy makers’ dilemma is to lower the emissions of the greenhouse gases. However, so far, attempts in that direction have been grossly unsuccessful. While stabilization of CO2 would require a 60–80% reduction in current anthropogenic CO2 emissions, worldwide they actually increased by 2% from 2001 to 2002 (Marland et al., 2005), a trend, which probably will not change at least for the remaining 6-year term of the Kyoto protocol, further increasing the required emission restrictions. Therefore, although by far not the best solution, the usefulness of artificially enhancing earth’s albedo and thereby cooling climate by adding sunlight reflecting aerosol in the stratosphere (Budyko, 1977; NAS, 1992) might again be explored and debated as a way to defuse the Catch-22 situation just presented and additionally counteract the climate forcing of growing CO2 emissions. This can be achieved by burning S2 or H2S, carried into the stratosphere on balloons and by artillery guns to produce SO2. To enhance the residence time of the material in the stratosphere and minimize the required mass, the reactants might be released, **distributed over time**, near the **tropical upward branch** of the stratospheric circulation system. In the stratosphere, chemical and micro-physical processes convert SO2 into sub-micrometer sulfate particles. This has been observed in volcanic eruptions e.g., Mount Pinatubo in June, 1991, which injected some 10 Tg S, initially as SO2, into the tropical stratosphere (Wilson et al., 1993; Bluth et al., 1992). In this case enhanced reflection of solar radiation to space by the particles cooled the earth’s surface on average by 0.5 ◦C in the year following the eruption (Lacis and Mishchenko, 1995). Although climate cooling by sulfate aerosols also occurs in the troposphere (e.g., Ramaswamy et al., 2001), the **great advantage** of placing reflective particles in the stratosphere is their long residence time of about 1–2 years, compared to a week in the troposphere. Thus, **much less sulfur, only a few percent, would be required** in the stratosphere to achieve similar cooling as the tropospheric sulfate aerosol (e.g., Dickinson, 1996; Schneider, 1996; NAS, 1992; Stern, 2005). This would make it possible to reduce air pollution near the ground, improve ecological conditions and reduce the concomitant climate warming. The main issue with the albedo modification method is whether it is environmentally safe, without significant side effects.

#### AND- Geo-engineering buys time

Demuth, American Enterprise Institute president, 2008

[Christopher, “Geoengineering: A Revolutionary Approach to Climate Change,” transcription by Matt Struth, [http://www.aei.org/events/eventID.1728,filter.all,type.upcoming/event\_detail.asp](http://www.aei.org/events/eventID.1728%2Cfilter.all%2Ctype.upcoming/event_detail.asp), 6-3-2008, transcribed 2008, accessed 9-6-10, mss]

But what **geo-engineering** does, is it potentially **buys** us **time, several decades, to make mitigation work**, and consequently it in fact may be the key to mitigation’s success, not its undoing. Time, above all is what we need to make mitigation work. I do believe it is possible to phase out the use of fossil fuels, but prospects improve dramatically if the goal is to do it over the course century, rather than over half that time or less. Rather than being the death of mitigation therefore, it may be the vital lynchpin that makes its possible. There are many challenges to mitigation, but every one of them can be sufficiently addressed by time. Time, coupled with sufficient dedication and resources is what will produce new clean energy technologies at a price that the developing world can actually afford. If we can solve the technology problem we can solve the cost problem, and from there, the political problems will fall away, I believe.

#### That’s key to tech and clean energy- solves the impact

Bailey, Reason Magazine science correspondent, 6-10-2008

[Ronald, "An Emergency Cooling System for the Planet," http://reason.com/archives/2008/06/10/an-emergency-cooling-system-fo, accessed 9-6-10, mss]

Why consider geoengineering in the first place? As Columbia University economist Jeffrey Sachs wrote in Scientific American in April: "[O]ur current technologies cannot support both a decline in carbon dioxide emissions and an expanding global economy. If we try to restrain emissions without a fundamentally new set of technologies, we will end up stifling economic growth, including the development prospects for billions of people." So if we don't want to perpetuate poverty in the name of preventing climate change, geoengineering may be our way out. Why? Because geoengineering would provide more time for the world's economy to grow while inventors and entrepreneurs develop and deploy new carbon neutral energy sources to replace fossil fuels. Wigley also noted that cutting greenhouse gas emissions is a tremendous global collective action problem. It seems unlikely that fast-growing poor countries like India and China will agree cut back on their use of fossil fuels any time soon. If that's the case, then emissions reductions in rich countries would have almost no effect on future temperature trends. Geoengineering could give humanity more time to resolve this collective action problem, too.

#### Even if it’s dangerous we can easily turn it off quickly before any damage is done

Gregory Benford, Contributing Editor andUniversity of California physics professor, November 1997, "Climate Controls," <http://www.reason.com/news/show/30433.html>

Some geoengineering systems appear possible to deploy now, and at reasonable cost. They could be turned on and off quickly if we got unintended effects. It would be relatively easy to run small-scale experiments to answer questions about how our current atmosphere behaves when one alters the kind of dust, or aerosols, in it. Nuanced knowledge is crucial; the biosphere is a highly nonlinear system, one that has experienced climatic lurches before (glaciation, droughts) and can go into unstable modes, too.

### AT Politics

#### Its popular- the counterplan is spun as an experiment- NOAA provides coverage

Eilperin ’10 (Juliet Eilperin, Washington Post Staff Writer, “Threat of global warming sparks U.S. interest in geoengineering”, <http://www.washingtonpost.com/wp-dyn/content/article/2010/10/03/AR2010100303458.html>, October 4, 2010)

It's come to this: Climate-conscious policymakers are beginning to contemplate the possibility of playing God with the weather in the hope of slowing global warming. For years it was considered downright wacky in official Washington to discuss geoengineering: altering the climate by reflecting sunlight back into the sky, sucking carbon dioxide from the air - or a host of other gee-whiz schemes. But in the past year the wacky has won a following, spurred in part by the recent collapse of climate legislation as well as by growing interest among private entrepreneurs and foreign officials. House Science and Technology Committee Chairman Bart Gordon (D-Tenn.), whose panel will jointly release a report on climate engineering with the British House of Commons this month, said the subject is "just now starting to get some attention" even though people recognize the danger in trying to change a complex weather system. "The more you know about it, the more you're concerned about if we can ever implement it," Gordon said in an interview. "However, there may be a point where we're up against the tipping point, and the consequences of climate change are even worse." Over the next few months, whispering about changing the weather will evolve into written recommendations. Several key groups - including the Government Accountability Office and a bipartisan task force of experts - will issue their thoughts on how best to start a modest federal research program on geoengineering. "We're getting a sense that agencies are interested in this topic and would be open, on a certain level, to letting this program go forward," said Jane Long, who co-chairs the National Commission on Energy Policy's task force. At this point, though, even the experts most seriously looking at climate engineering describe it as a last resort for when climate impacts become a serious threat and the world has yet to wean itself off fossil fuels. "Geoengineering only makes sense - if it makes sense, and that's an important conditional - as a way to bridge this crisis period," said Steven Hamburg, the Environmental Defense Fund's chief scientist. Climate engineering can be divided into two basic categories, both of which are untested on a large scale: solar radiation management, which aims to deflect sunlight away from the Earth, and carbon dioxide removal, which takes already released greenhouse gases out of the atmosphere. The first approach is relatively cheap and easy to deploy - researchers envision spraying small metallic particles or sulfur into the stratosphere, which could be accomplished with jets or even World War II-era howitzers - but this would do nothing to address the root causes of climate change or some of its worst effects, such as ocean acidification. The second method would address the atmospheric concentrations of carbon that can spur climate change, but it would take more time to develop and be much more expensive. At this point, many scientists argue that it is worth scrutinizing different geoengineering techniques to see what could work and what will not. At a conference last week sponsored by Arizona State University, the New America Foundation and Slate magazine, University of Maryland distinguished professor of economics Thomas Schelling said "field experiments are going to be essential" to determine whether humans can manipulate the climate in a responsible and effective way. "If solar radiation management is a bad idea, the sooner we discover that the better," said Schelling, who serves on the National Commission on Energy Policy task force. Ralph J. Cicerone, president of the National Academy of Sciences, has been interested in geoengineering for 20 years, but he said he kept a low profile on it because he didn't want to foster the perception abroad that Americans were looking for a quick fix on climate. Now, however, he said these ideas should be subject to peer review. "It's important for the federal agencies to get involved and at least solicit proposals," Cicerone said. "The best way to handle these issues is to treat it like normal science." Those who have been most skeptical about dire warming forecasts, however, are unlikely to embrace climate engineering. "You'd have to see concrete evidence for the worst case, and that's not there," said Patrick J. Michaels, a senior fellow at the Cato Institute, adding that it was hard to imagine how any proposed project could satisfy a federal environmental impact statement. Other countries are already doing that, in part because, as University of Southampton professor John Shepherd explained, the world needs to reach a consensus on geoengineering "before some nut case does it prematurely." Shepherd oversaw the geoengineering report that the Royal Society issued last year, and he is co-chairing an effort - along with the Environmental Defense Fund and the Academy of Sciences for the Developing World - to look at what rules could govern solar radiation management. This year the British government approved spending $4.5 million over three years on geoengineering research; the German Federal Ministry of Education and Research has a small program, as does the European Union. There has been some pushback on the idea of even doing research at all: Delegates to the Convention on Biological Diversity meeting this month in Nagoya, Japan, may consider a proposed moratorium on all geoengineering actitivities, including studies. In a sense, the geoengineering debate mirrors what happened on the question of adapting to climate change, a once-sensitive subject that is now a standard part of policymaking. For years people were wary of discussing how to adapt to global warming, on the grounds that it would reduce the incentive for cutting greenhouse gases. Now, funding for adaptation is a major part of international climate negotiations, and the Fish and Wildlife Service recently detailed how it plans to modify its operations based on the inevitable warming the United States will face in the coming decades. U.S. officials are reluctant to discuss climate engineering in public: the Office of Science Technology Policy declined to comment on the matter, as did the Energy Department. Gordon, who is retiring from Congress, expressed optimism that staffers would still work on it next year. In fact, starting to investigate the feasibility of deliberately changing the climate won't require a massive allocation of federal dollars, in part because agencies ranging from the Environmental Protection Agency to the National Oceanic and Atmospheric Administration are already conducting related research that could easily be expanded to encompass it. Long, who serves as principal associate director at large at Lawrence Livermore National Laboratory, described it as "a tweak with existing funding and existing programs," but added that administration officials "need to be covered by someone telling them to do it, because it's so controversial."

### Inev

#### Geo-engineering is inevitable- only a risk the counterplan is safer and avoids more reckless geo-engineering later

Schnare, Thomas Jefferson Institute for Public Policy energy and environment senior fellow, Ph.D., 2007

[David, "GLOBAL WARMING AND CHESAPEAKE BAY," CQ Congressional Testimony, 9-26-7, l/n, accessed 9-6-10, mss]

Scientists have been studying geo-engineering solutions for a considerable time. As early as 1996, the American Association for the Advancement of Science sponsored a symposium on the subject, and recent contributions are reaching substantial numbers. As discussed in the geo-engineering literature generally, because these techniques mimic natural phenomena, we know more about how quickly and well they work than we do about the efficacy of attempting to reduce greenhouse gases. We have measured the effects of the natural processes and can state with considerable certainty, bordering of complete certainty, that they will produce the result sought. Although the effects of greenhouse gas reduction would occur over a period of no less than decades and more likely centuries, the effects of geo-engineering can (and will) be manifest in a matter of weeks after application. The **extremely low** cost of geo-engineering allows many like Barrett to describe these techniques as economically "incredible." Table 1 shows that geo-engineering is not merely 200 to 2000 times less expensive, it prevents more damage than exclusive reliance on carbon control. Further, consider a risk not included in the $17 Billion worth of residual global warming damages shown in Table 1 - the $10 Billion a year cost to the United States from UV-caused cancer that would be avoided using geo-engineering.20 In practical terms, the benefits to the United States, alone, and for UV- related cancer, alone, justify using geo-engineering - a gift to the world that would prevent some $5.2 Trillion in global warming- caused damages. Notably, geo-engineering has gone commercial. Planktos, Inc., for example, is a for-profit ecorestoration company based in San Francisco with offices in the European Union and British Columbia. Their primary focus is to restore damaged habitats in the ocean and on land. They inject iron into iron-deficient waters to induce large blooms of plankton. This helps sequester carbon and Planktos sells carbon sequestration credits on the various carbon markets.22 One must ask, if private geo- engineering to sequester carbon is already in play, can private geo-engineering to reduce global temperatures be far behind? Considering the potential harm from global warming, the potential regulatory costs associated with a greenhouse gas-based strategy and the relatively low cost of launching sunscreens, there is good reason to believe the **inevitable** use of geo-engineering to limit global temperature risk could occur in the private sector. This is a troubling concern many have discussed and on which this testimony touches in its final section. The Chesapeake Bay and its Restoration The Chesapeake Bay is a relatively recent geo-physical development. It exists because of a meteor impact occurring 35 million years ago. The impact fractured the earth's mantle and created a depression that forced rivers to reverse their flows and cut paths into what is now the Bay estuary. But the Bay formed long thereafter. As late as 18,000 years ago, the bay region was dry land; the last great ice sheet was at its maximum over North America, and sea level was about 200 meters lower than today. This sea level exposed the area that now is the bay bottom and the continental shelf. With sea level this low, the major east coast rivers had to cut narrow valleys across the region all the way to the shelf's edge. About 10,000 years ago, however, the ice sheets began to melt rapidly, causing sea level to rise and flood the shelf and the coastal river valleys. The flooded valleys became the Chesapeake Bay and the rivers of the Chesapeake region converged at a location directly over the buried crater. This ancient meteor created many faults that now cut through the sedimentary beds below the site of the impact, many of which lay no more than 10 meters below the bay floor. These faults are zones of crustal weakness and have the potential to suddenly collapse and thus flood large portions of land surrounding the Bay. In other words, we now confront natural and potentially cataclysmic coastal flooding we cannot prevent and in a timeframe we cannot predict. Rather than permit this inevitability to limit our economic interests in the Bay, we instead accept the risk and seek to preserve this ecosystem for as long as nature allows. On the geological clock, our interests reflect mere ticks of the second hand. We measure the timescale of Bay degradation and restoration in decades, not centuries or millennia. A mere 70 years ago, the Bay was the largest commercial fishing waters in the U.S. If restored, the Bay could produce $3 Billion in commercial fishery revenues per year. It now produces less than $100 million. Overall, some suggest the fishing and recreational value of a bay at full ecological competence (assuming the ecology of the past) at more than a trillion dollars.24 Virginia, Maryland, Pennsylvania, the District of Columbia, the U.S. Environmental Protection Agency, and others, began their efforts to recover the ecological wealth of the Bay only 20 years ago. They have succeeded in preventing significant further deterioration despite large increases in population density and growth over the intervening years. An entire array of local, state and federal regulatory programs now protect the Bay as an ecological, recreational and commercial resource. The size of the annual revenues generated within the private marketplace for Bay related activities from mere shore- side residence to recreational swimming and sailing and to commercial activities like fishing, all testify to our success in maintaining, and to some degree improving the quality of the Bay. Nevertheless, problems persist. The Bay suffers from two threats that the current regulatory programs have not resolved: the discharge of sediments and nutrients into the waters of the Bay's watershed. The sediments bury the life on the bottoms of rivers, deltas, and shorelines. These include the extremely important breeding grounds for mollusks and fish. As the name implies, nutrients, specifically nitrogen and phosphorus, provide essential "food" to algae and other small life forms that constitute the bottom of the food chain in the bay. Too many nutrients, however, and the algae can consume too much oxygen, thus forcing the top of the food chain (the fish) to other waters, and causing mollusks and fish hatchlings to fail to thrive and eventually die. Restoration will require reductions in both sediments and nutrients by two critical sectors on the watershed, municipalities and the agricultural community. Figure 1, below, shows the significant sources of the threats to the Bay and each source's potential to reduce discharges. As these charts show, all sources will have to participate in reducing nutrient loadings into the Bay. In some cases, municipalities simply will not be able to do their share, in part because they simply will not have the funds needed to build advanced water treatment facilities. If response to climate change empties the state and federal environmental purse, as would happen with current legislative proposals, then we will not only lose the battle to restore the Bay but will lose ground due to continuing population growth. Even with current funding levels, municipalities will not have the capacity to do their share. Fortunately, in Virginia, the state legislature has authorized a state nutrients bank that allows municipalities to pay others to reduce nutrients when they can not. In the main, those "others" are our agricultural community. Reduction of nutrients from agricultural sources takes several forms, but controls on concentrated animal feeding operations (CAFOs) and "never-till" crop management seems the most promising. By leaving all but the harvestable grain in the field, by not tilling the field and by planting cover crops to hold nutrients and soil in place over the winter, this cropping technique has reduced nutrient and sediment runoff from those croplands by over 95 percent.25 Ten years ago farmers used these conservation tillage practices in only rare occasions. In Virginia today, farmers have nearly 15 percent of small grains and corn cropland in never-till management. To expand this number significantly will require a more robust nutrient market, increased technical agricultural assistance and further funding of transition to conservation tillage. Like municipal wastewater treatment, we will succeed in solving this problem only if response to climate change does not empty the state and federal environmental purse. With regard to sediment, again the agricultural community has the tools to resolve much of the problem. Conservation tillage holds sediments in the field, reducing sediment discharge by over 95%. Indeed, the nutrients adhere to the sediments and in particular the carbonaceous elements within the soil. Further, conservation tillage sequesters carbon in the soil. And, the farming community has already recognized the potential to reap carbon sequestration dollars through never-till farming. At present, Iowa's Farm Bureau is currently providing services to allow farmers to participate in the carbon sequestration market. Notably, for every ten pounds of carbon sequestered through never- till practices, a pound of nitrogen (and an equivalent weight of phosphorus) is also sequestered in the soil. In light of the financial interest the farming community has in carbon sequestration and the potential for large scale positive effects of conservation tillage on the water quality of the Bay, we believe Bay restoration should be considered an element of climate change mitigation, but recognize this opportunity will disappear if funding for both municipal and agricultural Bay restoration efforts evaporate. We further suggest that the timescale of Bay restoration stands in stark contrast to the timescale of climate change and the timescale of a response to climate change that relies exclusively on reduction of greenhouse gases. We recommend something else. Global Leadership on Geo-Engineering - An Unmet National Duty In light of the inevitable use of geo-engineering to prevent further global warming, this Committee may be well advised to follow Professor Sunstein's admonition to avoid the twin dangers of over-reaction and apathy.29 So too would groups that have decided to bypass Congress and attempt to convince State governments to commit to policies relying exclusively on regulatory reduction of greenhouse gases.30 Sunstein recommends that Congress try to ameliorate, if not avoid, future catastrophes, by looking at the widest possible solution set, by rejecting preconceived notions and emotion-based argument, thus retaining our sanity as well as scarce financial resources that can be devoted to more constructive ends. Sunstein makes an important point on the need to remember we have goals other than carbon reduction. In this hearing you cannot fail to recognize that commitment to a remedy based exclusively on reduction of greenhouse gases would sacrifice our current commitment to restoration of the Bay. Having served on the staff of the Senate appropriates committee, I thoroughly understand the level of competition for federal dollars. I know you do too. As you consider how to respond to global warming, I ask that you keep in mind what programs you will cut in order to pay for what you propose. And keep in mind that use of geo-engineering will pay for itself, while exclusive reliance on greenhouse reduction will not only fail to pay for itself, it will fail to prevent global warming. In light of Professor Sunstein's admonition, and the economic and fiscal realities of global warming, geo-engineering and alternatives thereto, the most sensible approach would be a mixed strategy of geo-engineering to prevent further global warming and the effects of ocean acidification over the next century or two and vigorously developing a transition from carbon-based energy, to include research on scrubbing greenhouse gases from the atmosphere. Lacking this two-pronged attack, current legislative proposals must be considered what Sunstein calls "over- reaction" or panic. We can make no more eloquent argument than that of Professor Barrett regarding what next this nation should do with regard to climate change, so this testimony ends by quoting his recommendation: Mitigating, forestalling, or averting global climate change is a global public good. Supplying it by means of reducing emissions is vulnerable to free riding. Too few countries are likely to participate in such an effort, those that do participate are likely to reduce their emissions by too little, and even their efforts may be overwhelmed by trade leakage (Barrett 2005). Geoengineering presents a very different set of incentives. A single country can deploy a geoengineering project on its own and the economics of geoengineering are so attractive that it seems likely that a country, or perhaps a small group of countries, may want to try to do so at some point in the future, especially should the worst fears about climate change ever unfold. The challenge posed by geoengineering is not how to get countries to do it. It is to address the fundamental question of who should decide whether and how geoengineering should be attempted a problem of governance (Barrett 2007). Failure to acknowledge the possibility of geoengineering may or may not spur countries to reduce their emissions, but it will mean that countries will be unrestrained should the day come when they would want to experiment with this technology. This, to my mind, is the greater danger.

### AT Ocean

#### Oceans resilient

Kennedy ‘2 (Victor, Environmental science prof, Maryland, Former Director, Cooperative Oxford Laboratory, PhD, Coastal and Marine Ecosystems and Global Climate Change, <http://www.pewclimate.org/projects/marine.cfm>, 2002)

There is evidence that marine organisms and ecosystems are resilient to environmental change. Steele (1991) hypothesized that the biological components of marine systems are tightly coupled to physical factors, allowing them to respond quickly to rapid environmental change and thus rendering them ecologically adaptable. Some species also have wide genetic variability throughout their range, which may allow for adaptation to climate change.

#### Ocean acidification will be slow and stable, proven by 1000 studies- it improves ocean resiliency

Codling ‘11 [Jo, received a Bachelor of Science first class and won the FH Faulding and the Swan Brewery prizes at the University of Western Australia. Her major was microbiology, molecular biology. Nova received a Graduate Certificate in Scientific Communication from the Australian National University in 1989,[4] and she did honours research in 1990, prize-winning science graduate, Jo has has done over 200 radio interviews, many on the Australian ABC.  She was formerly an associate lecturer in Science Communication at the ANU and is based in Perth, Western Australia, , “Ocean Acidification — a little bit less alkalinity could be a good thing,” Sept. 11, <http://joannenova.com.au/2011/09/ocean-acidification-a-little-bit-less-alkalinity-could-be-a-good-thing/>]

Studies of how marine life copes with less alkaline conditions include many experiments with water at pH values in a range beyond anything that is likely on planet Earth — they go beyond the bounds of what’s possible. There are estimates that the pH of the ocean has shifted about 0.1 pH unit in the last 200 years, yet some studies consider the effects of water that is shifted by 2 or even 4 entire pH units. Four pH units means 10,000 fold change in the concentration of hydrogen ions). That’s a shift so large, it’s not going to occur in the next few thousand years, even under the worst of the worst case scenarios by the most sadistic models. Indeed, it’s virtually impossible for CO2 levels to rise high enough to effect that kind of change, even if we burned every last fossil, every tree, plant microbe, and vaporized life on earth. (Yet still someone thought it was worth studying what would happen if, hypothetically, that happened. Hmm.)¶ 1103 studies on acidification say there’s no need to panic¶ CO2 science has an extraordinary data base of 1103 studies of the effects of “acidification” on marine life. They reason that any change beyond 0.5 pH units is “far far beyond the realms of reality” even if you are concerned about coral reefs in the year 2300 (see Tans 2009). Even the IPCC’s highest end “scenario A2″ estimate predicts a peak change in the range of 0.6 units by 2300.¶ Many of the headlines forecasting “Death to Reefs” come from studies of ocean water at extreme pH’s that will never occur globally, and that are beyond even what the IPCC is forecasting. Some headlines come from studies of hydrothermal vents where CO2 bubbles up from the ocean floor. Not surprisingly they find changes to marine life near the vents, but then, the pH of these areas ranges right down to 2.8. They are an extreme environment, nothing like what we might expect to convert the worlds oceans too.¶ Marine life, quite happy about a bit more CO2?¶ Studies of growth, calcification, metabolism, fertility and survival show that, actually, if things were a little less alkaline, on average, marine life would benefit. There will be winners and losers, but on the whole, using those five measures of health, the reefs are more likely to have more life on and around them, than they are to shrink.¶ Figure 12. Percent change in the five measured life characteristics (calcification, metabolism, growth, fertility and survival) vs. decline of seawater pH from its present (control treatment) value to ending values extending up to the beginning pH value of "the warped world of the IPCC" for all individual data points falling within this pH decline range.¶ How can this be?¶ First, marine life evolved under conditions where most of the time the world was warmer and had more CO2 in the atmosphere than it does today. Second, like life above the water, life-below-water is based on carbon, and putting more carbon into the water is not necessarily a bad thing. That said, the dots in the graph above represent study results, and the ones below zero tell us there will be some losers, even though there will be more winners (above zer0). Thirdly, watch out for some of the more devastating headlines which also come from studies where researchers changed the pH by tossing hydrochloric acid into the tank. Chlorine, as they say, is not the same as the gas nature breathes — CO2. (The strange thing about the studies with hydrochloric acid, is that it doesn’t seem to be bad as we might have expected– nonetheless, it seems like a dubious practice to use in studying the health of corals.)¶ The Ocean Acidification Database is housed at CO2 science.¶ The graph above is just one of many on their results and conclusions page.¶ The bottom line:¶ Yes, we should watch and monitor the oceans careful. No, there is no chance the Great Barrier Reef will be gone in the next 100 years: 1103 studies show that if the worlds oceans were slightly less basic then marine life as a whole will be slightly more likely to grow, survive, and be fertile.

#### Turn – warming helps marine ecosystems despite acidification

Carter et.al ‘11(Carter Robert, PhD, Adjuct Research Fellow, James Cook University, Fred Singer, PhD, President of the Science and Environmental Policy Project, Susan Crockford, evolutionary biologist with a specialty in skeletal taxonomy , paleozoology and vertebrate evolution, Joseph D’Aleo, 30 years of experience in professional meteorology, former college professor of Meteorology at Lyndon State College, Indur Goklany, independent scholar, author, and co-editor of the Electronic Journal of Sustainable Development, Sherwood Idso, President of the Center for the Study of Carbon Dioxide and Global Change, Research Physicist with the US Department of Agriculture, Adjunct Professor in the Departments of Geology, Botany, and Microbiology at Arizona State University, Bachelor of Physics, Master of Science, and Doctor of Philosophy, all from the University of Minnesota, Madhav Khandekar, former research scientist from Environment Canada and is an expert reviewer for the IPCC 2007 Climate Change Panel, Anthony Lupo, Department Chair and Professor of Atmospheric Science at the University of Missouri, Willie Soon, astrophysicist at the Solar and Stellar Physics Division of the Harvard-Smithsonian Center for Astrophysics, Mitch Taylor (Canada) [“Climate Change Reconsidered 2011 Interim Report,” September, Science and Environmental Policy Project, Center for the Study of Carbon Dioxide and Global Change)

 Another reason to doubt Pelejero et al.‘s forecast of falling pH levels is that high rates of aquatic photosynthesis by marine micro- and macro-algae, which have been shown to be stimulated and maintained by high levels of atmospheric CO2—see, for example, Wu et al. (2008), Fu et al. (2008), and Egge et al. (2009)—can dramatically increase the pH of marine bays, lagoons, and tidal pools (Gnaiger et al., 1978; Santhanam et al., 1994; Macedo et al., 2001; Hansen, 2002; Middelboe and Hansen, 2007) and significantly increase the surface-water pH of areas as large as the North Sea (Brussaard et al., 1996). Thus it is logical to presume anything else that enhances marine photosynthesis, such as nutrient delivery to the waters of the world‘s coastal zones (i.e., eutrophication), may increase pH as well. Thinking along these lines, Borges and Gypens (2010) employed an idealized biogeochemical model of a river system (Billen et al., 2001) and a complex biogeochemical model describing carbon and nutrient cycles in the marine domain (Gypens et al., 2004) ―to investigate the decadal changes of seawater carbonate chemistry variables related to the increase of atmospheric CO2 and of nutrient delivery in the highly eutrophied Belgian coastal zone over the period 1951–1998.‖ The findings of the two researchers indicate, as they describe it, that ―the increase of primary production due to eutrophication could counter the effects of ocean acidification on surface water carbonate chemistry in coastal environments,‖ and ―changes in river nutrient delivery due to management regulation policies can lead to stronger changes in carbonate chemistry than ocean acidification,‖ as well as changes that are ―faster than those related solely to ocean acidification.‖ And to make these facts perfectly clear, they add, ―the response of carbonate chemistry to changes of nutrient delivery to the coastal zone is stronger than ocean acidification.‖

### AT Sea Level

#### Sea level rise is junk science—models empirically fail

Gupta ’12 (Alexander Sen, Climate Change Research Centre @ University of New South Wales, et al., “Climate Drift in the CMIP3 Models,” Journal of Climate Vol. 25, Issue 13, p. 4621-4640, 2012)

As discussed above, drift in temperature and salinity dominates 20C3M trends throughout most of the subsurface ocean. In the calculation of steric sea level rise, a given temperature or salinity change will generally have less effect at depth than near the surface. As the amount of expansion for a given change in temperature or salinity is itself a function of temperature, salinity, and pressure (in particular warmer water expands more than colder water for the same increase in heat content), the changes in temperature near the warm surface ocean have a proportionally larger influence on steric sea level rise than temperature changes in the cold deeper ocean (at least away from the wellmixed high-latitude regions). Nevertheless, given that the global warming signal over the twentieth century is predominantly limited to the top few hundred meters, in most regions, while ocean drift extends through the entire water column, drift still introduces considerable bias into both regional and global sea level rise.

The CMIP3 models show a broad range of estimates for steric sea level rise over 1950–2000 (Fig. 10a). The spread in the raw 20C3M estimates is considerable (standard deviation ;0.76 mm yr21 with a multimodel mean of 0.45 mm yr21). In addition a number of the models indicate a lowering of sea level over the period. For the drift-corrected sea level rise (i.e., by using drift corrected temperature and salinity) values become considerably more consistent (standard deviation ;0.36 mm yr21) and all models now indicate a rise in sea level. While considerable intermodel variability still exists the driftcorrected multimodel mean (;0.59 mm yr21) is consistent with the Domingues et al. (2008) observational estimate (0.526 0.08 mm yr21, for 0–700 m, 1950–2003). Figure 10a shows raw 20C3M trends and drift-corrected estimates of forced trend for steric sea level rise, including multiple ensemble members where available; ensemble members for a given model are generally initialized from the same PICNTRL experiment but from different points in time, usually separated by multiple years (Table 1). Nevertheless the drift, which is derived from different time periods from a single PICNTRL simulation, is very similar across ensemble members, suggesting that the linear drift approximation is valid and that natural variability is not having a major effect on the drift estimates. Figure 10b shows a scatter of the raw 20C3M trend magnitudes versus drift magnitudes. The drift-related error varies considerably across the models from less than 10% to over 200% for the ECHAM4 model (see previous discussion of this model).

As with surface drift, subsurface drift in temperature and salinity is spatially heterogeneous and so can result in a larger bias on regional scales. This is particularly important for assessing twentieth-century regional changes, where the steric component of sea level rise is a major component of the total (e.g., Domingues et al. 2008). Figure 11 shows both the raw 20C3M and driftcorrected 1950–2000 trends for three models (calculated from the surface to the bottom). A few models (e.g., MRI-CGCM2.3.2) have a well-equilibrated preindustrial control throughout the ocean and so are essentially untroubled by drift. However, most models are significantly affected in certain regions. In fact for many models and regions the sign of the sea level trend is changed by the spurious drift. For instance in the CSIRO Mk3.0 model the steric sea level anomaly over much of the tropics and midlatitudes, estimated from the raw 20C3M temperature and salinity, changes sign once the drift is taken into account.

### 2NC Inov Hub Solvency

#### Spills over into all economic productivity- absent the counterplan the plan fails

Saha and Muro 1/14 (Devashree Saha and Mark Muro, Brookings, “Cut to Invest: Create a Nationwide Network of Advanced Industries Innovation Hubs”, <http://www.brookings.edu/research/papers/2013/01/14-federalism-series-advanced-industries-hubs>, January 14, 2013)

In the aftermath of the Great Recession, the United States needs to transition from an economic model focused on finance and consumption toward a “next economy” model oriented toward innovation, engineering, and production. Such a model promises to increase the nation’s productivity, drive export growth, and provide good-paying jobs. Advanced industries—characterized by dynamic R&D and engineering-intensive industrial concerns—must be a focal point of this new direction. Delivering products and services in industries ranging from aerospace and space to auto assembly, advanced energy systems, IT, and medical devices, AIs comprise over 10 percent of the overall economy, generate 45 percent of U.S. goods exports, and support over 4 million high-skilled, and several million more ancillary, jobs. All too often with advanced industries, companies fail to make adequate investments in innovation because the benefits are undetermined, the risks are too high, and the project timelines too extended. A national network of innovation hubs would address these challenges by greatly accelerating the pace of innovation and new-product development. Nor is that all. A prime site of R&D activity in the U.S. economy, AIs punch well above their weight in building and expanding national and regional economic competitiveness. Innovations in AIs—such as photonics technology with applications in optical communications, medical diagnostics, semiconductors, optical imaging, and the now ubiquitous GPS technology—tend to ripple across the economy and drive broader productivity. As a result, AIs contribute inordinately to the competitiveness of the nation’s critical traded sectors, which will be crucial in helping the United States to balance its foreign trade. Simply put, the U.S. economy will not regain its full vitality and preeminence without a strong push to extend the leadership of AIs.

### AT Econ

#### Economy instability doesn’t affect international security

Barnett ‘9 (Thomas P.M. Barnett, senior managing director of Enterra Solutions LLC, “The New Rules: Security Remains Stable Amid Financial Crisis,” 8/25/2009, http://www.aprodex.com/the-new-rules--security-remains-stable-amid-financial-crisis-398-bl.aspx)

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

### 2NC Solvency

#### The clean tech bubble burst has burst- investment dead

Nordan 3/27 (Mathew Nordan, Guest Contributor, Matthew Nordan is an energy VC investor at Venrock, one of the oldest and best-performing VC firms. Earlier, he co-founded and led the energy tech analyst firm Lux Research and forecasted technology futures at Forrester. There’s more where this came from at mnordan.com, “The state of cleantech venture capital: what lies ahead”, <http://gigaom.com/2013/03/27/the-state-of-cleantech-venture-capital-what-lies-ahead/>, March 27, 2013)

Cleantech VC is receding because of poor short-term performance – no surprise in a post-bubble field with outsized time and money requirements. The category is about to go on a walk in the woods, where innovators will blaze a new trail. tweet this In late 2011 I decided to write up an internal analysis I’d done at Venrock about the state of cleantech venture capital and make it available broadly. I’m a fact-based, research-driven guy, so I tried to shine the light of data on myths and realities in the field. My macro conclusion was that while it was really early, investment returns to date were on par with VC overall. Much has changed since then. With 2012 numbers done and dusted, I figure it’s time to revisit this topic – again, under the light of data. I’ll frame this analysis with the questions I’ve gotten from VCs and entrepreneurs who’ve asked me for an update. What’s happening to cleantech venture capital? It’s receding. TSOCVC\_fig1 Investment fell 30% in 2012 – and even further at the early stage. The Moneytree survey numbers had cleantech VC investment falling from $4.6 billion in 2011 to $3.3 billion in 2012 – a 28% drop. Further, they showed first-time funding of new start-ups plummeting 58% to just $216 million, and shrinking as the year progressed: By Q4, first-time funding was just 4% of capital invested. Limited partners are backing off. VC firms get the money they invest from limited partners (LPs) like foundations and pension funds. Last December Preqin called up 31 LPs that were invested in at least one cleantech-focused fund and asked if they planned to back any new ones in 2013. Only 22% said yes (down from 31% a year before). The people are changing. Many VC firms parted ways with their cleantech teams in 2012. While February’s ARPA-E conference had a record number of attendees, venture investors were scarce – replaced by a bumper crop of corporate types. Why is this happening? Cleantech VC performance is substantially lagging venture capital as a whole. This wasn’t true in 2011, but things changed fast in 2012. I arrive at this conclusion by comparing two data sets. On one hand, we have data on the interim performance of 19 cleantech-only VC funds as reported by the California Public Employees’ Retirement System (CalPERS), a big LP. On the other, we have equivalent data for the entire universe of VC funds from the National Venture Capital Association. (The data are expressed as “value to paid-in capital, net to LPs,” which means “the current value of the funds divided by the money put into them, accounting for what VCs pay themselves.”) By comparing cleantech-only fund performance with the full VC universe at the same points in time, we can see whether cleantech is doing better or worse than the asset class. The answer is that cleantech went sideways in 2012 while VC overall did well. In September 2010, the cleantech VC funds were worth 0.90x the money paid into them while comparable VC funds overall were at 0.96x – roughly the same. Six months later the gap had widened, but both had risen in value and remained within spitting distance. By June of 2012, however (the most recent data available), the cleantech funds had declined slightly while the overall VC universe climbed to 1.23x. TSOCVC\_fig2 This is why investment is stalling, LPs are hesitating, and cleantech VCs are thinning: Capital invested in other domains is showing a greater near-term return. If minimal money had gone into cleantech, or if the macro environment were rosier, there might be more willingness to forge ahead. But today, fund managers assess the $25 billion worth of cleantech VC invested since 2003 against a backdrop of shale gas and climate apathy – and tighten the purse strings. OK, but why is that happening? What’s driving weak cleantech VC performance? Two factors. First, there have been too few exits. Let’s consider the gold standard of VC wins – an IPO on a major exchange. When I last did this analysis, cleantech was overperforming on the IPO front: In 2009, 2010, and 2011, cleantech’s share of VC-backed IPOs exceeded its share of VC funding. (Note: One must apply an appropriate time lag applied to the latter – I used five years, which is informed by deal-by-deal fundraising data by cleantech start-ups). This ended in 2012. Just as in the prior year, three cleantech IPOs took place out of about 50 VC-backed IPOs in total (6%). But cleantech’s corresponding share of VC funding rose to 10% – so cleantech was now underperforming on exits relative to capital invested, instead of overperforming. (Of course, most VC-backed companies exit through acquisition, not an IPO. But the M&A front looks no better for cleantech. When merchant bank Jane Capital counted up every acquisition of a VC-backed cleantech start-up worth more than $50 million in the last 10 years, it found just 27 of them.) Second, the winners have disappointed post-IPO. When a start-up goes public, its VC investors rarely get to sell their shares immediately: They have to wait out a lockup period that typically lasts six months. Of the nine VC-backed cleantech start-ups that have done major-market IPOs since 2010 and have been public for more than six months, eight were trading below their IPO price at the 180-day mark. In four of those cases, the 180-day share price was also lower than the price at the last venture round. That means VCs who bought shares in that round were under water when the lockup expired. So is the pullback in cleantech VC justified? Well, it’s certainly expected. The cleantech gold rush of the late 2000s saw hundreds of start-ups funded – many with identical propositions – that greatly exceeded the carrying capacity of their industries: For example, there’s no way that more than a handful of the 219 solar start-ups counted by Greentech Media in 2009 could possibly succeed. This dynamic isn’t unique to cleantech. The Internet VC bubble of the late 90s was the same story, albeit on a much larger scale. But just as the boom-and-bust in dot com investment didn’t mean this whole Internet thing was a waste, the same is true for energy and environmental technologies. It’s very likely that multiple billion-dollar companies lurk among today’s cleantech VC portfolios. The question is – given the current retrenchment of capital from the field – how many of them will get the fuel to reach the finish line. In the main, energy and environmental start-ups need outsized time, money, and risk tolerance to reach a big outcome. (That’s not true of IT-meets-energy “cleanweb” companies like Opower or Venrock-backed Nest Labs, but it holds for the deep-tech start-ups that comprise most of the category.) As our case study, let’s take First Solar, the pioneering thin-film solar maker. The company’s first instantiation was founded in 1990; it took 12 years to ship a product, was restarted in 1999, and consumed $150 million of equity investment (all Walton family money) before its 2007 IPO. But at that outcome, First Solar was worth $1.4 billion valuing the Walton stake at 8.4x. Two years later at the peak of the solar boom, it was worth 199x! If this is what success looks like – that is, if the majority of cleantech start-ups will need more time and money to reach big outcomes compared with VC-backed companies overall – a few conclusions follow: Funds focused solely on cleantech will have a longer and deeper “J-curve” of returns compared with VC as a whole. When they reach the same final return multiple, they will take longer to do so (impacting IRR). Midway through the journey, their performance will look like an “L-curve.” To the extent that cleantech start-ups’ time to exit will be 10 years or more, it’s too early to call success or failure on the current crop – because most of them were founded in 2007 or later. Check back in five years. Because the time frames to an outcome are longer and the amounts of capital required are greater, cleantech investment should be less spikey compared with investment in, say, Internet start-ups. And lo and behold, that’s pretty much what we see: Cleantech VC now is like Internet VC in 2001: on the downward slope of a bubble, albeit with a more gradual climb and a gentler descent. Note that Facebook was conceived in 2003 – the lowest point for Internet investing post-bust – and that in 2004, Google’s IPO kicked off the renaissance that persists today. So is the cleantech pullback justified? The data says it’s too early to call. However, it also suggests that the time frame required to reach a conclusion will greatly stretch 10-year closed-ended funds. (A diligent reader may point out my own numbers showing that when VC-backed cleantech start-ups have gone public, they’ve mostly done so in less than 10 years. My take is that most of these companies were rushed to public markets before they were ready – explaining the awful aftermarket performance.) What happens now? Cleantech innovation is about to take a walk in the woods. Justified or not, the established path of VC-backed investment is narrowing for a generation of start-ups. Some of those companies – and some of the investment managers that have backed them – will break off into the wilderness to find a new route.

#### No investment in green technology- lowest levels since 2006

Herndon and Martin ’13 (Andrew Herndon & Christopher Martin, “Silicon Valley Shifting to Power Grid After Solar Sours”, <http://www.bloomberg.com/news/2013-02-25/silicon-valley-shifting-to-power-grid-after-solar-sours.html>, February 25, 2013)

Silicon Valley investors that helped build the solar industry are shifting cash into electricity-grid technology and energy-storage developers after bets on panel manufacturers failed to pay off. Companies including VantagePoint Capital Partners and Khosla Ventures are stepping up funding for systems to manage electricity, which are typically less capital intensive than solar-panel factories. Venture capital and private-equity financing for renewables dropped to its lowest in at least six years in 2012, according to data compiled by Bloomberg. Companies including VantagePoint Capital Partners and Khosla Ventures are stepping up funding for systems to manage electricity, which are typically less capital intensive than solar-panel factories. Investment flowing from private equity and venture capital firms into renewable energy fell 34 percent to $5.8 billion last year, according to Bloomberg New Energy Finance, the lowest since at least 2006. Photographer: Sam Hodgson/Bloomberg Competition for the best investments from Blackstone Group LP to Warren Buffett along with a plunge in profit from the solar and wind industries prompted the shift. It pushed Silicon Valley into taking smaller stakes in emerging technologies that help squeeze efficiency and flexibility from power supplies. “We are going through a repositioning of cleantech,” said Wal van Lierop, founder of Chrysalix Energy Venture Capital, which is based in Vancouver. “The big sectors -- solar, wind and LEDs -- are in the process of being consolidated. They’re maturing, so they fall out of the cleantech opportunity basket. We now are trying to find the next hot spots.” Investment flowing from private equity and venture capital firms into renewable energy fell 34 percent to $5.75 billion last year, according to Bloomberg New Energy Finance, the lowest since at least 2006. That accounted for 2.2 percent of the $268.7 billion invested in the clean energy industry, down from as much as 6.5 percent in 2008. Grid Technology Chrysalix invested in the energy-management providers Enbala Power Networks and AlertMe Ltd. Khosla funded LightSail Energy Inc., which is developing energy storage devices. “Our specialty is with large technology risk, where if the technology works there’s a big economic breakthrough,” Vinod Khosla, the billionaire founder of Khosla Ventures in Menlo Park, California, said in an interview. “That’s what we keep looking for in all areas.” Alan Salzman, chief executive officer of VantagePoint Capital Partners, said systems that allow energy to be used more efficiently and help the grid cope with variable supplies from wind and solar plants represent the richest new areas. Energy storage is “an essential component” for renewable energy to thrive, Salzman said. “That’s an area that has been hugely underserved historically that we think remains hugely interesting,” he said. Energy Efficiency VantagePoint, based in San Bruno, California, backed Next Step Living Inc. and Tendril Networks Inc., which developed energy-efficiency software to reduce power consumption. “One of the disappointments in the U.S. is that our utility smart-grid deployments have really slowed,” Salzman said. Deployments have “shifted overseas right now, away from the U.S., because of our regulatory environment,” he said. “It doesn’t mean that our archaic system -- see Hurricane Sandy -- isn’t ripe for updating.” So-called energy smart technologies including efficiency products and equipment for the electricity grid amounted to $2.2 billion of the clean energy investment from venture capital and private equity tracked last year by New Energy Finance. That accounted for 38 percent of VC/PE funding for clean energy last year, up from 15 percent in 2008. Solar investments were $1.58 billion last year. Renewables Dwindling Profits have drained away from renewable energy in the past three years as manufacturing capacity surged quicker than demand. Solar cell prices plunged 74 percent since the end of 2010 to 40 cents from $1.46 for each watt of capacity. The cost of power from wind turbines on land fell 15 percent to $81.44 per megawatt-hour since mid-2009, according to Bloomberg New Energy Finance estimates. That reduced the industry’s attractiveness for venture capital companies. With solar, now that the technology is proven, the industry’s biggest challenge is driving down costs, said Raj Prabhu, managing partner at Mercom Capital Group in Austin, Texas. Solyndra LLC got more than $1.2 billion in venture capital funding. Then it liquidated after competition from Chinese manufacturers priced its tubular solar modules out of the market. Panel maker MiaSole Inc. was sold in January to Hanergy Holding Group Ltd. for about $30 million. That’s a fraction of the $494.4 million poured into it by Kleiner, Vantage Point and Firelake Capital, according to Mercom Capital Group. VC Misfires Another misfire for the VC investors was A123 Systems Inc. (AONEQ), a provider of batteries for electric cars. It filed for bankruptcy in October as sales of the vehicles failed to meet expectations. It got at least $278 million from VC firms including North Bridge Venture Partners LP and CMEA Ventures. “VCs are really good at finding new technologies but not so good at manufacturing,” Prabhu said. “They’ve learned that they need to stick to picking technology winners, not building factories. The new money is going downstream to help build markets. The industry is now mainstream.”

#### 2013 will be even worse

Kachan ’12 (A former managing director of the Cleantech Group, Dallas Kachan is now managing partner of Kachan & Co., a cleantech research and advisory firm that does business worldwide from San Francisco, Toronto and Vancouver. The company publishes research on clean technology companies and future trends, offers consulting services to large corporations, governments, service providers and cleantech vendors, and connects cleantech companies with investors through its Hello Cleantech™ programs. Kachan staff have been covering, publishing about and helping propel clean technology since 2006, “Predictions for cleantech in 2013”, <http://www.kachan.com/cleantech-greentech-predictions-2013-forecast-trends>, December 3, 2012)

Every year around this time since 2007, as executive editor of a leading global cleantech research and news service, I’ve contributed to predictions on what to expect in the year ahead in cleantech. We’ve kept that tradition alive here at Kachan & Co. We don’t claim a perfect track record, but we’ve been eerily prescient and nailed some biggies a year or more before they actually came to pass, like the growth of cleantech venture capital in 2011 and its decline in 2012, the rise of corporate and non-institutional capital, the emergence of energy efficiency as a leading technology theme, a decline in storage investment, the rise of China as cleantech superpower, and more. There have, of course, been misses. But we won’t dwell on those, will we? As a cleantech research and consulting company that does business around the world, we’re close to the action. We publish research reports. We speak at conferences. We get constant pitches from companies seeking capital. We’re quoted in the press. We speak with investors, large corporations, governments and technology vendors, all informing a good, well-rounded perspective. And to our analysis, 2013 will be something of a year of backtracking for the cleantech industry, a year that calls into question some of its traditional leading indicators of health, and one that surfaces long term risk to such cleantech stalwarts as solar, wind and electric vehicles. Does that mean cleantech is finished? Not at all. But much like young Skywalker learned in Episode V, cleantech is about to find out that the Empire sometimes gets its revenge. Details below. Venture capital – down is the new up Even if the global economy blusters along, and there’s no guarantee it will, we predict global cleantech venture capital will show a limp performance in 2013 and not even match 2012 levels. Which, as we foretold, were considerably down this past year from 2011. We will go so far as to predict that the salad days of cleantech VC are behind us, never to return to previous levels, and that the bloom is off the cleantech rose for the mainstream venture investor. But that’s not because we think cleantech’s days are over (unlike this IDC analyst, who already writes about the sector in the past tense.) On the contrary, with the global economic slowdown, there’s more need than ever to do more with less—one of cleantech’s central tenets. What it really means is that venture capital, as we know it today, is not proving itself suited to the unique characteristics of cleantech investments. Therefore, the amount of venture investment in clean products and services no longer functions effectively as a leading indicator of the health of the cleantech space as we and others have been using it for the last 10 years. Venture data is, and will remain, still useful for spotting technology and geographical trends—such as the recent decline of solar and rise of transportation and biofuels as current investor focuses. Why are we pessimistic about the levels of conventional cleantech venture capital we’ll see in 2013? Lack of rock star IRRs. Much has been written about this in recent months, including our own analysis. But to restate: with IPO poster kids of cleantech declaring backruptcy, and relatively modest returns to date on cleantech mergers and acquisitions (M&A), large exit multiples bolstering VC's internal rates of return (IRRs) continue to elude the space, and that’s weeded out many conventional venture capitalists and their limited partners who seek shorter term returns than most cleantech subsectors can offer at this point. Lag time of negative sentiment. We wrote this same point last year at this time, and it’s especially important now: it takes a few quarters for pullback to show in venture or project investment numbers because deals can take quarters to consummate. The disillusionment we’ve been hearing from investors through 2012 will still take several more quarters to manifest in deal numbers yet to post. So it’s not unreasonable to expect 2013’s cleantech venture performance will be even lower than 2012’s. It takes a while for a ship to slow down. Poor policy support. It’s a tough time for cleantech subsidies worldwide. With the exception of Japan (which has introduced one of the world’s most progressive feed-in tariffs for renewables—read Kachan’s free report on the subject here—and is starting to throw money around like China), and with its new energy bill, the UK, most developed economies are rolling back their economic support of cleantech. The U.S. at this writing is still mired after debating all summer to extend the production tax credit, or PTC, for wind that expires at the end of this month and can’t even get a binding federal energy efficiency policy in place. The re-election of Barack Obama for a second term gives some a little optimism for American policy favoring cleantech. Lack of policy support makes it hard for the private sector to feel enthusiastic about investing in cleantech. Especially when, rhetoric to the contrary, the reversal of perverse subsidies to the oil and gas "dark side" is unlikely to ever happen.

#### This environment overwhelms the plan

Ellis ‘12 (Vicky Ellis, ““Grim” world economy should give energy buyers pause for thought”, <http://www.energylivenews.com/2012/09/11/%E2%80%9Cgrim%E2%80%9D-world-economy-should-give-energy-buyers-pause-for-thought/>, September 11, 2012)

The Advice The deteriorating “grim” world economic outlook should outweigh ‘kick-start’ monetary policy actions, give energy buyers pause for thought when looking at price contracts, according to a monthly price risk prediction from BuyEnergyOnline, the online energy market for businesses buying electricity and gas. Globe watch: need-to-know background Europe’s economy shrank 0.2% in the second quarter of 2012, notes BuyEnergyOnline, following zero growth in the first three months, with economic indicators in July and August suggesting Europe should fall into a double-dip recession this quarter. In the States, the looming ‘fiscal cliff’ – which will automatically increase taxes and cut government spending in the new year to the tune of 4% GDP – is re-emerging as a potential flash point, according to the price risk prediction. The cut off will happen unless new financing is negotiated with the Senate. Asian superpower China’s growth is also slowing down with flashing “danger signs” from some economic indicators including manufacturing and export. What happened with energy prices? Overall, markets had an “exuberant” couple of weeks following ECB President Draghi’s ‘whatever it takes’ comments at end of July, but turned cautious ahead of further monetary policy announcements over the next couple of weeks. Nuclear-related Iran-Israel tensions hit UK energy prices during August, said Derek Myers, managing director of BuyEnergyOnline: “UK gas and electricity prices have been tracking oil price volatility associated with concerns about Israel striking out at Iran nuclear power research centres before they are relocated safely in deep underground bunkers.” Mr Myers added: “Overall, gas prices were up 4.3% to 2.18p/kWh and electricity prices rose 5.3% to 5.55p/kWh. Oil prices increased 8.4% to $114/barrel, coal prices bucked the trend falling 3% to $92/tonne and carbon permits rose 16% to €8.04/tonne.” The Prediction Gas and electricity prices are likely to remain “bearish” because of the global slowdown and concerns about the US ‘fiscal cliff’. With possible monetary policy actions taken into account in the financial and energy markets this month, any postponement of those may cause changes to prices, advises BuyEnergyOnline. Mr Myers added: “Wait as long as possible to lock away fixed prices for no longer than 12 months. Within this grim economic environment we would recommend using flexible purchase contracts to ride the market lower by buying on a month-ahead or day-ahead spot basis.”

#### Investors flee from the plan

WSJ 12/27 (Wall Street Journal, “Silicon Valley's Green Energy Mistake Political venture capital turns out to be a loser.”, [http://online.wsj.com/article/SB10001424127887323401904578159660625274422.html#](http://online.wsj.com/article/SB10001424127887323401904578159660625274422.html), December 27, 2012)

Silicon Valley's investment wizards are fleeing the so-called green economy, and not a moment too soon for American prosperity. As painful as the era of enviro-investing has been for taxpayers and shareholders, there's an emerging silver lining. It's likely that in 2013 fewer people will spend their time trying to turn political projects into companies. A recent survey from our corporate cousins at Dow Jones VentureSource and the National Venture Capital Association finds that "clean technology" is inspiring pessimism among venture capitalists. Fully 61% expect less clean-tech investment in 2013 compared to 2012. On the flip side, a majority expect more investment next year in business information technology, a traditional U.S. economic strength. Fisker Automotive co-founder Henrik Fisker, left, and CEO Tony Posawatz in Los Angele in November. The survey reflects a natural and healthy shift in Silicon Valley. Talent and resources are moving back to the technologies that gave the valley its name—and away from trendy eco-projects that failed. When Silicon Valley was committed to addressing market needs, it enriched the world with Intel, Apple, Google GOOG -0.89% and Cisco. When venture investors tried to profit from political agendas, they saddled taxpayers with stinkers like Abound Solar, Range Fuels and the infamous Solyndra, which went bust last year after receiving more than half a billion dollars in federal loans. Success has proven elusive even for the smartest guys in the solar-heated room. Five years after Al Gore joined the prestigious venture-capital firm Kleiner Perkins to back environmentally correct companies, the collaboration has yielded few successful exits for Mr. Gore and his partners, along with some spectacular disasters. This week brought further embarrassment for a Kleiner-backed and taxpayer-subsidized project called Fisker Automotive. In an interview with Delaware's News Journal, the head of the state's economic development office, Alan Levin, discussed the $21.5 million that was provided by the state in return for a Fisker promise to build green cars there. "All we want are the jobs or our money back," Mr. Levin told the newspaper. Fisker, an electric-car maker, is currently not making any cars due to various design and production problems. Last year the Department of Energy stopped lending money to Fisker after the company missed development deadlines, but federal taxpayers were already on the hook for more than $190 million. Fisker's problems have lately been exacerbated by the October bankruptcy of a key supplier, A123 Systems, AONEQ -4.76% which also received federal loans. Last week another green company backed by Kleiner, Glori Energy, withdrew its plans for an initial public offering (IPO), blaming poor market conditions. Perhaps Glori will be able to go public next year, and IPOs are a great way for venture investors to cash out of an investment, but Kleiner has enjoyed very few of them in its clean-tech portfolio.

### Solar 2NC

#### Solar is too expensive even if panels are free- their ev is media hype

**Zehner ’12** [Ozzie, visiting scholar at the University of California, Berkeley STSC and author of Green Illusions, graduated from Kettering University (BS - Engineering) and The University of Amsterdam (MS/Drs – Science and Technology Studies), “Green Illusions: The Dirty Secrets of Clean Energy and the Future of Environmentalism,” Google Books, accessed 3-13-13]

Free Panels, Anyone? Among the ceos and chief scientists in the solar industry, there is surprisingly little argument that solar systems are expensive.46 Even an extreme drop in the price of polysilicon, the most expensive technical component, would do little to make solar cells more competitive. Peter Nieh, managing director of Lightspeed Venture Partners, a multibillion-dollar venture capital firm in Silicon Valley, contends that cheaper polysilicon won't reduce the overall cost of solar arrays much, even if the price of the expensive material dropped to zero.47 Why? Because the cost of other materials such as copper, glass, plastics, and aluminum, as well as the costs for fabrication and installation, represent the bulk of a solar system's overall price tag. The technical polysilicon represents only about a fifth of the total. Furthermore, Keith Barnham, an avid solar proponent and senior researcher at Imperial College London, admits that unless efficiency levels are high, "even a zero cell cost is not competitive."48 In other words, even if someone were to offer you solar cells for free, you might be better off turning the offer down than paying to install, connect, clean, insure, maintain, and eventually dispose of the modules—especially if you live outside the remote, dry, sunny patches of the planet such as the desert extending from southeast California to western Arizona. In fact, the unanticipated costs, performance variables, and maintenance obligations for photovoltaics, too often ignored by giddy proponents of the technology, can swell to unsustainable magnitudes. Occasionally buyers decommission their arrays within the first decade, leaving behind graveyards of toxic panels teetering above their roofs as epitaphs to a fallen dream. Premature decommissioning may help explain why American photovoltaic electrical generation dropped during the last economic crisis even as purported solar capacity expanded.49 Curiously, while numerous journalists reported on solar infrastructure expansion during this period, I was unable to locate a single article covering the contemporaneous drop in the nation's solar electrical output, which the Department of Energy quietly slid into its annual statistics without a peep.

### 2NC Wind

#### Wind power fails – technology easily breaks and is clogged

Driessen 5/8/12 (Paul, Senior Policy Advisor for the Committee For a Constructive Tomorrow, “Time to Terminate Big Wind Subsidies”)

 (1 megawatt (MW, 1 million watts) of power output 3 24 hours 3 365 days 5 8,760 megawatt-hours (MW-h) energy per year; if a 1-MW wind turbine actually produces 1,752 MW-h over a year, owing to the variability of the wind and other factors, its capacity factor is 1,752/8,760 5 0.20, or 20%.) In high winds, ironically, the turbines must be stopped because they are easily damaged. Build-up of dead bugs has been shown to halve the maximum power generated by a wind turbine, reducing the average power generated by 25% and more. Build-up of salt on off-shore turbine blades similarly has been shown to reduce the power generated by 20%–30%.

### 2NC Water

#### No impact

Easterbrook ‘95 (Gregg, Distinguished Fellow @ The Fullbright Foundation and Reuters Columnist, “A Moment on Earth,” p. 25, 1995)

In the aftermath of events such as Love Canal or the Exxon Valdez oil spill, every reference to the environment is prefaced with the adjective "fragile." "Fragile environment" has become a welded phrase of the modern lexicon, like "aging hippie" or "fugitive financier." But the notion of a fragile environment is profoundly wrong. Individual animals, plants, and people are distressingly fragile. The environment that contains them is close to indestructible. The living environment of Earth has survived ice ages; bombardments of cosmic radiation more deadly than atomic fallout; solar radiation more powerful than the worst-case projection for ozone depletion; thousand-year periods of intense volcanism releasing global air pollution far worse than that made by any factory; reversals of the planet's magnetic poles; the rearrangement of continents; transformation of plains into mountain ranges and of seas into plains; fluctuations of ocean currents and the jet stream; 300-foot vacillations in sea levels; shortening and lengthening of the seasons caused by shifts in the planetary axis; collisions of asteroids and comets bearing far more force than man's nuclear arsenals; and the years without summer that followed these impacts. Yet hearts beat on, and petals unfold still. Were the environment fragile it would have expired many eons before the advent of the industrial affronts of the dreaming ape. Human assaults on the environment, though mischievous, are pinpricks compared to forces of the magnitude nature is accustomed to resisting.

#### Their impact evidence is alarmist and false

Kaleita ‘7 (Amy, PhD, Assistant Professor of Agricultural and Biosystems Engineering @ IA State, “Hysteria’s History: Environmental Alarmism in Context,” <http://www.pacificresearch.org/docLib/20070920_Hysteria_History.pdf>, 2007)

Apocalyptic stories about the irreparable, catastrophic damage that humans are doing to the natural environment have been around for a long time. These hysterics often have some basis in reality, but are blown up to illogical and ridiculous proportions. Part of the reason they’re so appealing is that they have the ring of plausibility along with the intrigue of a horror flick. In many cases, the alarmists identify a legitimate issue, take the possible consequences to an extreme, and advocate action on the basis of these extreme projections. In 1972, the editor of the journal Nature pointed out the problem with the typical alarmist approach: “[Alarmists’] most common error is to suppose that the worst will always happen.”82 But of course, if the worst always happened, the human race would have died out long ago. When alarmism has a basis in reality, the challenge becomes to take appropriate action based on that reality, not on the hysteria. The aftermath of Silent Spring offers examples of both sorts of policy reactions: a reasoned response to a legitimate problem and a knee-jerk response to the hysteria. On the positive side, Silent Springbrought an end to the general belief that all synthetic chemicals in use for purposes ranging from insect control to household cleaning were uniformly wonderful, and it ushered in an age of increased caution on their appropriate use. In the second chapter of her famous book, Carson wrote, “It is not my contention that chemical insecticides must never be used. I do contend that… we have allowed these chemicals to be used with little or no advance investigation of their effect on soil, water, wildlife, and man himself.” Indeed, Carson seemed to advocate reasoned response to rigorous scientific investigation, and in fact this did become the modern approach to environmental chemical licensure and monitoring. An hour-long CBS documentary on pesticides was aired during the height of the furor over Silent Spring. In the documentary, Dr. Page Nicholson, a water-pollution expert with the Public Health Service, wasn’t able to answer how long pesticides persist in water once they enter it, or the extent to which pesticides contaminate groundwater supplies. Today, this sort of information is gathered through routine testing of chemicals for use in the environment. 20 V: Lessons from the Apocalypse Ironically, rigorous investigation was not used in the decision to ban DDT, primarily due to the hysteria Silent Spring generated. In this example, the hysteria took on a life of its own, even trumping the author’s original intent. There was, as we have seen, a more sinister and tragic response to the hysteria generated by Silent Spring. Certain developing countries, under significant pressure from the United States, abandoned the use of DDT. This decision resulted in millions of deaths from malaria and other insect-borne diseases. In the absence of pressure to abandon the use of DDT, these lives would have been spared. It would certainly have been possible to design policies requiring caution and safe practices in the use of supplemental chemicals in the environment, without pronouncing a death sentence on millions of people. A major challenge in developing appropriate responses to legitimate problems is that alarmism catches people’s attention and draws them in. Alarmism is given more weight than it deserves, as policy makers attempt to appease their constituency and the media. It polarizes the debaters into groups of “believers” and “skeptics,” so that reasoned, fact-based compromise is difficult to achieve. Neither of these aspects of alarmism is healthy for the development of appropriate policy. Further, alarmist responses to valid problems risk foreclosing potentially useful responses based on ingenuity and progress. There are many examples from the energy sector where, in the presence of economic, efficiency, or societal demands, the marketplace has responded by developing better alternatives. That is not to say that we should blissfully squander our energy resources; on the contrary, we should be careful to utilize them wisely. But energy-resource hysteria should not lead us to circumvent scientific advancement by cherry-picking and favoring one particular replacement technology at the expense of other promising technologies. Environmental alarmism should be taken for what it is—a natural tendency of some portion of the public to latch onto the worst, and most unlikely, potential outcome. Alarmism should not be used as the basis for policy. Where a real problem exists, solutions should be based on reality, not hysteria.

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### 2NC Warming No Impact

#### Overfishing deforestation port-dredging are alt cause to their terminal impacts

Guterl ’13 (Fred Guterl is an award-winning journalist and executive editor of Scientific American. He worked for ten years at Newsweek, most recently as deputy editor, covering the most important trends in science, technology, and international affairs. He lives in the New York City area with his wife and two children, “Animal Forecast Could Humans Go Extinct?”, <http://mobile.slate.com/articles/health_and_science/animal_forecast/2013/02/human_extinction_could_a_mass_extinction_kill_homo_sapiens.html>, February 22, 2013)

If a mass extinction is happening, climate change would not have had much time to factor into it. Most of the species loss has so far has had little to do with pumping carbon into the atmosphere. Humans as a species have ravaged the Earth in many other ways. Fishing the waters with factory trawlers, clearing forests for wood and palm oil plantations, carrying strange flora and fauna in the bilge of ships from port to port—all these things, and more, have contributed.

#### Warming won’t cause extinction

Barrett ‘7 (Scott, Professor of natural resource economics @ Columbia University, “Why Cooperate? The Incentive to Supply Global Public Goods, introduction”, 2007)

First, climate change does not threaten the survival of the human species.5 If unchecked, it will cause other species to become extinction (though biodiversity is being depleted now due to other reasons). It will alter critical ecosystems (though this is also happening now, and for reasons unrelated to climate change). It will reduce land area as the seas rise, and in the process displace human populations. “Catastrophic” climate change is possible, but not certain. Moreover, and unlike an asteroid collision, large changes (such as sea level rise of, say, ten meters) will likely take centuries to unfold, giving societies time to adjust. “Abrupt” climate change is also possible, and will occur more rapidly, perhaps over a decade or two. However, abrupt climate change (such as a weakening in the North Atlantic circulation), though potentially very serious, is unlikely to be ruinous. Human-induced climate change is an experiment of planetary proportions, and we cannot be sur of its consequences. Even in a worse case scenario, however, global climate change is not the equivalent of the Earth being hit by mega-asteroid. Indeed, if it were as damaging as this, and if we were sure that it would be this harmful, then our incentive to address this threat would be overwhelming. The challenge would still be more difficult than asteroid defense, but we would have done much more about it by now.

### 2NC Warming Inevitable

#### Asia overwhelms

Knappenberger ‘12 (Paul Knappenberger, Assistant Director of the Cato Institute’s Center for the Study of Science, He holds an M.S. degree in Environmental Sciences (1990) from the University of Virginia as well as a B.A. degree in Environmental Sciences (1986) from the same institution.His over 20 years of experience as a climate researcher have included 10 years with the Virginia State Climatology Office and 13 years with New Hope Environmental Services, Inc., "Asian Air Pollution Warms U.S More than Our GHG Emissions (More futility for U.S. EPA)", [www.masterresource.org/2012/06/asian-air-pollution-warming/](http://www.masterresource.org/2012/06/asian-air-pollution-warming/), June 7, 2012)

“The whims of foreign nations, not to mention Mother Nature, can completely offset any climate changes induced by U.S. greenhouse gas emissions reductions…. So, what’s the point of forcing Americans into different energy choices?” A new study provides evidence that air pollution emanating from Asia will warm the U.S. as much or more than warming from U.S. greenhouse gas (GHG) emissions. The implication? Efforts by the U.S. Environmental Protection Agency (and otherwise) to mitigate anthropogenic climate change is moot.¶ If the future temperature rise in the U.S. is subject to the whims of Asian environmental and energy policy, then what sense does it make for Americans to have their energy choices regulated by efforts aimed at mitigating future temperature increases across the country—efforts which will have less of an impact on temperatures than the policies enacted across Asia? Maybe the EPA should reconsider the perceived effectiveness of its greenhouse gas emission regulations—at least when it comes to impacting temperatures across the U.S. New Study A new study just published in the scientific journal Geophysical Research Letters is authored by a team led by Haiyan Teng from the National Center for Atmospheric Research, in Boulder, Colorado. The paper is titled “Potential Impacts of Asian Carbon Aerosols on Future US Warming.” Skipping the details of this climate modeling study and cutting to the chase, here is the abstract of the paper: This study uses an atmosphere-ocean fully coupled climate model to investigate possible remote impacts of Asian carbonaceous aerosols on US climate change. We took a 21st century mitigation scenario as a reference, and carried out three sets of sensitivity experiments in which the prescribed carbonaceous aerosol concentrations over a selected Asian domain are increased by a factor of two, six, and ten respectively during the period of 2005–2024. The resulting enhancement of atmospheric solar absorption (only the direct effect of aerosols is included) over Asia induces tropospheric heating anomalies that force large-scale circulation changes which, averaged over the twenty-year period, add as much as an additional 0.4°C warming over the eastern US during winter and over most of the US during summer. Such remote impacts are confirmed by an atmosphere stand-alone experiment with specified heating anomalies over Asia that represent the direct effect of the carbon aerosols. Usually, when considering the climate impact from carbon aerosol emissions (primarily in the form of black carbon, or soot), the effect is thought to be largely contained to the local or regional scale because the atmospheric lifetime of these particulates is only on the order of a week (before they are rained out). Since Asia lies on the far side of the Pacific Ocean—a distance which requires about a week for air masses to navigate—we usually aren’t overly concerned about the quality of Asian air or the quantity of junk that they emit into it. By the time it gets here, it has largely been naturally scrubbed clean. But in the Teng et al. study, the authors find that, according to their climate model, the local heating of the atmosphere by the Asian carbon aerosols (which are quite good at absorbing sunlight) can impart changes to the character of the larger-scale atmospheric circulation patterns. And these changes to the broader atmospheric flow produce an effect on the weather patterns in the U.S. and thus induce a change in the climate here characterized by “0.4°C [surface air temperature] warming on average over the eastern US during winter and over almost the entire US during summer” averaged over the 2005–2024 period. While most of the summer warming doesn’t start to kick in until Asian carbonaceous aerosol emissions are upped in the model to 10 times what they are today, the winter warming over the eastern half of the country is large (several tenths of a °C) even at twice the current rate of Asian emissions. Now let’s revisit just how much “global warming” that stringent U.S. greenhouse gas emissions reductions may avoid averaged across the country. In my Master Resource post “Climate Impacts of Waxman-Markey (the IPCC-based arithmetic of no gain)” I calculated that a more than 80% reduction of greenhouse gas emissions in the U.S. by the year 2050 would result in a reduction of global temperatures (from where they otherwise would be) of about 0.05°C. Since the U.S. is projected to warm slightly more than the global average (land warms faster than the oceans), a 0.05°C of global temperature reduction probably amounts to about 0.075°C of temperature “savings” averaged across the U.S., by the year 2050. Comparing the amount of warming in the U.S. saved by reducing our greenhouse gas emissions by some 80% to the amount of warming added in the U.S. by increases in Asian black carbon (soot) aerosol emissions (at least according to Teng et al.) and there is no clear winner. Which points out the anemic effect that U.S. greenhouse gas reductions will have on the climate of the U.S. and just how easily the whims of foreign nations, not to mention Mother Nature, can completely offset any climate changes induced by our greenhouse gas emissions reductions. And even if the traditional form of air pollution (e.g., soot) does not increase across Asia (a slim chance of that), greenhouse gases emitted there certainly will. For example, at the current growth rate, new greenhouse gas emissions from China will completely subsume an 80% reduction in U.S. greenhouse gas emission in just over a decade. Once again, pointing out that a reduction in domestic greenhouse gases is for naught, at least when it comes to mitigating climate change. So, what’s the point, really, of forcing Americans into different energy choices? As I have repeatedly pointed out, nothing we do here (when it comes to greenhouse gas emissions) will make any difference either domestically, or globally, when it comes to influences on the climate. What the powers-that-be behind emissions reduction schemes in the U.S. are hoping for is that 1) it doesn’t hurt us too much, and 2) that China and other large developing nations will follow our lead. Both outcomes seem dubious at time scales that make a difference.

### 2NC Grid

#### Zero impact to grid failures, even ones caused by cyber attacks

Birch ’12 (Douglas Birch, former foreign correspondent for the Associated Press and the Baltimore Sun who has written extensively on technology and public policy, 10/1/12, “Forget Revolution,” Foreign Policy, <http://www.foreignpolicy.com/articles/2012/10/01/forget_revolution?page=full>, October 1, 2012)

Government officials sometimes describe a kind of Hieronymus Bosch landscape when warning of the possibility of a cyber attack on the electric grid. Imagine, if you will, that the United States is blindsided by an epic hack that interrupts power for much of the Midwest and mid-Atlantic for more than a week, switching off the lights, traffic signals, computers, water pumps, and air conditioners in millions of homes, businesses, and government offices. Americans swelter in the dark. Chaos reigns! Here's another nightmare scenario: An electric grid that serves two-thirds of a billion people suddenly fails in a developing, nuclear-armed country with a rich history of ethnic and religious conflict. Rail transportation is shut down, cutting off travel to large swathes of the country, while many miners are trapped underground. Blackouts on this scale conjure images of civil unrest, overwhelmed police, crippled hospitals, darkened military bases, the gravely injured in the back of ambulances stuck in traffic jams. The specter of what Defense Secretary Leon Panetta has called a "digital Pearl Harbor" led to the creation of U.S. Cyber Command, which is tasked with developing both offensive and defensive cyber warfare capabilities, and prompted FBI Director Robert Mueller to warn in March that cyber attacks would soon be "the number one threat to our country." Similar concerns inspired both the Democrats and Republicans to sound the alarm about the cyber threat in their party platforms. But are cyber attacks really a clear and present danger to society's critical life support systems, capable of inflicting thousands of casualties? Or has fear of full-blown cybergeddon at the hands of America's enemies become just another feverish national obsession -- another of the long, dark shadows of the 9/11 attacks? Worries about a large-scale, devastating cyber attack on the United States date back several decades, but escalatedfollowing attacks on Estonian government and media websites during a diplomatic conflict with Russia in 2007. That digital ambush was followed by a cyber attack on Georgian websites a year later in the run-up to the brief shooting war between Tbilisi and Moscow, as well as allegations of a colossal, ongoing cyber espionage campaign against the United States by hackers linked to the Chinese army. Much of the concern has focused on potential attacks on the U.S. electrical grid. "If I were an attacker and I wanted to do strategic damage to the United States...I probably would sack electric power on the U.S. East Coast, maybe the West Coast, and attempt to cause a cascading effect," retired Admiral Mike McConnell said in a 2010 interview with CBS's 60 Minutes. But the scenarios sketched out above are not solely the realm of fantasy. This summer, the United States and India were hit by two massive electrical outages -- caused not by ninja cyber assault teams but by force majeure. And, for most people anyway, the results were less terrifying than imagined**.** First, the freak "derecho" storm that barreled across a heavily-populated swath of the eastern United States on the afternoon of June 29 knocked down trees that crushed cars, bashed holes in roofs, blocked roads, and sliced through power lines. According to an August report by the U.S. Department of Energy, 4.2 million homes and businesses lost power as a result of the storm, with the blackout stretching across 11 states and the District of Columbia. More than 1 million customers were still without power five days later, and in some areas power wasn't restored for 10 days. Reuters put the death tollat 23 people as of July 5, all killed by storms or heat stroke. The second incident occurred in late July, when 670 million people in northern India, or about 10 percent of the world's population, lost power in the largest blackout in history. The failure of this huge chunk of India's electric grid was attributed to higher-than-normal demand due to late monsoon rains, which led farmers to use more electricity in order to draw water from wells. Indian officials told the media there were no reports of deaths directly linked to the blackouts. But this cataclysmic event didn't cause widespread chaos in India -- indeed, for some, it didn't even interrupt their daily routine. "[M]any people in major cities barely noticed the disruption because localized blackouts are so common that many businesses, hospitals, offices and middle-class homes have backup diesel generators," the New York Timesreported. The most important thing about both events is what didn't happen. Planes didn't fall out of the sky. Governments didn't collapse. Thousands of people weren't killed. Despite disruption and delay, harried public officials, emergency workers, and beleaguered publics mostly muddled through. The summer's blackouts strongly suggest that a cyber weapon that took down an electric grid even for several days could turn out to be little more than a weapon of mass inconvenience. That doesn't mean the United States can relax. James Lewis, director of the technology program at the Center for Strategic and International Studies, believes that hackers threaten the security of U.S. utilities and industries, and recently penned an op-ed for the New York Times calling the United States "defenseless" to a cyber-assault. But he told Foreign Policy the recent derecho showed that even a large-scale blackout would not necessarily have catastrophic consequences.

#### No nuclear lashout

Rogin ‘10 (Josh, “Obama embraces missile defense in nuclear review,” Foreign Policy, <http://thecable.foreignpolicy.com/posts/2010/04/06/obama_embraces_missile_defense_in_nuclear_review>, April 6, 2010)

The document claims that missile defense is critical to allowing the United States to shift away from nuclear weapons, especially now that the U.S. will no longer threaten to use nukes to retaliate against non-nuclear attacks, such as from chemical or biological weapons. The review even features a photo of a missile being shot from an Aegis destroyer in 2007, in what many outside experts saw at the time as a clear demonstration of the fact that U.S. missile defense capabilities can also have offensive uses as well, such as shooting down a satellite. "Major improvements in missile defenses and counter-weapons of mass destruction (WMD) capabilities have strengthened deterrence and defense against CBW attack," reads the document, known as the Nuclear Posture Review, which will stand as the Obama administration's guiding document on all things nuclear. "With the advent of U.S. conventional military preeminence and continued improvements in U.S. missile defenses and capabilities to counter and mitigate the effects of [chemical and biological weapons], the role of U.S. nuclear weapons in deterring non-nuclear attacks -- conventional, biological, or chemical -- has declined significantly," the document claims. Later on in the document, the administration points to Russia and China's nuclear modernization and notes that both countries view U.S. missile-defense expansion as destabilizing. Secretary Clinton addressed that issue in Tuesday's press conference. The NPR itself was careful to mention missile defense as only one of several capabilities needed to counter non-nuclear attacks. But Secretary Clinton was less careful. "It's no secret that countries around the world remained concerned about our missile-defense program," Clinton said, explaining that the NPR weighs in on "the role [missile defense] can and should play in deterring proliferation and nuclear terrorism." Ok, so now missile defense can deter chemical attacks, biological attacks, proliferation of nuclear technology, and suitcase bombs? Regardless, the document makes clear that with fewer nukes to be deployed once the new START agreement goes into effect, and with the role of nuclear weapons now limited to responding to nuclear threats, the administration is now looking to missile defense, among other technologies, to fill in the gap. "As the role of nuclear weapons is reduced in U.S. national security strategy, these non-nuclear elements will take on a greater share of the deterrence burden," the review reads.

### 1NC/ 2AC China Crash

#### China crash inevitable

Gruber ‘13 (James Gruber, I founded the investment newsletter, Asia Confidential, in July 2012. Prior to this, I was a fund manager, stockbroking analyst and journalist in Asia for 13 years. Most recently, I spent two years as a portfolio manager for Asian equities at AMP Capital. For five years before AMP, I was a research analyst at Asian brokerage, CLSA, where I covered multiple sectors in Hong Kong, Singapore, Australia, Malaysia and Indonesia. And in a former life, I was a television and radio news journalist at the Australian Broadcasting Corporation, “Why A China Crash May Be Imminent

”, <http://www.forbes.com/sites/jamesgruber/2013/02/23/a-china-crash-may-be-imminent/>, February 23, 2013)

Those silly enough to believe that China‘s economy has “recovered” should at least been given some pause by this week’s events. For China surprised the market with moves to reduce liquidity in the banking system and curb the property market. Clearly, the government is worried about the re-appearance of bubbles due to excessive credit growth. And they should be worried because it’s obvious that the bubbles which caused China’s slowdown never went away. In fact, they’ve gotten worse from government stimulus designed to prevent a hard economic landing. These government actions have made the chances of an imminent China crash more likely. Double, double toil and trouble Just when the world had bought into a Chinese economic recovery, along comes the government throwing proverbial spanners in the works. Actually, they’re more like grenades. According to Bloomberg, China’s central bank has drained Rmb910 billion (US$145 billion) from the banking system this week, a record high weekly net drain. Reducing liquidity after Chinese New Year is normal, as is increasing liquidity prior to this holiday. But the extent of the liquidity reduction dwarfed the Rmb 662 billion added before the New Year. To put this in some context, the People’s Bank of China has now drained a net Rmb548 billion from the banking system this year. This compares with a net injection of Rmb1.44 trillion last year. On top of this news came calls from outgoing Chinese Premier Wen Jiabao for local governments to impose home price restrictions and “decisively” curb housing market speculation. He described house price gains as “excessively fast” and also ordered major municipalities to publish annual price control targets. It’s obvious that the government is concerned with three things: Local governments are again turning to fixed asset investment, particularly property sales, to boost their revenue and GDP. The problem is that local governments own the land so they’re incentivised to sell that land to get revenues. These governments are already heavily in debt and this is exacerbating the issue. Property sales have led to increased bank lending, as January figures attest too. This is not what the government wants given total credit to GDP is already high, at 190% according to Fitch. More broadly, the property bubble has never really deflated. As economist Andy Xie points out, NBS data shows 10.6 billion square metres of property was under construction at the end of last year, half in residential and the other half in office/commercial. If you put market prices on this inventory, it equates to 1.5x Chinese GDP. Quite the bubble. Why the noose is tightening The vast majority of economists will tell you that the government’s actions are prudent and will ensure that the economic recovery remains on track. They’ll site all kinds of data to show that a recovery is on the cards. After all, GDP increased 7.9% in the fourth quarter of 2012, compared with the 7.4% in the third quarter. Exports in January grew 25% from a year earlier, while imports surged 29%. New lending from banks in January more than doubled from December. Total social lending – a broad measure of liquidity in the economy – increased to Rmb2.5 trillion in January, from Rmb1.63 trillion in December. Impressive stats indeed. But I’d suggest that economists who take this data at face value are either extraordinarily lazy, ignorant of basic economics or both. Here are three initial quibbles: Anyone taking GDP growth as a sign of economic health needs to be seriously questioned. GDP growth in developed world economies before the 2008 crisis was supposedly showing healthy economies when they were anything but. Anyone taking GDP growth in China as a sign of economic health needs more serious help. The GDP figures can’t get more rubbery, as highlighted by recent reports suggesting the real GDP growth for China was closer to 5.5% in 2012, rather than the 7.8% recorded. I was one of the first to question the export data out of China late last year and the latest data makes me more sceptical. Exports from China to its largest partner, Europe, are sharply recovering, really? Given the deterioration in European economies, it’s more than a little hard to believe. So the extent of the economic recovery as indicated by the data needs to be questioned. More importantly though, a simple, broader question needs to be asked: what has driven this seeming recovery? And it’s here that the answer should concern everyone. For China is repeating the same mistakes that it made post the financial crisis. Back then, the government unveiled an enormous Rmb4 trillion (US$640 billion) package to ward off an economic slump after developed market economies crashed. They primarily stimulated the economy via infrastructure and property-related investment, fuelled almost exclusively by debt. It seemingly saved the day as China’s economy roared back into life. But then the hangover began in 2011. The investment garnered little if any returns in industries which were already suffering from over-capacity. Property prices started levelling off after a decade of super-charged returns, as it became obvious that demand couldn’t meet the endless supply. And bad debts at banks undoubtedly skyrocketed, but have remained hidden to this day. An investment-driven, debt-fuelled binge had seemingly come to an end. Even the government had privately told investors and stockbrokers that this binge was a mistake. I, for one, believed them. Six months ago, I thought an economic soft landing was likely as the government wouldn’t repeat the mistakes of 2009-2010. But that assumption was wrong. As the economic downturn gathered steam in the second quarter of last year, the government turned to the easiest way it knew how to boost economic activity: fixed asset investment funded by debt. The central government officially unveiled a Rmb1 trillion (US$160 billion) infrastructure package in September last year. Unofficially, local governments launched a similar package totalling up to Rmb13 trillion (US$2.1 trillion). How much of this money has been spent isn’t clear. But infrastructure spend and property investment figures suggest much of it has been put to work. And total credit financing figures, as mentioned above for January, are showing a sharp increase from the first half of last year. The unique thing this time around is that the debt financing is being done less via traditional banks but non-banks. In 2012, total credit financing grew 20%, with trust loans up 80%, FX loans up 27% and bond financing increasing 45%. Credit Suisse estimates that the so-called shadow banking system now totals Rmb22.8 trillion or 44% of GDP, making it the second largest asset class in China! All of this means that an economy that was unbalanced and fragile before 2012, has become more so thanks to the governments actions. The options to maintain the investment-led, credit boom are narrowing, and fast. As hedge fund titan Jim Chanos said of China: “They’re on a treadmill to hell”. Meaning, they either try to keep the bubbles going to maintain economic growth or they don’t and risk an immediate economic crash.

## 1NR

### Impact overview

**Immigration reform is key china cooperation – that turns solvency**

**Herman and Smith ‘10** (Richard T. Herman is the founder of Richard T. Herman & Associates, law firm in Cleveland, Ohio, also the co-founder of a chapter of TiE, a global network of entrepreneurs started in 1992 in Silicon Valley. He has appeared on National Public Radio, FOX News, and various affiliates of NBC, CBS, and ABC. He has also been quoted in such publications as USA Today,InformationWeek, PCWorld, ComputerWorld, CIO, Site Selection and National Lawyers Weekly, Robert L. Smith is a veteran journalist who covers international cultures and immigration issues for the Cleveland Plain Dealer, Ohio’s largest newspaper. Bob He has written extensively about immigration issues and has interviewed people at all points of the immigrant experience, from undocumented field workers to hugely successful entrepreneurs, Parts of this paper were excerpted from the book “Immigrant Inc.: Why Immigrant Entrepreneurs are Driving the New Economy (and how they will save the American worker)” (John Wiley & Sons, 2009) by Richard T. Herman & Robert L. Smith.  Available wherever books are sold, “Why Immigrants Can Drive the Green Economy,” Immigation Policy Center)

Raymond Spencer, an Australian-born entrepreneur based in Chicago, has a window on the future—and a gusto for investing after founding a high-technology consulting company that sold for more than $1 billion in 2006. “I have investments in maybe 10 start-ups, all of which fall within a broad umbrella of a ‘green’ theme,” he said. “And it’s interesting, the vast majority are either led by immigrants or have key technical people who are immigrants.” It should come as no surprise that immigrants will help **drive the green revolution**. America’s young scientists and engineers, especially the ones drawn to emerging industries like alternative energy, tend to speak with an accent. The 2000 Census found that immigrants, while accounting for 12 percent of the population, made up nearly **half of the all scientists and engineers** with doctorate degrees. Their importance will only grow. Nearly 70 percent of the men and women who entered the fields of science and engineering from 1995 to 2006 were immigrants. Yet, the connection between immigration and the development and commercialization of alternative energy technology is rarely discussed. Policymakers envision millions of new jobs as the nation pursues renewable energy sources, like wind and solar power, and builds a smart grid to tap it. But Dan Arvizu, **the leading expert** on solar power and the director of the National Renewable Energy Laboratory of the U.S. Department of Energy in Golden, Colorado, warns that **much of the clean-technology talent lies overseas**, in nations that began **pursuing alternative energy** sources **decades ago.** Expanding our **own clean-tech industry will require working closely with foreign nations and** foreign-born **scientists**, he said. Immigration restrictions are making collaboration difficult. His **lab’s** **efforts to work with a Chinese energy lab**, for example, **were** **stalled due to U.S. immigration barriers**. “We can’t get researchers over here,” Arvizu, the son of a once-undocumented immigrant from Mexico, said in an interview in March 2009, his voice tinged with dismay. “It makes no sense to me. We need a much more enlightened approach.” Dr. Zhao Gang, the Vice Director of the Renewable Energy and New Energy International Cooperation Planning Office of the Ministry of Science and Technology in China, says that America needs that enlightenment fast. “The Chinese government continues to impress upon the Obama administration that **immigration restrictions are creating major impediments to U.S.-China collaboration on clean energy** development,” he said during a recent speech in Cleveland. So what’s the problem? Some of it can be attributed to national security restrictions that impede international collaboration on clean energy. But Arvizu places greater weight on immigration barriers, suggesting that national secrecy is less important in the fast-paced world of green-tech development. “We are innovating so fast here, what we do today is often outdated tomorrow. Finding solutions to alternative energy is a complex, global problem that requires global teamwork,” he said. **We need** an **immigration** system **that prioritizes** the attraction and retention of **scarce, high-end talent** needed **to invent and commercialize alternative energy technology** and other emerging technologies. One idea we floated by Arvizu was a new immigrant “Energy Scientist Visa,” providing fast-track green cards for Ph.D.s with the most promising energy research, as reviewed by a panel of top U.S. scientists. Arvizu enthusiastically responded, “Wow, that’s a brilliant idea.” As the recent submission of the Startup Visa Act bill suggests, there’s really no shortage of good ideas of leveraging immigration to jumpstart the economy. The challenge is getting the American people to understand that high-skill immigration creates jobs, that the current system is broken, and that action is required now.

**and turns china’s econ**

**Hart 2/12**, Melanie, Policy Analyst for Chinese Energy and Climate Policy at American Progress, “The Case for More Chinese Investment In U.S. Clean Energy,” 2/12, http://theenergycollective.com/josephromm/185056/chinese-direct-investment-us-clean-energy

President Obama’s administration made great strides in his first term toward building a sustainable U.S. clean energy economy that will provide jobs for middle-class Americans and reduce our nation’s dependence on foreign oil and fossil fuels. But more work is needed. Moving toward a clean energy economy in the United States will require more than $1 trillion of investment in the electricity grid, new fuels, mass transit, power generation, and manufacturing. An investment of this size will require the United States to mobilize every possible source of capital, including foreign direct investment. While the United States has a sizeable investment need, Chinese investors are eager for new opportunities in foreign markets—and the U.S. market in particular. Their goals are not always perfectly aligned with ours, nor do U.S. market opportunities always perfectly meet their needs. That said, however, there are times when Chinese direct investment in the U.S. clean energy economy would be mutually beneficial. Chinese enterprises would like to invest in the United States for many reasons, including: Some potential investors are seeking infrastructure investments with stable returns. Others are seeking access to innovative technology and processes or high-yield opportunities in manufacturing. Directly investing in the United States can give Chinese enterprises a local presence and a closer relationship with U.S. consumers—two critical prerequisites for building and promoting Chinese name-brand goods and services. All of these possible reasons for Chinese investment in the United States are supported by the fact that the Chinese government has amassed more than $3 trillion in foreign-exchange reserves. They cannot convert those reserve holdings into Chinese renminbi—the official currency of China—and invest them domestically without triggering inflation, so Chinese banks and enterprises are constantly looking for good investment opportunities abroad. Over the past 5 to 10 years, Chinese enterprises have grown more adept at operating in foreign markets, and that has triggered a shift from lower-yield portfolio investments—where Chinese entities buy minority shares in foreign assets—to higher-yield direct investments—where Chinese entities actually play an operational role by building and operating manufacturing plants abroad. China’s total cumulative outward foreign direct investment now amounts to around $230 billion worldwide. Annual Chinese direct investments in overseas markets grew from less than $2 billion in 2004 to more than $40 billion in 2009, and some analysts predict that China’s total global stock in outward foreign direct investment could reach $2 trillion by 2020. If handled correctly, these investments could play a large role in revitalizing economies worldwide, including the U.S. economy.

**turns the US economy**

Smith 12. [Gerry, technology reporter, "Brain Drain: Why We're Driving Immigration Talent Overseas" Huffington Post -- November 5 -- www.huffingtonpost.com/2012/11/09/immigrant-entrepreneur\_n\_2077183.html]

Stories like his are not unique. They’re also troubling for the U.S. economy, advocates say. For the first time, the number of immigrant-founded startups is in decline, as foreign-born entrepreneurs struggle to obtain a limited number of visas and green cards and decide to launch companies in other countries that offer perks to start businesses there. Losing founders like Darash, who launch startups that create jobs, means that America risks losing a source of employment and a competitive edge in the global economy as the country claws its way out of a recession, they say.¶ For years, immigrant entrepreneurs have propelled the growth of Silicon Valley, building some of the most successful tech companies in the world: Sergey Brin, co-founder of Google, was born in Russia; Elon Musk, co-founder of PayPal and Tesla, was born in South Africa; Vinod Khosla, co-founder of Sun Microsystems, was born in India. When they immigrated, it was likely easier for them because there was not a backlog that there is today, according to Vivek Wadhwa, a professor at the Pratt School of Engineering at Duke University who researches high-tech immigration. Immigrants are more than twice as likely to start a business as native-born Americans, according to a report earlier this year by the Partnership for a New American Economy. And their companies have produced sizable economic benefits. This year, engineering and technology companies founded in the United States employed about 560,000 workers and generated $63 billion in sales, according to Wadhwa. About a quarter of those companies had at least one foreign-born founder.¶ An estimated three out of every four startups fail, if not more. But by the conventional wisdom of Silicon Valley, Darash’s chances were even slimmer. For one, he does not have a co-founder. He insists he doesn’t need one. (Paul Graham, creator of the startup incubator Y Combinator, has said having a co-founder is critical because “a startup is too much for one person to bear.”) Darash also never worked for a major tech company before, so he did not have the network of contacts that help other entrepreneurs find engineers and meet investors.¶ But what he has lacked in support and connections he has made up for through a work ethic that borders on obsession.¶ “Asaf is a stubborn guy,” said Adam Gries, a childhood friend and founder of Smart Bites, a smartphone app that teaches people English. “He gets into his head that something is going to happen and he’s tenacious.”¶ Darash awakes every morning at 4:30 a.m., takes the BART train from his home in Berkeley to San Francisco, and arrives at the office by 6 a.m. He works for an hour, then walks across the street to the gym to swim and lift weights (A back injury he suffered while serving in the Israeli army requires him to stay physically strong). He typically does not go home until 9 p.m., after his children have gone to bed. Employees say he is a “total workaholic” who sends emails past midnight and sleeps just a few hours a night.¶ “I have a one-and-a-half year old who sees his Daddy maybe three hours a week,” Darash said. “It’s hard to explain how much sacrifice you make to bring a company from an idea to something real, especially if it’s a company with high-level technology.”¶ He is hands-on about all aspects of the company, from courting new clients to writing code. But lately, Darash has been distracted, spending valuable hours gathering documents and talking to lawyers, instead of running his company. His wife recently flew back to Israel to find housing and a school for their kids in case they have to leave the United States. He describes feeling a range of emotions: anger, fear, frustration. Mostly, though, he is confused. In his homeland of Israel, politicians fight over who can attract more foreign entrepreneurs. The United States, he says, should be rolling out the welcome mat for him, not ushering him out the door.¶ “I could not even comprehend this would become a problem,” he said. “I’m creating a company. I’m creating jobs. There’s nothing bad in what I’m doing and there’s nothing I’m taking away from someone else. The only thing I’m doing is creating more!”¶ “SERIOUS ALARM”¶ Since 2005, the number of immigrant-founded startups in Silicon Valley has declined from 52 percent to 44 percent, according to Wadhwa, who argues this drop is cause for “serious alarm” because America needs to attract immigrant entrepreneurs for its economy to recover.¶ “The United States risks losing a key growth engine right at the moment when it’s economy is stuck in a deep ditch, growing slowly and struggling to create jobs,” Wadhwa wrote in his new book, The Immigrant Exodus.¶ Their recent decline could be linked to entrepreneurs finding better business prospects abroad, especially in countries with growing economies like India and China. But advocates say a major reason why immigrants are launching fewer startups in the United States is because they are struggling to secure visas to remain in the country.

**Turns resource wars**

**ACIR ‘7** (December 4, 2007 THE AGRICULTURE COALITION FOR IMMIGRATION REFORM

Dear Member of Congress: The Agriculture Coalition for Immigration Reform (ACIR) is deeply concerned with pending immigration enforcement legislation known as the ‘Secure America Through Verification and Enforcement Act of 2007' or ‘SAVE Act’ (H.R.4088 and S.2368). While these bills seek to address the worthy goal of stricter immigration law enforcement, they fail to take a comprehensive approach to solving the immigration problem. History shows that a one dimensional approach to the nation’s immigration problem is doomed to fail. Enforcement alone, without providing a viable means to obtain a legal workforce to sustain economic growth is a formula for disaster. Agriculture best illustrates this point. Agricultural industries that need considerable labor in order to function include the fruit and vegetable, dairy and livestock, nursery, greenhouse, and Christmas tree sectors. Localized labor shortages have resulted in actual crop loss in various parts of the country. More broadly, producers are making decisions to scale back production, limit expansion, and leave many critical tasks unfulfilled. Continued labor shortages could force more producers to shift production out of the U.S., thus stressing already taxed food and import safety systems. Farm lenders are becoming increasingly concerned about the stability of affected industries. This problem is aggravated by the nearly universal acknowledgement that the current H-2A agricultural guest worker program does not work. Based on government statistics and other evidence, roughly 80 percent of the farm labor force in the United States is foreign born, and a significant majority of that labor force is believed to be improperly authorized. The bills’ imposition of mandatory electronic employment eligibility verification will screen out the farm labor force without providing access to legal workers. Careful study of farm labor force demographics and trends indicates that there is not a replacement domestic workforce available to fill these jobs. This feature alone will result in chaos unless combined with labor-stabilizing reforms. Continued failure by Congress to act to address this situation in a comprehensive fashion is placing in jeopardy U.S. food security and global competitiveness. Furthermore, congressional inaction threatens the livelihoods of millions of Americans whose jobs exist because laborintensive agricultural production is occurring in America. If production is forced to move, most of the upstream and downstream jobs will disappear as well. The Coalition cannot defend of the broken status quo. We support well-managed borders and a rational legal system. We have worked for years to develop popular bipartisan legislation that would stabilize the existing experienced farm workforce and provide an orderly transition to wider reliance on a legal agricultural worker program that provides a fair balance of employer and employee rights and protections. We respectfully urge you to oppose S.2368, H.R.4088, or any other bills that would impose employment-based immigration enforcement in isolation from equally important reforms that would provide for a stable and legal farm labor force.

### 2nc uq

**Extend Sink and Mali—Obama is empirically able to build momentum by pushing immigration, prefer our evidence—it’s future predictive and conclusive on the likelihood of passage**

**Will pass – bipart momentum – within a month**

Xinhua 3-26-13. ["Obama pushes Congress to put forward immigration bill next month" -- news.xinhuanet.com/english/world/2013-03/26/c\_124501794.htm]

Bipartisan groups in both the House and Senate are moving closer to finalize their separate immigration reform proposals.¶ The Senate group, dubbed "Gang of Eight", expect themselves to finalize their detailed package by the end of this month and bring it up when legislators return from a two-week Easter break.¶ The effort by the Senate group of eight has received more attention over the weeks. The group, including top-ranking Democrats and leading Republicans on immigration reform like veteran Senator John McCain and Hispanic Republican star Marco Rubio, announced their framework of principles to guide the immigration reform at the end of January. One day later, U.S. President Barack Obama officially unveiled his own proposals on immigration reform.¶ Both plans to overhaul the immigration system include giving an earned citizenship to illegal immigrants as well as awarding green cards to foreign young high-end workforce.¶ The bipartisan House group has yet to share details of their proposals, but their work has gained support from leaders in both parties, particularly when the Republicans sent an encouraging signal.¶ Last week, U.S. House Speaker John Boehner, who had never endorsed the negotiation previously, voiced support for the group' s plan, calling it "a pretty responsible solution."

**Border controls being resolved – top of the agenda**

Silverleib 3-28. [Alan, CNN Congressional Producer, "Immigration tops agenda as senators tour border" CNN Newswire -- www.12newsnow.com/story/21819421/immigration-tops-agenda-as-senators-tour-border]

Immigration tops agenda as senators tour border A bipartisan group of U.S. senators at the heart of the debate over immigration reform toured the U.S.-Mexico border in Arizona on Wednesday -- the latest sign of growing legislative momentum on a polarizing issue that has been stalled on Capitol Hill for years.¶ Arizona GOP Sens. John McCain and Jeff Flake were joined on the tour by New York's Chuck Schumer and Colorado's Michael Bennet, both Democrats. The four men are part of a group of eight senators expected to unveil comprehensive legislation soon after Congress returns from its spring break in April.¶ President Barack Obama also stepped up his push for a comprehensive bill, sitting down for interviews with the Telemundo and Univision. While both interviews were embargoed, immigration was expected to dominate the discussion.¶ Speaking at a naturalization ceremony at the White House on Monday, Obama said he expects significant legislation action next month.¶ "We are making progress, but we've got to finish the job," the president said. "I want to sign that bill into law as soon as possible."¶ House Minority Leader Nancy Pelosi, D-California, told reporters Wednesday she is "optimistic" about the chances of legislative success.¶ Democrats and Republicans have been bogged down for years over the question of how best to secure the country's border while resolving the status of roughly 11 million undocumented immigrants. A rare political window appeared to open after last November's presidential election, when GOP presidential nominee Mitt Romney performed dismally among Hispanic voters.¶ Despite strong conservative resistance to a pathway to citizenship for undocumented immigrants, Republican leaders recognize their party's need to appeal more strongly to America's fastest growing minority group. For his part, Obama is hoping to lock in a major second term legislative victory.¶ A source familiar with the congressional negotiations has told CNN that the eight senators have tentatively reached agreement on some of the thorniest issues, such as a path to citizenship and metrics for securing the border.¶ The groups is also working on a revamped guest worker program, the source noted.

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### a/t: gun control

**issue specific uq**

**Obama not touching gun control.**

Mendte 3/26. [Larry, “Mendte: President Obama And Gun Control” KPLR News -- http://kplr11.com/2013/03/26/mendte-president-obama-and-gun-control/]

NEW YORK, NY. (KPLR) – The nation is divided over gun control laws and congress is split over it too. Larry Mendte asks if President Obama has given up on his fight. Remember this ending to the state of the union last month. The president in front of the world demanding a vote for stricter gun control. It was powerful, it was emotional. And as it turns out it was all just theater as the presidential advocate quickly became a realist. By all accounts that was the last real push the white house made for a ban on assault rifles, bullet heavy magazines and background checks. The reality is the legislation never had a chance and the president bailed on it as soon it was obvious that there wasn`t the will or the votes in congress.

**Won’t spent capital**

Amanpour 3-25. [Christian, reporter, "Gun Control Issues in the United States" CNN International -- lexis]

AMANPOUR: What do you say, then, to your own party, Senator, who obviously do fear this or fear not being able to muster enough votes? The leader of the party in the Senate, Harry Reid, has dropped the whole idea of assault weapons.¶ And President Obama himself, who said right after Newtown, that he will use every power available in this office by all accounts has not actually spent the kind of political capital to push this forward.

**Hold all of their link UQ to a very high threshold---issues don’t cost PC until they’re at the finish line---if they can’t cite a bill discount them**

Drum, 10 (Kevin, Political Blogger, Mother Jones, http://motherjones.com/kevin-drum/2010/03/immigration-coming-back-burner)

Not to pick on Ezra or anything, but this attitude betrays a surprisingly common misconception about political issues in general. The fact is that political dogs never bark until an issue becomes an active one. Opposition to Social Security privatization was pretty mild until 2005, when George Bush turned it into an active issue. Opposition to healthcare reform was mild until 2009, when Barack Obama turned it into an active issue. Etc. I only bring this up because we often take a look at polls and think they tell us what the public thinks about something. But for the most part, they don't.1 That is, they don't until the issue in question is squarely on the table and both sides have spent a couple of months filling the airwaves with their best agitprop. Polling data about gays in the military, for example, hasn't changed a lot over the past year or two, but once Congress takes up the issue in earnest and the Focus on the Family newsletters go out, the push polling starts, Rush Limbaugh picks it up, and Fox News creates an incendiary graphic to go with its saturation coverage — well, that's when the polling will tell you something. And it will probably tell you something different from what it tells you now. Immigration was bubbling along as sort of a background issue during the Bush administration too until 2007, when he tried to move an actual bill. Then all hell broke loose. The same thing will happen this time, and without even a John McCain to act as a conservative point man for a moderate solution. The political environment is worse now than it was in 2007, and I'll be very surprised if it's possible to make any serious progress on immigration reform. "Love 'em or hate 'em," says Ezra, illegal immigrants "aren't at the forefront of people's minds." Maybe not. But they will be soon.

### a/t: not spending capital

**Top priority for Obama – newest ev.**

Irish Central 3-29. ["President Obama 'confident' immigration reform bill could pass by summer – VIDEO" -- www.irishcentral.com/news/Obama-confident-immigration-reform-bill-could-pass-by-summer--VIDEO-200584251.html]

President Obama predicted that Congress could pass a reform bill by the end of the summer when he said that last-minute obstacles are "resolvable" this week.¶ The president gave several interviews with Spanish-language television networks this week in which he voiced confidence in a bipartisan Senate group that appears to be on the cusp of unveiling a draft bill.¶ "If we have a bill introduced at the beginning of next month as these senators indicate it will be, then I'm confident that we can get it done certainly before the end of the summer," Obama told Telemundo.¶ Overhauling the nation’s immigration system is a top priority for Obama during his second term.

**Obama push overcomes obstacles – number one priority.**

Whitaker 3-27. [Morgan, MSNBC producer, "Obama sees ‘enormous progress’ on immigration reform" MSNBC -- tv.msnbc.com/2013/03/27/obama-sees-enormous-progress-on-immigration-reform/]

“I think we’ve seen enormous progress over the last month and a half. I think both sides, Democrats and Republicans, have been very serious about the negotiations,” he said. “I’m actually very optimistic that when they return in early April that we’ll see a bill ready to move through the process.”¶ The president insisted the current impasse over a guest-worker program would not ultimately stall the bill. ”There are still some areas… about the future flow of guest workers, and labor and businesses may not always agree exactly on how to do this, but this is a resolvable issue.”¶ Those same senators backed his claim, telling reporters Wednesday they will be ready to unveil their plan when they return from recess in less than two weeks. Their remarks came as they toured the U.S.-Mexico border. As the president pointed out in his interview, border security has already been drastically improved under his administration, with fewer crossings than at any point in years, something that even former opponent Senator John McCain has admitted.¶ When it comes to the politically controversial pathway to citizenship, the president focused on eliminating red tape to help speed up the process for those willing to go through the process.¶ “If we have a smarter legal immigration system that is more streamlined, there’s a smoother verification process, that we’re reducing some of the red tape and bureaucracy, then we can make sure that those who are already in line are processed more quickly,” he said. “People who are currently undocumented, living in this country, have to go to the back of the line. But if the front of the line is getting shorter, that means that they can move forward in this process more quickly.”¶ Asked about the potential political pitfalls if the legislation were to fail, Obama insisted he’s focused on making the legislation work.¶ “I’m concerned about the people whose lives are going to be impacted by it, and I want to make sure they have the capacity to move forward and live out the dream of immigrants that has driven this country for so many years,” he said. “It’s good for the economy, it’s good for these people. That is my number one priority.”

### a/t: no vote

**vote in the next few weeks**

NY Times 3/29. [The New York Times, newspaper, “Business and Labor Said to Near Deal on Immigration” http://www.nytimes.com/2013/03/30/us/politics/guest-worker-program-low-skilled-immigrants.html?\_r=1&]

WASHINGTON — The nation’s top business and labor groups are nearing agreement on a guest worker program for low-skilled immigrants, a final sticking point that had stalled negotiations late last week on a broad immigration overhaul, and are closing in on a deal that could come as early as Friday, according to officials involved in the talks. ¶ An agreement between the labor and business communities would clear one of the last hurdles for an overall deal on immigration legislation in the Senate, which the bipartisan group hopes to introduce early next month. ¶ “We are very close, closer than we’ve ever been,” said Senator Charles E. Schumer, Democrat of New York and a member of a bipartisan group of senators working on comprehensive immigration legislation. “We are very optimistic, but there are a few issues remaining.” ¶ The [United States Chamber of Commerce](http://www.uschamber.com/) and the [A.F.L.-C.I.O.](http://www.aflcio.org/), the nation’s main federation of labor unions, have been in discussions parallel to those of the Senate group, and have reached a tentative agreement about the size and scope of a temporary guest worker program, which would grant up to 200,000 new visas annually for low-skilled workers. The labor-business talks [came close to breaking down last Friday](http://thecaucus.blogs.nytimes.com/2013/03/22/immigration-talks-hit-snag-over-business-and-labor-concerns/), on the eve of a two-week Congressional recess, over the issue of what the pay levels should be for low-skilled immigrants, often employed at restaurants or on construction projects, who could be brought in when employers said they faced labor shortages. ¶ One of the last sticking points in the business-labor negotiations has been the specific type of jobs that would be excluded from the program. The nation’s construction unions, officials in the talks said, have succeeded in persuading the negotiators to exclude certain types of higher-skilled jobs — including crane operators and electricians — from the guest worker program. ¶ [Eliseo Medina](http://www.seiu.org/a/ourunion/eliseo-medina.php), the secretary-treasurer of the Service Employees International Union and one of labor’s most influential voices on immigration issues, said, “We may be very close to a point where the senators will have an announcement soon.” ¶ One official involved in the talks said that the business community was likely to see a number of visas that it considered satisfactory, while the agreement on wages pleased labor because it would not affect the labor market adversely. ¶ This official said that after the business-labor talks came close to breaking down last week, some union officials pressed the labor negotiators to show more flexibility to avoid having the momentum toward immigration reform break down over the guest worker issue. The official said that at the same time, some business leaders and Republican lawmakers pressed the Chamber to be more flexible on the guest worker issue so as not to derail the overall immigration overhaul. ¶ “A lot of the fine details are still being hammered out,” said the official, who insisted on anonymity because the business and labor representatives agreed to a news blackout about the talks. ¶ When President George W. Bush pushed to revamp the nation’s immigration laws in 2007, the inability of business and labor to agree on a plan for guest workers was one of the main reasons that effort failed. ¶ Tamar Jacoby, the president of ImmigrationWorks, a group that represents small businesses on immigrations matters, said business and labor had reached agreement on the highly contentious issue of how many guest workers would be admitted each year. ¶ “The way it’s structured, it will start, according to press reports, at 20,000 visas a year, and it can grow as high as 200,000, but there is a formula that will allow it to grow and shrink according to economic needs,” she said. ¶ Ms. Jacoby said that the formula agreed to was not flexible enough to meet the needs of specific industries in specific places. ¶ The number of guest workers allowed in would increase as the nation’s unemployment rate fell and the number of job openings increased. A federal commission would also assess the need for guest workers, with an eye to shortages in specific industries and communities. ¶ “It will work like an accordion, based on shortages,” said one official involved in the talks. ¶ In the negotiations, officials said, business had pushed to pay guest workers the minimum wage, while the labor negotiations were demanding they be paid the median wage in the industries in which they would work. ¶ Two officials involved in the talks said there was a tentative agreement for guest workers to be paid the prevailing industry wage previously used in the guest worker program. These officials said that employers who experienced a labor shortage even after the national guest worker quota was filled could request a “safety valve” exemption to bring in workers, but at a higher wage rate than the prevailing wage while also paying additional fees. ¶ Though the bipartisan group of senators left for their two-week break with their immigration negotiations stalled over the guest worker program, they have continued to work while Congress is out of session. On Wednesday, four of the group’s members — Senators Michael Bennet, Democrat of Colorado; Jeff Flake, Republican of Arizona; John McCain, Republican of Arizona; and Mr. Schumer — [toured Nogales, Ariz., a city on the Mexican border](http://www.nytimes.com/2013/03/28/us/politics/immigration-in-spotlight-as-senators-tour-arizona.html). ¶ Speaking at a Chamber of Commerce event in Columbia, S.C., on Tuesday, Senator Lindsey Graham, Republican of South Carolina and a member of the group, expressed confidence that the Senate would reach a full deal in the coming days. ¶ “We’re sort of stuck on the ten-yard line,” he said, “but I’m optimistic we’ll get a bill in the next few weeks.”

### a/t: relations resilient

**Visa policy is dragging down US-India relations now – only CIR can reaffirm our alliance with India**

Zee News 12 [“Krishna, Hillary to discuss visa fee hike in NY”, October 1st, 2012, http://zeenews.india.com/news/nation/krishna-hillary-to-discuss-visa-fee-hike-in-ny\_802978.html]

New York: The issue of US visa fee hike, which has hurt several Indian IT firms, is expected to come up for discussion when External Affairs Minister SM Krishna meets US Secretary of State Hillary Clinton here on Monday on the sidelines of the UN General Assembly session. India has "consistently" taken up the issue of the visa fee hike with the US and the issue will figure in talks between Krishna and Clinton, official sources said. The US had raised visa fee in 2010 to fund its enhanced costs on securing border with Mexico under the Border Security Act. Some of the top Indian companies TCS, Infosys, Wipro and Mahindra Satyam were affected by the US action and India is expected to soon seek consultations with the US at the World Trade Organization (WTO) on the issue. The sources said that young Indian professionals working in the US have been the "cornerstone" of India-US relations and are a pillar in the improved bilateral relations that has brought the two countries closer. Hiking visa fees or limiting the number of work visas available to Indian companies is tantamount to "undermining that pillar and growth in India-US relations," they added. "Raising visa fees and putting other barriers is not in consonance with the forward thinking of growing bilateral ties," the sources said. This will be the third bilateral meeting between Krishna and Clinton this year. They had previously met in India in April and again in June in Washington. The sources said that the two countries have a fairly elaborate agenda and the visa issue is one of the issues in a broader relationship. Krishna will also address the 67th session of the UN General Assembly today.

part of the world are essential to the peace and prosperity of the world.

**h-1b’s are key to indian relations.**

Economic Times ’09 [Oct. 19, “India to ask US for more H-1B visas,” http://economictimes.indiatimes.com/news/news-by-industry/services/travel/visa-power/India-to-ask-US-for-more-H-1B-visas/articleshow/5137427.cms]

India is likely to ask the United States to raise the cap on visas for skilled workers at the bilateral trade forum meeting to be held in New Delhi later this month, a government official told ET. India may also push for a special mechanism for Indian professionals travelling to the US for short-term assignments arising out of contractual obligations. The issue of a more liberal and simple US visa regime for professionals will be high on India’s agenda at the bilateral meeting to be chaired by Indian commerce minister Anand Sharma and the US trade representative Ron Kirk, the official said. H-1B visas, which are non-immigrant US visas for skilled professionals, given for up to six years, are highly popular with Indian IT companies such as Infosys, Wipro, TCS and Satyam, which usually corner a big chunk of such visas issued by the US. The subsidiaries of these companies in the US usually employ H-1B visa professionals to deliver services at customer’s location. “The number of world-wide H-1B visas issued to professionals was reduced by more than half to 65,000 per year about two years back. This has affected the functioning of Indian companies in the US, especially ones in the IT sector,” the official said. He added that India was keen on taking up with the new US government the issue of a possible increase in the cap on such visas. Although, this year, the entire quota of 65,000 H-1B visas has not yet been utilised because of the on-going global economic slow down, the official pointed out that it was a temporary phase and the demand for US work visas would soar the moment the global economy began to look up.

### a/t: link turns

**Plan kills pc and causes a fight– no one supports it**

**Mulkern 9 –**

 (Anne C. March 24th,“Some see daylight at last for U.S. feed-in tariffs” <http://www.nytimes.com/gwire/2009/03/24/24greenwire-some-see-daylight-at-last-for-us-feedin-tariff-10271.html?pagewanted=all>)

But feed-in tariffs are controversial. They are blamed for sharply higher electricity prices in countries where they exist. Some question whether Americans accustomed to comparatively low electricity costs would tolerate paying more. Utility companies also argue that they are not needed, since Congress is poised to pass legislation that would set financial penalties for carbon emissions from traditional power sources. And there might not be a political appetite for a fight over a national tariff. It is sensitive enough that the Solar Energy Industries Association's president and spokeswoman did not want to talk about the question of lobbying for it, except to call the tariff "a heavy lift." But Efird said that when the issue came up at the association's board of directors' meeting last month, there was "pretty much a consensus that the political atmosphere at this point would justify us investing some of our resources in a lobbying effort for a feed-in tariff." Since then, a policy task force has been meeting about twice a week, Efird said, "working on the details of what we think the ideal feed-in tariff should look like." 'New ideas take time' Congress does not appear likely to embrace a feed-in tariff anytime soon, however. "There is no interest on the Energy Committee's part to examine the concept of feed-in tariffs," said Bill Wicker, spokesman for the Senate Energy and Natural Resources Committee, the most likely starting place for such discussions. "We believe a better way to accomplish the same goal -- creating a market for renewables -- is with a renewable electricity standard."

**Nedler just says it doesn’t go through congress—magnifies our link argument**

Thomas McGarity, Endowed Chair in Administrative Law, University of Texas School of Law, May 2012, ARTICLE: ADMINISTRATIVE LAW AS BLOOD SPORT: POLICY EROSION IN A HIGHLY PARTISAN AGE, 61 Duke L.J. 1671

The interchange-fee rulemaking experience illustrates how stakeholders in high-stakes rulemakings have begun going beyond the conventional responses to rulemaking initiatives by adopting a new toolbox of strategies better suited to the deeply divided political economy. If the players on one side of the policy debate perceive that they are unlikely to prevail in the administrative arena, they will move the implementation game to another arena - the White House, a congressional hearing, a political fundraising dinner, a think-tank white paper, talk-radio programs, attack advertising, telephone solicitation and "push polls," or Internet blogs. Many of these new venues were amply used in the battle that accompanied the interchange-fee rulemaking. In addition, although lawyers for the stakeholders employ the careful language of administrative law in arenas in which that language is expected, spokespersons and allies also employ the heated rhetoric of modern political discourse in arenas in which that language is more likely to succeed. This Part probes these, among other, contours of blood-sport rulemaking.

**concedes it causes a fight and Obama pushes it**

**Nedler 12.** (Chris, energy analyst citing Jennifer Gleason, Adjuct Professor at University of Oregon Law School. Smart Planet, “Beyond carbon policy: A national feed-in tariff.” 11/14/12. http://www.smartplanet.com/blog/take/beyond-carbon-policy-a-national-feed-in-tariff/231)

Incumbents will certainly recognize the existential threat of a FiT and resist it, accusing the federal government of “picking winners” and repeating their usual complaints. But there would be no ground lost there over the status quo. They will also surely insist that the grid can’t handle higher penetration rates for renewables, despite the evidence that with proper planning, it can. That’s fine. Either they’ll go along with the inevitable energy transition, or they’ll die. This is President Obama’s chance to show real leadership, and create a legacy on par with Eisenhower’s highways and Roosevelt’s Social Security. It would transform America for the long haul, leaping over Congressional gridlock and delivering true sustainability in a century that will be defined by climate and energy challenges. I hope he takes it.

### a/t: public

Harder evidence is fantastic – energy is nonstarter for Obama – he’s picked his political strategy and energy would disrupt it because congressional republicans aren’t willing to support it

There’s a timeframe differential even if they’re right

**GOP will attack Obama for prioritizing environment concerns over energy securitiy.**

Saad 12. [Lydia, senior editor, “Obama rated better on environmental than on energy policies” Gallup -- March 26 -- http://www.gallup.com/poll/153437/Obama-Rated-Better-Environmental-Energy-Policies.aspx]

Obama's rating on improving the nation's energy policy has particular significance right now as he is striving to address consumer anxiety about rising gas prices by focusing on his long-term plans for conservation and alternative "clean energy" solutions. At the same time, Obama faces significant political cross-pressures on the proposed Keystone XL pipeline. Environmentalists are fiercely opposed to the project, while Republicans in Congress, as well as the general public and some unions, endorse it.¶ Not only is Obama's overall rating for doing a good job of improving the nation's energy policies unchanged from a year ago, but his ratings on the issue from each party group have also been fairly stable. There has been a slight increase in the percentage of independents saying he is doing a good job, and a slight decrease among Republicans, but neither of these changes is statistically meaningful.¶ Bottom Line¶ Americans' views about Obama's performance on the economy, energy policy, and American prosperity have been fairly stable at the present levels since a year into his presidency. That a solid majority says he is doing a good job on protecting the environment is a positive for him. Obama's standing on the economy and energy policy is more problematic for him, given that barely 4 in 10 Americans say he has done a good job on each, and roughly half, a poor job.¶ George W. Bush's ratings on the same issues either were no better or were worse at the same point in his presidency, yet he won re-election. This may provide some reassurance for Obama. Still, Obama's ratings on the economy and energy are significantly below the high expectations Americans had for him in 2009. And, the imbalance between Americans' ratings of him on the environment and on energy could suggest he is vulnerable to Republican claims that he has pursued environmental goals at the expense of U.S. energy independence -- a position somewhat out of step with the current even split in Americans' preferences for the environment vs. energy trade-off. At the same time, Americans do favor conservation and pursuing alternative energy sources over increased development of fossil fuels.

### a/t: wind PTC

**The Wind PTC fight means the plan’s supporters are exhausted and won’t invest in fighting for the plan—only a risk of the link – this card is amazing**

Amy Harder, 1/3/13, Battle Over Wind Subsidy Leaves Industry Bruised, www.nationaljournal.com/congress/influence/battle-over-wind-subsidy-leaves-industry-bruised-20130103

The battle to get Congress to renew the wind-energy production tax credit before year’s end strained relationships among utilities, splintered support within the industry’s biggest trade group and is setting up the industry—and its supporters in Congress—for a 2013 even more contentious than 2012.

Many utilities, environmental groups and lawmakers from both parties are cheering the news that the PTC was extended by one year as part of the fiscal cliff deal. But the bruising fight over the last year doesn’t bode well for the sector as it must now agree on how to ramp down the tax subsidy that was first created 21 years ago.

Xcel Energy, which is among the top 10 biggest utilities in the country and had the largest wind capacity of any utility in 2011, is reviewing its membership in AWEA largely because of how the trade group handled the PTC debate. A final decision from the company is expected soon about what, if anything, it plans to do.

"We are in the process of reviewing our relationship with AWEA,” Xcel lobbyist John O’Donnell told NJ. “It's our concern that they continue to represent the interests of developers to the exclusion of customers."

O’Donnell is referring to both individual households and businesses whose electricity bills from utilities are affected by the production tax credit either directly or indirectly. O’Donnell doesn’t think extending the PTC, which is a tax credit that goes to wind-energy developers, benefits customers paying electricity bills or the utilities buying wind from renewable-energy generators. He went so far to say that because Congress extended the PTC without any additional policies to benefit customers, the Minnesota-based Xcel may not buy more wind.

"As the largest provider of wind to customers by far, we feel this action doesn’t nearly enough for customers, and throws into immediate question any further plans we have to buy more wind on their behalf,” O’Donnell said.

Another bruise from last year’s fight that will wear on into 2013 is lobbying by Exelon, the country’s biggest nuclear generator, to eliminate the PTC altogether. The Chicago-based Exelon, which is also the 11th-ranked utility in terms of wind generation, has aggressively lobbied lawmakers to end right away the tax credit because the policy distorts electricity market prices and hurts the company’s bottom line.

Exelon spent $6.4 million on lobbying through October (fourth-quarter lobbying numbers are due out later this month). In response to Exelon’s lobbying push, which was first reported by National Journal in August, AWEA kicked the company out of its group in September. Exelon is going to keep up its push against the policy now that Congress renewed it.

“In the coming months Exelon will work with legislators to inform them of the unintended negative consequences to power markets and investments in other sources of generation from the continuation of the PTC,” Exelon lobbyist David Brown told National Journal in an e-mail.

The lobbying power of Exelon, whose position against the PTC aligns the company with deep-pocketed conservative tea-party groups like Americans for Prosperity and the American Energy Alliance, could be even more concerning to the wind industry moving forward.

“Most people supportive of renewable energy are concerned about all the money they’re putting into this,” said one wind-energy lobbyist who would speak on the condition of anonymity only. “The renewable energy and wind energy specifically need to come up with a much better defense and push back…You’re going to see industry hit back harder now.”

But for now, AWEA is regrouping. Amid internal claims that the group’s leadership on the PTC was lacking, its CEO and president of the past four years, Denise Bode, announced last month she was resigning to return to the private sector as a tax attorney. AWEA’s top lobbyist, Rob Gramlich, will serve as interim CEO as the group finds a new one.

AWEA spent $1.81 million on lobbying through October, which is much less than Exelon and a $1 million less than NextEra Energy, the biggest renewable-energy generator that was the most outspoken company supporting the PTC. NextEra, whose lobbyists have clashed with Exelon executives over the PTC, did not immediately have a comment in response to this article.

AWEA has publicly announced it supports phasing out the tax credit, but consensus within the industry doesn’t exist (yet) about how and for how long that should happen.

Sen. Mark Udall, D-Colo., who is the most outspoken supporter of the policy in Congress and gave almost 30 floor speeches on the issue over the last several months, said he remains committed on a way forward.

“I plan on pushing my colleagues this year to pursue a multiyear extension in conjunction with a well-crafted phase-out,” Udall said to National Journal. “Such a phase-out would need to provide market certainty, and I believe that is the direction we need to head.”

Toward the end of last year, Xcel lobbied lawmakers on a proposal that would have replaced the production tax credit with a combination of an investment tax credit and a customer renewable credit.

The investment tax credit would be given to renewable-energy developers to help finance projects, and the customer renewable credit would be awarded to utilities that integrate more wind and solar onto the grid in order to incentivize such renewable-energy integration. The two credits combined would cost the government between $6 billion and $7 billion over 10 years. The one-year extension will cost taxpayers about $12 billion over 10 years.

“There is some merit to that,” said the wind-energy lobbyist about Xcel’s proposal. “Maybe that is a way to compromise and get utilities more supportive of tax credits for renewable energy.”

Udall expressed initial support for the proposal last month, but at that point he—and all other congressional wind backers—was focused chiefly on extending the PTC.

Another big problem lurking in the background for the wind industry is what, if any, legislative vehicle they can use to advance their proposal, if and when the industry can agree on a way forward. But that’s a fight for another day.

### a/t: Hirsch

**PC key to force a vote**

Ronald **Brownstein**, National Jouranl, **1/31/**13, On Immigration, What Obama Can Learn From Bush's Failed Efforts, www.nationaljournal.com/columns/political-connections/on-immigration-what-obama-can-learn-from-bush-s-failed-efforts-20130131

The prospects for major immigration reform are now the brightest in years, but for key players in Washington, a shadow still looms: the ghost of 2006. That was the last time the stars were aligned for a breakthrough. Immigration reform that included a path to citizenship for those in the United States illegally had the support of President Bush, a broad labor-business-faith coalition, and a bipartisan Senate majority. Yet that armada ultimately splintered against the stony refusal of House Republican leaders to consider a bill opposed by a majority of their majority. Any of that sound familiar? Already many of the same dynamics are developing, with President Obama stamping immigration reform as a top priority, a bipartisan Senate coalition reassembling, a broad outside alliance of support groups coalescing—and most House Republicans rejecting anything that hints at “amnesty” for illegal immigrants. Yet the contrasts between now and 2006, particularly in the political climate, are also significant. Understanding both the similarities and the differences will be critical for reform advocates if they are to avoid replicating the disappointment they suffered under Bush. Presidential interest was then, as it is now, critical in elevating immigration reform. Since his days as Texas governor, Bush had courted Hispanics, and—even during the 2000 GOP presidential primary campaign—he strikingly defended illegal immigrants as “moms and dads” trying to make a better life for their children. Together with his political “architect,” Karl Rove, Bush saw comprehensive reform that coupled a path to citizenship with tougher enforcement as an opportunity to consolidate the beachhead that allowed him to capture more than 40 percent of Hispanic voters in his 2004 reelection. But Bush largely looked away when Republicans who controlled the House channeled that impulse in a very different direction. In December 2005, they passed an enforcement-only bill drafted by Judiciary Committee Chairman Jim Sensenbrenner of Wisconsin, that, for the first time, designated all undocumented immigrants as felons. (Previously, illegal presence in the U.S. had been a civil, not criminal, violation.) Initially, debate in the GOP-controlled Senate drifted. Majority Leader Bill Frist, considering a 2008 presidential bid, pushed his own enforcement-only bill. But amid the backdrop of huge public rallies against Sensenbrenner’s proposal, Sen. Arlen Specter unexpectedly joined with three other Republicans and all eight Judiciary Committee Democrats in late March to approve a comprehensive plan, including a path to citizenship, that followed a blueprint negotiated by Sens. Edward Kennedy and John McCain. When broader Senate agreement teetered over the terms of legalization, Republican Sens. Chuck Hagel and Mel Martinez devised a compromise that divided illegal immigrants into three categories, requiring those here less than two years to leave but allowing those with deeper roots to eventually earn citizenship by paying fines and learning English. After Bush finally delivered a national address on immigration, a bill embodying that plan cleared the Senate with 62 votes, including support from 23 Republicans. House Republicans immediately signaled their disinterest by refusing to appoint a conference committee and instead scheduled hearings in border communities to highlight security lapses. “Border security reigned supreme,” recalls Ron Bonjean, the communications director for then-Speaker Dennis Hastert. “I remember being in a meeting with … the leadership where pollsters came in and said border security was the key to our reelection.” Even in 2006, something like the Senate plan likely could have attracted 218 votes in the House—but not a majority of Republicans. Faced with a collision between his two political imperatives—courting Hispanics and mobilizing conservatives—Bush blinked, allowing House leaders to replace the Senate bill with enforcement-only legislation, which he signed that fall. These choices began the GOP’s slide among Hispanics that continues unabated: Hispanic support for Republican House candidates plummeted from 44 percent in 2004 to just 29 percent in 2006, presaging Mitt Romney’s disastrous 27 percent showing among those voters in 2012. That slippage is one of the two most important differences in the political environment around immigration between 2006 and today. Back then, as Bonjean notes, hardly any House Republicans argued that the GOP needed to pass a plan attractive to minorities. But many GOP leaders now see that as self-preservation. “The political imperative has shifted the tectonic plates,” says Frank Sharry, a key player in the 2006 debate who remains central as executive director of America’s Voice, which backs full citizenship for immigrants. “Immigration was viewed as a wedge issue for Republicans in 2006. Now it’s viewed as a wedge issue for Democrats.” The “Gang of Eight” proposal released this week makes it likely that, as in 2006, the Senate will eventually pass a bipartisan immigration bill. Once again, there are probably 218 House votes for such a plan, but not a majority of the majority Republicans. That raises another key difference from 2006: Hastert faced little pressure to consider the Senate bill, because Bush bit his tongue when the speaker buried it. If House Republicans shelve another bipartisan Senate plan in 2013, they should expect much more public heat, because Obama won’t be as deferential.

**Capital prevents watered down legislation – means even if it passes it fails without Obama’s capital**

Anniston Star, 3-27 [Editorial Board, "On the offensive: Obama is wise to start anew the push for immigration reform," 3-27-13, annistonstar.com/view/full\_story/22088295/article-On-the-offensive--Obama-is-wise-to-start-anew-the-push-for-immigration-reform?instance=opinion\_lead, accessed 3-28-13, mss]

The point: President Obama didn’t fulfill his promise of securing sweeping immigration-reform policies during his first term. Now in his second, Obama is beginning a new campaign to urge legislators — particularly Republicans — to find a bipartisan compromise that (a.) **isn’t watered down** and (b.) is effective. It’s a lot to ask. Nevertheless, Obama is wise to go on this offensive. The need, as always, is great. An Associated Press report this week points out that the president is working behind the scenes in order to **keep Republicans at the** negotiating **table** between now and Congress’ April 8 return from spring break. The key is the Senate working group, the Gang of Eight, that is putting together a bipartisan plan the White House has yet to see. “We’ll reserve judgment on the product of those discussions until it’s produced,” White House spokesman Josh Earnest said.

**And momentum**

Bill **Keller**, NYTimes, **2/3**/13, Selling Amnesty, www.nytimes.com/2013/02/04/opinion/keller-selling-amnesty.html?pagewanted=print

The good news is that the anti-immigration side has no lobbying equivalent of the National Rifle Association, no group with its hands so firmly on the throats of Congress that it can override public opinion. But the bill will face a reservoir of popular fear, resentment and misunderstanding. President Obama and the indefatigable Senator Charles Schumer will work the Democratic constituencies and rally public support, but the hard sell is up to a few key Republicans who understand that this is their party’s best hope of redemption with the surging Latino electorate. So far the most effective antidote to right-wing opposition has been Senator Rubio. In the days after the Gang of Eight unveiled its proposal the Floridian made the rounds of the shouting heads on the conservative media circuit, arguing the case. By the time Rubio was done, Rush Limbaugh was unconvinced but muted, and Sean Hannity, who announced after the November election that he had “evolved” on the issue, was calling it “the most thoughtful proposal that I’ve heard.” Karl Rove, another Fox talker, who tried unsuccessfully to sell immigration reform when he was President George W. Bush’s right arm, called the Senate principles “a huge step forward.” Fox pundits, perhaps mindful that their owner, Rupert Murdoch, recently came out for a path to citizenship, have avoided using the A-word to describe the latest proposals. Rubio could bolster the case for legalizing undocumented immigrants by making more of the economics. My conservative colleague David Brooks has spelled out the rosiest economic case for increased immigration, including legalization of the undocumented. I would add a point made by Gordon Hanson, who studies immigration economics at the University of California, San Diego. Hanson points out that giving the 11 million undocumented immigrants provisional legal status would greatly improve the odds that their children would become educated, productive, taxpaying members of society rather than drains on the economy. Supporters of reform are moving with unusual speed, hoping to build up momentum that will carry over to the House. They aim to get a bill through the Senate this summer, leaving much of 2013 for the House to act before representatives are completely immersed in midterm electoral politics.

**Hirsch agrees**

Michael Hirsh, National Journal, 2/7/13, There’s No Such Thing as Political Capital, www.nationaljournal.com/magazine/there-s-no-such-thing-as-political-capital-20130207

The point is not that “political capital” is a meaningless term. Often it is a synonym for “mandate” or “momentum” in the aftermath of a decisive election—and just about every politician ever elected has tried to claim more of a mandate than he actually has. Certainly, Obama can say that because he was elected and Romney wasn’t, he has a better claim on the country’s mood and direction. Many pundits still defend political capital as a useful metaphor at least. “It’s an unquantifiable but meaningful concept,” says Norman Ornstein of the American Enterprise Institute. “You can’t really look at a president and say he’s got 37 ounces of political capital. But the fact is, it’s a concept that matters, if you have popularity and some momentum on your side.”

### a/t: winners win

**Even if a confrontational strategy is key, that doesn’t mean the plan’s singular win spills-over—it’s more likely to undermine Obama’s careful strategy**

Ryan Lizza, 1/7/13, Will Hagel Spike the G.O.P.’s Fever?, www.newyorker.com/online/blogs/newsdesk/2013/01/how-much-will-the-nomination-of-chuck-hagel-hurt-obamas-second-term-agenda.html

But Obama’s victory has made almost no difference in changing the psychology or incentives of the members of the G.O.P. who matter most: the House Republicans. The idea that a bloc of conservative, mostly Southern, Republicans would start to coöperate with the President on issues like tax policy and immigration may have rested on a faulty assumption.

The past few weeks of fiscal-cliff drama have taught us that “breaking the fever” was the wrong metaphor. There is no one event—even the election of a President—that can change a political party overnight. Congress is a co-equal branch of government, and House Republicans feel that they have as much of a mandate for their policies as Obama does for his. Shouldn’t House Republicans care that their views on Obama’s priorities, like tax cuts for the rich and immigration, helped cost Romney the White House and will make it difficult for their party’s nominee to win in 2016? In the abstract, many do, but that’s not enough to change the voting behavior of the average House Republican, who represents a gerrymandered and very conservative district.

A better metaphor for the coming battles with Congress may be what Woody Hayes, the college-football coach, famously called “three yards and a cloud of dust”: a series of grinding plays where small victories are earned only after lots of intense combat. While the fiscal-cliff showdown demonstrated that there’s potential for bipartisan deal-making in the Senate, passing any Obama priority through the House of Representatives is nearly impossible unless the political pressure is extremely intense.

The fiscal-cliff bill passed the House only when Speaker John Boehner’s members realized that their only alternative was blowing up the settlement negotiated by Joe Biden and Mitch McConnell—and accepting all the blame and consequences.

That episode offers the White House a general template for the coming fights over spending, immigration, and gun control—three issues where there is very little consensus between Obama and most House Republicans. Deals will have to be negotiated in the Senate and gain the imprimatur of some high-profile Republicans. Then a pressure campaign will have to be mounted to convince Boehner to move the legislation to the floor of the House under rules that allow it to pass with mostly Democratic votes. It’s easier to see how this could happen with the coming budgetary issues, which have deadlines that force action, than for the rest of Obama’s agenda, which is more likely than not to simply die in the House.

### a/t: lynch

**Lynch evidence references no one relevant to congress and here’s the conclusion of the article that says the aff crushes Obama’s political capital**

Lynch 2011, Peter, Renewable Energy World contributor, “Feed-in Tariffs: The Proven Road NOT Taken…Why?”, <http://www.renewableenergyworld.com/rea/news/article/2011/11/feed-in-tariffs-the-proven-road-not-takenwhy>

FITs do not depend on taxpayer contributions (it is not a subsidy) and no new public debt is needed to fund it, which is ideal in the current recession environment. As a result, a FIT program is not as vulnerable to the uncertainty and unpredictability of the political environment. The FIT has proven superior to any other program currently in use around the world, such as subsidies with public money, tendering models and quota models. In fact, since the German’s have launched their FIT program, approximately 35 to 40 counties have followed suit and implemented their own. FITs eliminate uncertainty thereby encouraging private investment, which results in more taxable income from new companies and jobs in the industry. Remember: where widespread uncertainty exists, major investment does not. This is a basic financial concept that the U.S. has failed to understand and address. FITs dramatically reduce government bureaucracy, eliminate red tape and move the process along at a much faster and cheaper rate. Typical power purchase agreements in the U.S. are incredibly complex and require an army of lawyers and engineers — which is both timely and costly for developers/owners. There is a lack of political courage to try something new or allow something that powerful contributors (utilities, fossil fuel companies) do not want to infringe on their businesses and help kick-start a competing industry.

Iowa’s card ends

In the U.S. the typical agreement between a producer and a utility is a minimum of 85 to 100 pages long, in Germany the comparable contract is only two to four pages. The more complex system is not working very well in the U.S., while the simple, transparent system is proven and has been successful for over 10 years in Germany. FITs, by accelerating the development of the renewable energy industry, enhance national security by lessening U.S. dependence on foreign oil and helping to decrease the huge cash drain (approximately $800,000,000 per day in 2010) from buying foreign oil. FITs Are A Proven and Working Worldwide FITs must be carefully designed in order to work effectively. Germany has a 10-year-old model others can reference, and 35 models have been based from it worldwide. Some countries have designed their FITs successfully, and some have not. However the U.S. can learn much from these successes and failures. The most recent, closest and successful of these FIT programs is in the province of Ontario, Canada. FITs are not theories, nor are they the next Solyndra. Opposition to FITs: Opposition Is Talk, FITs Are Fact FITs major opponent is the local electric utility. These utilities argue that FITs work contrary to the market, but most utilities are not market-driven. They are monopolies — monopolies do not respond to market forces. As history has shown, the last thing a monopoly wants is competition in the market. But if one looks at FIT results, especially in another developed country like Germany, the numbers speak for themselves. FITs are far more market-oriented than monopolies. There is a lack of political courage to try something new or allow something that powerful contributors (utilities, fossil fuel companies) do not want to infringe on their businesses and help kick-start a competing industry. Why Germany and Not the U.S.? The primary reason FIT’s are working in Germany and not in the U.S. is the respective mindsets in each of the countries. Germany: Here are two quotes from Willi Voigt, former minister of the German state of Schlexwig-Holsteim, one of the early adopters of FITs. “We decided we will reduce the CO2 until 2020, 40 percent, [and by] 2050 by 80 percent. Then we debated the instruments that could make this possible and decided on feed-in tariffs.” “I hear arguments (spoken in 2009) we discussed in Germany 10 or 15 years ago. It’s the same debate. In Germany, we made a decision; we made a law….the renewable Energy Resources Act (FIT). It worked. You can see the results.” United States: The German’s made a decision that would benefit their citizens and then followed through. The U.S. can’t make a decision — every U.S. President since Richard Nixon has recognized the unsustainable path we are on and has vowed to move toward less oil-dependence. Since those first “vows” our dependency has more than doubled. Opponents of renewables have done a great job in the media to dampen energy awareness and its solution (FITs) from widespread dissemination among the American people. I believe that the majority of the citizens in the U.S. are not aware of our energy problem and how truly serious it is. Americans, it seems to me, have always been reactive (at least in the energy area) and the current situation calls for us to be proactive. We seem to be unable to make that transition. Complacency is always a barrier to change. Just as the captain and crew of the Titanic became complacent when the ship was deemed “unsinkable,” we must not become complacent and ignore what is transparent, proven and obvious: feed-in tariffs.