# China DA

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#### China’s beating the US in offshore wind development now---it’s key to their overall clean-tech leadership---the plan reverses this

Zoninsein 10 Manuela is a writer for Climatewire, New York Times. “Chinese Offshore Development Blows Past U.S.,” Sept 7, <http://www.nytimes.com/cwire/2010/09/07/07climatewire-chinese-offshore-development-blows-past-us-47150.html?pagewanted=all>

As proposed American offshore wind-farm projects creep forward -- slowed by state legislative debates, due diligence and environmental impact assessments -- China has leapt past the United States, installing its first offshore wind farm. Several other farms also are already under construction, and even the Chinese government's ambitious targets seem low compared to industry dreaming. "What the U.S. doesn't realize," said Peggy Liu, founder and chairwoman of the Joint U.S.-China Collaboration on Clean Energy, is that China "is going from manufacturing hub to the clean-tech laboratory of the world." The first major offshore wind farm outside of Europe is located in the East China Sea, near Shanghai. The 102-megawatt Donghai Bridge Wind Farm began transmitting power to the national grid in July and signals a new direction for Chinese renewable energy projects and the initiation of a national policy focusing not just on wind power, but increasingly on the offshore variety. Moreover, "it serves as a showcase of what the Chinese can do offshore ... and it's quite significant," said Rachel Enslow, a wind consultant and co-author of the report "China, Norway and Offshore Wind Development," published in March by Azure International for the World Wildlife Fund Norway.

#### China’s clean tech leadership’s key to Chinese growth, CCP stability, Chinese soft power, and warming

McMahon 13 Tamsin is a reporter for the National Post. “How China is going to save the world,” 1/27, http://www2.macleans.ca/2013/01/27/business/

China’s ongoing struggles with pollution have been a blight on the country’s international reputation. The world’s image of China is that of an industrial behemoth fuelled by the dirtiest of energies, coal. On the surface, the reputation is well deserved. No country pumps out as much CO2 as China (not even the U.S. comes close). But behind the smog, China’s environmental woes have become an unexpected boon to the global renewable energy industry. Last week’s air quality emergency sent Chinese green energy stocks soaring on the hope that the political fallout will prompt the Communist party to offer up more public money for the country’s burgeoning environmental protection sector.¶ Investors are counting on it. Even as it remains the scourge of environmentalists for being the largest emitter on the planet, China is also emerging as the world’s biggest spender on green energy.¶ Globally, green energy investment fell 11 per cent last year, according to a recent Bloomberg New Energy Finance report. Indebted European countries slashed subsidies, India cut its spending by more than 40 per cent and the U.S. witnessed a string of solar power manufacturer bankruptcies. China’s investment in renewable energy, meanwhile, was a bright spot. It rose 20 per cent to nearly $68 billion, or a full quarter of the $269 billion global total.¶ From having virtually no green energy infrastructure as recently as 2008, China has built 133 gigawatts of renewable energy—mainly wind turbines—enough to power as many as 53 million homes, or every household in Canada four times over. The International Energy Agency predicted that China would overtake Europe as the world’s top renewable energy growth market. It’s a market expected to be worth more than $470 billion by 2015, according to state-owned China Merchants Securities, or almost double what it was in 2009 and equal to about eight per cent of the country’s GDP.¶ That investment has caught the eye of clean-tech companies in Europe and North America, who are flocking to China in hopes of selling their technologies after seeing demand stagnate or collapse in their home markets. “All the key players are going to China these days,” says Changhua Wu, Greater China director of the Climate Group, a London-based agency that promotes green energy investment. “Everyone is trying to figure out what the potential for opportunity is, partly because everyone recognizes that China could potentially be the largest market for clean tech in the world.”¶ As China takes the lead, everyone will benefit from the technology that is developed and exported. China is saving itself, but might also be saving the world in the process.¶ While the Middle Kingdom’s smog problems have earned plenty of headlines, it has also been quietly attracting a host of very unlikely supporters, including praise from the Pew Charitable Trust and the World Wildlife Foundation, which gave its “climate solver” award this year to several Chinese companies that manufacture technology to capture and recycle wasted heat, water and chemical emissions to power everything from factories to refrigerators. Greenpeace predicted the country would be on track to install 400 gigawatts of wind energy by 2030 and could become the largest solar market in the world.¶ The argument that China is the world’s environmental bad guy “is increasingly difficult, if not impossible, to make given China’s recent policies,” wrote the authors of an October report for the Climate Institute, an Australian think tank. The country has closed more coal-fired power plants since 2006 than the entire capacity of Australia’s electrical grid, and exported more than $35-billion worth of renewable energy technology—equal to the total value of shoes exported from China that year. This year, China is rolling out pilot projects that could eventually lead to the world’s largest carbon trading system.¶ “The broad scheme of things is that China believes it wants to become a resource-conserving, environmentally friendly society and that’s the way they describe it, in those exact words,” says Arthur Hanson, one of Canada’s leading experts on sustainable development. The former founding director of Dalhousie University’s School for Resource and Environmental Studies, Hanson is in Beijing this week in his role as international chief adviser to the China Council for International Co-operation on Environment and Development.¶ Granted, China has little choice but to invest in renewables as it seeks out more sources of energy to help power its rapidly developing economy, with GDP growth expected just shy of eight per cent this year and an urban population rising by an estimated 2.3 per cent a year. Green energy is also seen as a political tool for the Chinese government that can quell rising environmental protests and appease political dissent. “The leadership in China is really recognizing that in order to manage and govern the country better you need to find a universal underlying theme to make sure everyone is with you,” says Wu. “Green growth or sustainable development happens to be the only one.”**¶** But beyond the obvious political and economic advantages of green energy, China is also pinning its hopes on the belief that demand for clean technology will enable the country to transform both its domestic economy and its exports.¶ Until now, China’s green energy sector has largely done what the country does best: import technology developed elsewhere, reproduce it for less money and then export it back to the West. That’s changing as China pours billions into research and development and advanced education in hopes that clean tech can help shift China from being merely the low-cost factory of the world to being a global leader in developing innovative technology.¶ China’s current five-year plan, which runs through 2015, includes an economic development blueprint that will see more than $1.5 trillion invested in seven industries, all of them related in some way to environmental protection and renewable energy technology.

#### China’s economic rise prevents CCP instability and lashout --- decline tubes the global economy, US primacy, and Sino relations

Mead 9 Walter Russell Mead, Henry A. Kissinger Senior Fellow in U.S. Foreign Policy at the Council on Foreign Relations, “Only Makes You Stronger,” The New Republic, 2/4/9, http://www.tnr.com/story\_print.html?id=571cbbb9-2887-4d81-8542-92e83915f5f8

The greatest danger both to U.S.-China relations and to American power itself is probably not that China will rise too far, too fast; it is that the current crisis might end China's growth miracle. In the worst-case scenario, the turmoil in the international economy will plunge China into a major economic downturn. The Chinese financial system will implode as loans to both state and private enterprises go bad. Millions or even tens of millions of Chinese will be unemployed in a country without an effective social safety net. The collapse of asset bubbles in the stock and property markets will wipe out the savings of a generation of the Chinese middle class. The political consequences could include dangerous unrest--and a bitter climate of anti-foreign feeling that blames others for China's woes. (Think of Weimar Germany, when both Nazi and communist politicians blamed the West for Germany's economic travails.) Worse, instability could lead to a vicious cycle, as nervous investors moved their money out of the country, further slowing growth and, in turn, fomenting ever-greater bitterness. Thanks to a generation of rapid economic growth, China has so far been able to manage the stresses and conflicts of modernization and change; nobody knows what will happen if the growth stops.

#### Extinction

Yee and Storey 2 Herbert is a Professor of Politics and IR @ Hong Kong Baptist University, and Ian is a Lecturer in Defence Studies @ Deakin University. “The China Threat: Perceptions, Myths and Reality,” p. 5

The fourth factor contributing to the perception of a China threat is the fear of political and economic collapse in the PRC, resulting in territorial fragmentation, civil war and waves of refugees pouring into neighbouring countries. Naturally, any or all of these scenarios would have a profoundly negative impact on regional stability.Today the Chinese leadership faces a raft of internal problems, including the increasing political demands of its citizens, a growing population, a shortage of natural resources and a deterioration in the natural environment caused by rapid industrialization and pollution. These problems are putting a strain on the central government’s ability to govern effectively. Political disintegration or a Chinese civil war might result in millions of Chinese refugees seeking asylum in neighbouring countries. Such an unprecedented exodus of refugees from a collapsed PRC would no doubt put a severe strain on the limited resources of China’s neighbours. A fragmented China could also result in another nightmare scenario- nuclear weapons falling into the hands of irresponsible local provincial leaders or warlords. From this perspective, a disintegrating China would also pose a threat to its neighbours and the world.

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### Link

#### The whole supply chain follows demand---means leadership is zero-sum---if they solve their advantages they definitely link to the DA

Caperton et al 11 Richard W. Caperton is a Policy Analyst with the Energy Opportunity team at the Center for American Progress; Kate Gordon is Vice President for Energy Policy at the Center; Bracken Hendricks is a Senior Fellow at the Center; and Daniel J. Weiss is a Senior Fellow and Director of Climate Strategy at the Center. “Helping America Win the Clean Energy Race,” Feb 7, http://www.americanprogress.org/wp-content/uploads/issues/2011/02/pdf/ces\_brief.pdf

This is no way to build a modern industry. Already we have seen cutting-edge solar power manufacturing companies begin to close their doors, either permanently or to move to other countries with strong and dedicated clean energy markets. Evergreen Solar Inc., for example, recently announced plans to close its Massachusetts plant to put more funds into solar panel manufacturing in China. The company followed on the heels of SpectraWatt Inc. in New York and Solyndra Inc. in California closing some of their facilities. As General Electric Co.’s chairman and chief executive, Jeff Immelt, said at last year’s ARPA-E summit, those countries with strong demand for renewable energy products will naturally pull these companies into their borders because “innovation and supply chain strength gets developed where the demand is the greatest. Similarly, wind manufacturers in Iowa, once a state leader in this industry, are laying off workers as new orders fail to materialize. Leading global financier Deutsche Bank decided to move billions of investment dollars out of the U.S. clean energy market, and into China and Europe as soon as it was clear there would be no comprehensive climate and energy legislation coming out of the 111th Congress. China and our other economic competitors in Asia, Europe, and emerging markets are not waiting for America to regroup. The home team can win the clean energy race These stories share a common theme: investment dollars leav[e]ing the United States to be deployed among our global competitors who have fully embraced the economic and environmental imperative to enter a new era of cleaner, more sustainable and domestic energy. China is the most striking example. In 2009, even as the United States was installing more wind turbines, China driven by stable long-term demand for its products, became the world’s largest manufacturer of wind power systems. It was already the world’s largest solar manufacturer and developer of efficient nuclear and coal technologies. All these countries have comprehensive programs in place to spur robust and stable demand for low-carbon energy, which then creates a market for businesses to manufacture and install the technologies to meet that demand. Last June, China announced its plan to meet a renewable energy standard of 20 percent by 2020, matching the European Union’s target. Germany has set a target of 60 percent by 2050. The country already gets 16 percent of all its power from renewables, well on its way to meeting this ambitious goal, and some think it may reach 100 percent by 2050. Denmark has gone a step further, actually announcing its intention to become 100 percent independent of fossil fuels by 2050, something that at least one of its islands has already achieved. This occurred in a country that in 1970 was almost completely dependent on foreign fossil fuels. These countries prove that strong clean energy standards build growing economies. But even more than that, strong clean energy standards are now imperative if we are to compete on the same playing field as China and Europe. America over the course of the 20th century took command of the Industrial Revolution and the communications revolution, and then led the world into the Information Age. It is time for us to lead the clean-tech revolution, too. Today, others are beating us to the punch, not because we lack the technology and innovation to lead this new revolution, but because we are not providing the market signals needed for our private-sector entrepreneurs need to invest over the long haul. This clean energy investment gap is rapidly becoming the greatest threat to America’s technology leadership.

#### Investment is also zero-sum---plan causes flight from China by creating certainty in the US

Luke Schoen 12, World Resources Institute, “CLEAN TECH’S RISE, PART I: Will the U.S. and China Reap the Mutual Benefits?”, China FAQS issue brief, April 2012, http://www.chinafaqs.org/files/chinainfo/ChinaFAQs\_IssueBrief1\_MutualBenefits.pdf

China itself, meanwhile, is becoming a critical market. In¶ recent years, it has become the world’s largest source of,¶ and destination for, investment in clean energy.¶ 9¶ China is¶ expected to invest at least $300 billion in domestic clean¶ energy technologies over the next five years¶ 10¶ as part of its¶ drive to curb greenhouse gas emissions, gain economic¶ benefits, and improve energy security, in pursuit of¶ aggressive renewable energy deployment targets in its¶ 12¶ th¶ Five-Year Plan¶ 11¶ (see table).¶ “There is no doubt that the¶ country remains committed to the ongoing development¶ of its renewable energy sector,” notes a recent analysis¶ from Ernst & Young.¶ 12¶ The investment race, meanwhile,¶ is heating up. In 2010, China invested a world-leading $45¶ billion in clean energy, while the U.S. slipped to second¶ place with about $33.7 billion.¶ In 2011, however, the U.S.¶ recaptured the lead, with investment surging to¶ $48 billion, while China invested $45.5 billion.¶ 13¶ China’s clear commitment to clean energy has made it¶ “attractive to U.S. and international investors” because it¶ offers “the certainty they are looking for before investing,”¶ notes Deborah Seligsohn, a China specialist with the ¶ World Resources Institute and WRI’s ChinaFAQs project.¶ Companies including First Solar, GE, Duke Energy,¶ American Electric Power, and many other U.S. firms have¶ all invested or expressed interest in investing in China,¶ and “increasingly entrepreneurs with new ideas are¶ looking to China to make those ideas become a reality.”

#### Renewables companies are going to China now because of lack of incentives---empirics prove

Freedman 11 David is a Guest Contributor @ MIT’s Technology Review. “China Beckons for Green-Energy Startups,” Sept 27, http://www.technologyreview.com/article/425560/china-beckons-for-green-energy-startups/

Many in the U.S. have an interest in getting clean-tech ventures off the ground. Among them are the government, capital markets, industry, and science labs. But China seems ready to do more on every front to make such projects happen, and to do it right now—without red tape or concern about economic turmoil. Leading-edge battery maker Boston Power appears to have come to that conclusion. The company is set to move to China, where the government is helping to cut the firm a $125-million deal that no one else is likely to match. The deal could leave the company poised to be a part of what could be a mushrooming market there in electric vehicles. “This is really the next chapter for us,” says Christina Lampe-Onnerud, who founded Boston Power in 2005. Lampe-Onnerud, a former star technology consultant at Arthur D. Little and top scientist at Bell Communications Research, has been much lauded in the world of high-tech green startups, thanks to Boston Power’s innovations in the chemistry of lithium-ion batteries, and to the success the company has had in selling the resulting higher-capacity, faster-charging batteries to Hewlett-Packard for laptops. Boston Power seemed even hotter in 2008 when Lampe-Onnerud announced she was setting her sights on producing batteries for the electric-vehicle market. But this market has been slow to materialize and highly competitive, pitting Boston Power against other high-flying startups, including A123 Systems, based in Waltham, Massachusetts. In 2009, Boston Power failed to win a substantial loan guarantee from the U.S. Department of Energy that would have financed a Massachusetts factory—the company currently manufactures via Taiwanese partner GP Batteries. That same year, a deal backed by the Swedish government to help put the company’s batteries in electric vehicles from foundering Saab went nowhere. The new deal should put Boston Power, which has raised nearly $200 million in funding, in a better position to compete for at least a foothold in what is expected to eventually be a large global market for electric-vehicle batteries. The deal was set up by GSR Ventures, based in Beijing and Palo Alto, California. GSR has more than $1 billion under management and is investing mostly in high-tech startups doing business in China. Neither GSR’s managing director, Sonny Wu, nor Lampe-Onnerud would provide details on the exact breakdown of the new financing, but both confirmed that the $125-million value represents a mix of private equity and Chinese-government grants, low-interest loans, and financial and tax incentives. The equity investment comes from venture-capital firms Oak Investment Partners and Foundation Asset Management, which are previous Boston Power investors, as well as from GSR. And the $125 million might not be all there is to the deal, hinted Lampe-Onnerud. “Even more will unfold over the next six months,” she says. Lampe-Onnerud says the company will soon break ground on a new plant near Shanghai that is expected to turn out 18 million battery cells a year, about three times the company’s current capacity. And while the company is retaining some R&D capabilities in the U.S.—it is headquartered in Westborough, Massachusetts—most of its engineering operations will be based near Beijing, and the company is laying off about a third of its 100 U.S. employees. GSR’s Wu is becoming chairman of Boston Power in the deal, essentially taking the reins from Lampe-Onnerud, who says she will remain on the board and will continue to work closely with the company, but will not move to China. The company is currently looking for a CEO to replace Keith Schmid, who took over the slot in February from Lampe-Onnerud. Lampe-Onnerud says the company was driven to strike a China deal because the country has demonstrated an intention to use generous incentives and funding to push its clean-tech markets, and its electric-vehicle market in particular, versus the shakier support in the United States. “China, by far, is the biggest market for us, and this was a chance to get to profitability very quickly,” she explains. “We would have loved to manufacture here, but every entrepreneur in this business who wants to stay in the U.S. will have to make some tough choices.” Wu seconds the notion that China’s willingness to throw government resources at electric-vehicle growth makes the country increasingly hard to resist for startups in the industry. The Chinese government has already started building a large network of vehicle-recharging stations in major cities, he says, and has stated goals to get at least 300,000 electric vehicles on the road within two years, goosing the market with incentives worth more than $15,000 per car. “Being in China has become a necessary and sufficient condition for success in electric vehicles,” he adds. “U.S. startups are feeling they need to be in China for this market in the same way that Israeli high-tech companies in the early 1990s felt they had to be in the U.S.” Marianne Wu, a partner at Mohr Davidow Ventures with experience in Asian markets, also agrees that China is likely to prove irresistible to a growing number of startups in the electric-vehicle and other clean-tech markets. The fact that China is simply buying more cars and just about everything else due to its rapid industrialization, along with its lower manufacturing costs, are reasons enough to focus operations there, she says, adding that any government help with financing is icing on the cake. “The Chinese government seems willing to provide large incentives to companies in industries that it views as strategic, to foster these industries through infancy,” she says. “EV batteries appear to be one of them, along with renewable energy in general.”

#### It’s zero-sum---demand is key---plan causes firms to relocate to the US

Bradsher 1/30 Keith is a writer at the NY Times. “China Leading Global Race to Make Clean Energy,” 2010, <http://www.nytimes.com/2010/01/31/business/energy-environment/31renew.html?pagewanted=all>

The United States and other countries are offering incentives to develop their own renewable energy industries, and Mr. Obama called for redoubling American efforts. Yet many Western and Chinese executives expect China to prevail in the energy-technology race.¶ Multinational corporations are responding to the rapid growth of China’s market by building big, state-of-the-art factories in China. Vestas of Denmark has just erected the world’s biggest wind turbine manufacturing complex here in northeastern China, and transferred the technology to build the latest electronic controls and generators.¶ “You have to move fast with the market,” said Jens Tommerup, the president of Vestas China. “Nobody has ever seen such fast development in a wind market.”¶ Renewable energy industries here are adding jobs rapidly, reaching 1.12 million in 2008 and climbing by 100,000 a year, according to the government-backed Chinese Renewable Energy Industries Association.¶ Yet renewable energy may be doing more for China’s economy than for the environment. Total power generation in China is on track to pass the United States in 2012 — and most of the added capacity will still be from coal.¶ China intends for wind, solar and biomass energy to represent 8 percent of its electricity generation capacity by 2020. That compares with less than 4 percent now in China and the United States. Coal will still represent two-thirds of China’s capacity in 2020, and nuclear and hydropower most of the rest.¶ As China seeks to dominate energy-equipment exports, it has the advantage of being the world’s largest market for power equipment. The government spends heavily to upgrade the electricity grid, committing $45 billion in 2009 alone. State-owned banks provide generous financing.¶ China’s top leaders are intensely focused on energy policy: on Wednesday, the government announced the creation of a National Energy Commission composed of cabinet ministers as a “superministry” led by Prime Minister Wen Jiabao himself.¶ Regulators have set mandates for power generation companies to use more renewable energy. Generous subsidies for consumers to install their own solar panels or solar water heaters have produced flurries of activity on rooftops across China.¶ China’s biggest advantage may be its domestic demand for electricity, rising 15 percent a year. To meet demand in the coming decade, according to statistics from the International Energy Agency, China will need to add nearly nine times as much electricity generation capacity as the United States will.¶ So while Americans are used to thinking of themselves as having the world’s largest market in many industries, China’s market for power equipment dwarfs that of the United States, even though the American market is more mature. That means Chinese producers enjoy enormous efficiencies from large-scale production.

#### Financing is leaving the US for China now because of lack of production incentives

Romm 11 Dr. Joseph Romm is a Senior Fellow @ American Progress. “United States slipped to third in clean energy race,” March 29, http://thinkprogress.org/climate/2011/03/29/207777/united-states-third-clean-energy-race/

“The United States’ position as a leading destination for clean energy investment is declining because its policy framework is weak and uncertain,” said Phyllis Cuttino, director of Pew’s Clean Energy Program. “We are at risk of losing even more financing to countries like China, Germany and India, which have adopted strong policies such as renewable energy standards, carbon reduction targets and/or incentives for investment and production. In today’s global economic race, the United States can’t afford to be to be a follower in this sector.” That China passed us a couple of years ago should have been a wake-up call (see Steven Chu on why China’s bid for clean energy leadership should be our “Sputnik Moment”). Dropping to third behind Germany, though, should be equally worrisome. It means U.S. clean energy manufacturing is being squeezed from every side. Michael Liebreich, CEO of Bloomberg New Energy Finance, added, “The United States remains the global leader in clean energy innovation, receiving 75 percent of all venture capital investment in the sector, a total of $6 billion in 2010, but the U.S. has not been creating demand for deployment of clean energy. As a result it is losing out on opportunities to attract investment, create manufacturing capabilities and spur job growth. For example, worldwide, China is now the leading manufacturer of wind turbines and solar panels.”

#### Plan doesn’t access the impact since it doesn’t resolve Chinese growth and offshore wind is key---it’s zero sum

Harvey 11 Fiona is an environment correspondent at the Guardian. “Developing world ups ante in cleantech 'arms race',” Oct 18, <http://www.guardian.co.uk/sustainable-business/eveloping-world-lead-wind-power-renewable-energy>

Last year was a turning point in the global race to develop clean technology. It marked the first time that more new wind power generating capacity was installed in developing countries than in the rich world. China led the way**,** according to the Global Wind Energy Council (GWEC), and now has the most wind generating capacity in the world, thanks to favourable government policies. A record capacity of 19 gigawatts was added in China last year, taking the total to more than 42GW. India also showed strong growth, in line with the government target of adding more than 10GW of new capacity by 2012, and there are industry estimates that 100GW is possible. According to GWEC, the growth illustrates the advantages of investing in green power. "This puts an end to the assertion that wind power is a premium technology only for rich countries which cannot be deployed at scale in other markets," it says in its annual report. "It is also testament to the inherent attractiveness of wind power for countries striving to diversify their energy mix, improve their security of supply in the face of rapidly growing demand and relieve national budgets of the burden of expensive fossil fuel imports at volatile prices." In the developed world, by contrast, growth was inhibited by the financial crisis and recession: while €50bn was invested and about 39GW added around the world, the overall market for wind energy was static compared with 2009. The US market fared particularly badly, with only half as much new wind capacity built as in the previous year. Europe's growth also slowed down, with 7.5% less capacity added than in 2009, according to GWEC. Even an increase in the offshore wind market and growth in eastern Europe was not enough to make up for the slack elsewhere. The rapid growth of wind energy in emerging economies also shows how power is shifting in the clean technology world. Three of the world's top 10 wind turbine manufacturers are now Chinese, and the country makes turbines capable of producing 30GW a year, of which an increasing number are now destined for the export market. India also boasts 17 companies making wind power equipment, the biggest and best known being Suzlon. By 2013, according to estimates for the World Institute for Sustainable Energy, Indian companies will be making turbines to produce 17GW a year, many to be exported around the world. Other forms of clean technology are also growing rapidly in the developing world – China, for instance, is also the world's biggest manufacturer of solar power equipment, the vast majority of it exported. European governments facing severe fiscal crises have given less attention to promoting clean technology than in the past, and some have cut back on subsidies to save money. But this neglect carries a potential cost and a risk, as if Europe falls behind it will struggle to make up the lost ground. Connie Hedegaard, climate change commissioner for the EU, warned a European Wind Energy Association event earlier this year that unless governments upped their game, Europe as a whole would lose out. "We should not be losing this race, because these are the growth industries of the future, that will generate wealth and create jobs," she said. In the US, there are similar fears among clean technology advocates. President Obama called in 2009 for a doubling of renewable energy within three years, but this now looks less likely to be achieved. There are doubts over some of the support available for renewables – many of the relevant grants and loans are due to expire this year, and there is hostility towards such mechanisms from some quarters. The American Wind Energy Association (AWEA) has called for support to be stepped up, against attacks from some politicians and sections of the media. Rob Gramlich, senior director of public policy for AWEA, claims that conventional forms of electricity have benefitted from subsidies for years. "Tax incentives have been the most effective means of bringing new energy sources to the market," he says. "Previously they brought us much of our domestic oil and gas supply, including the new shale gas resources. They typically apply in the early and middle stages of development, so it's not surprising that in any given year, new sources receive much more than conventional sources." Steven Lang, clean tech leader for the UK and Ireland at Ernst and Young, says government policies are one of the key determinants for how fast new clean technologies grow. "Governments need to send a very clear signal to the market, that they are committed to this. Financial incentives are also very important," he says. Lang points to Alex Salmond, the leader of Scotland's devolved administration, who has put renewable energy firmly at the heart of his economic agenda, and a particular focus on new marine technologies such as wave and tidal power. The first minister told a conference in September: "I'm confident that by 2025 we will produce at least 100 per cent of our electricity needs from renewables alone, and together with other sources it will enable us to become a net exporter of clean, green energy." Salmond even won the praise of Al Gore recently for his "inspiration". The world is engaged in a "clean tech arms race", Lang says, but he argues that all countries have opportunities in different types of clean technology. For instance, in the UK offshore wind is likely to be a winner, and has been championed by the government because it avoids the problems associated with obtaining planning permission for onshore wind farms. Carbon capture and storage is another potential British winner, if government plans for as many as four demonstration projects are successful.

#### Wind is symbolically key to clean tech leadership

Asmus 11 Peter Asmus, president of Pathfinder Communications, is an internationally known expert on energy and Corporate Social Responsibility (CSR) matters. “Wind: Leader of the renewable power pack,” Oct 24, <http://www.fierceenergy.com/story/wind-leader-renewable-power-pack/2011-10-24>

As the most affordable renewable-energy choice, wind power has emerged as an icon of green technology. With more than 200 GW of capacity currently up and running, and large companies such as General Electric, Vestas, Siemens, Mitsubishi and BP all investing in the sector, it is clear this technology has a bright future**.** While the North American wind energy industry lags in key areas compared to Europe and Asia, many key industry players are optimistic about the North American market as turbine costs continue to drop dramatically. A total of 5,784 MW of wind capacity was added in North America in 2010, according to Pike Research's report, Wind Energy Outlook for North America. Wind has been tapped as a source of mechanical powers for centuries. Between the 14th and 19th centuries, for example, windmills of various kinds provided as much as a quarter of Europe's total energy needs. Before the advent of the Industrial Revolution, windmills ranked second only to wood fuel as a source of power. Wind, of course, also provided the "fuel" for the sailing vessels of the Age of Discovery. Until the past three decades, its variability and potentially destructive nature have hampered any comprehensive long-term program to convert free and abundant wind power into a major source of electricity. Utilities face challenges Variability of wind power is probably the prime challenge for utilities. Energy company officials worry about maintaining stability of the grid once wind power reaches 10 or 20 percent of total supply. However, smart grid technology as well as a variety of advanced storage devices, will help address those issues. Another challenge for utilities is accessing the best remaining wind resources. This will require investment in new transmission lines. Current regulatory and policy frameworks governing transmission may be a bottleneck for future growth. Grid operators, meanwhile, are changing scheduling protocols and placing a greater emphasis on new wind forecasting technologies as wind becomes a larger and larger portion of total supply. Wind resources are actually a form of solar energy. The uneven heating of the Earth's surface by the sun results in air movements as the atmosphere continuously tries to reach equilibrium. The tilt of the Earth and its daily rotation around the sun are the primary elements shaping wind patterns. However, large bodies of water and the geographic contours of mountain, forest, and desert landscapes (as well as other factors) also contribute to creating regions of the planet where winds blow frequently enough to be harnessed as fuel to generate electricity. The determination of whether potential wind resources can be developed into an economic source of electricity depends upon numerous infrastructure choices, among them the following: Selection of wind turbine technology Affordable interconnections to the transmission grid Siting issues that include concerns of nearby human populations about scenic views and diminished land values Environmental concerns regarding potential collisions of federally protected species of birds and bats with the spinning wind turbine blades Historically, wind power has been one of the lowest cost renewable technologies. This is one reason wind power has led the pack among renewable energy technologies in terms of new capacity additions over the past decade. The diversity in scale -- with wind turbines ranging from less than 1 kW for remote or residential applications all the way up to designs of 10 or even 15 MW for offshore sites -- has allowed wind power to meet the needs of a variety of applications around the world. Indeed, more efficient wind turbine technology has enabled operators to capture more power more of the time, contributing to the wind industry's 21st century growth. The next frontier Offshore wind power is the next frontier. The vast majority of existing capacity is utility-scale wind farms deployed on land. The best wind resources, however, are largely untapped because they are located at marine sites that cannot be owned or controlled in the traditional way. These sites are located offshore, typically in shallow ocean waters relatively close to urban population centers.

### Impact

#### Chinese economic collapse causes World War III

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But imagine a China disintegrating -- on its own, without neo-con or CIA prompting, much less outright military invasion -- because the economy (against all predictions) suddenly collapses. That would knock Asia into chaos. Refugees by the gazillions would head for Indonesia and other poorly border-patrolled places, which don't want them and can't handle them; some in Japan might lick their chops for World War II Redux and look to annex a slice of China. That would send small but successful Singapore and Malaysia -- once Japanese colonies -- into absolute nervous breakdowns. India might make a grab for Tibet, and while it does, Pakistan for Kashmir. Say hello to World War III Asia-style!

#### Chinese growth turns U.S. competitiveness--- strong Chinese technological power forms linkages with US companies --- drives growth of US companies

NRC 10 National Research Council “The Dragon and the Elephant: Understanding the Development of Innovation Capacity in China and India: Summary of a Conference” http://www.nap.edu/openbook.php?record\_id=12873&page=13

Wadhwa found in his surveys that companies go offshore for reasons of “cost and where the markets are.” Meanwhile, Asian immigrants are driving enterprise growth in the United States. Twenty-five percent of technology and engineering firms launched in the last decade and 52% of Silicon Valley startups had immigrant founders. Indian immigrants accounted for one-quarter of these. Among America’s new immigrant entrepreneurs, more than 74 percent have a master’s or a PhD degree. Yet the backlog of U.S. immigration applications puts this stream of talent in limbo. One million skilled immigrants are waiting for the annual quota of 120,000 visas, with caps of 8,400 per country. This is causing a “reverse brain drain” from the United States back to countries of origin, the majority to India and China. This endangers U.S. innovation and economic growth. There is a high likelihood, however, that returning skilled talent will create new linkages to U.S. companies, as they are doing within General Electric, IBM, and other companies. Jai Menon of IBM Corporation began his survey of IBM’s view of global talent recruitment by suggesting that “multinational” is an antiquated term. IBM pursues growth of its operations as a global entity. There are 372,000 IBMers in 172 countries; 123,000 of these are in the Asia-Pacific region. Eighty percent of the firm’s R&D activity is still based in the United States. IBM supports open standards development and networked business models to facilitate global collaboration. Three factors drive the firm’s decisions on staff placement and location of recruitment -- economics, skills and environment. IBM India has grown its staff tenfold in five years; its $6 billion investment in three years represents a tripling of resources in people, infrastructure and capital. Increasingly, as Vivek Wadhwa suggested, people get degrees in the United States and return to India for their first jobs. IBM follows a comparable approach in China, with 10,000+ IBM employees involved in R&D, services and sales. In 2006, for the first time the number of service workers overtook the number of agricultural laborers worldwide. Thus the needs of a service economy comprise an issue looming for world leaders.

#### China’s growing now---no alt causes

Ling 2/5 Li is a writer at the Global Times. “China’s path gives global economy hope,” 2013, http://english.peopledaily.com.cn/90778/8122121.html

At the recent 2013 World Economic Forum (WEF) in Davos, China tops the agenda. The agenda on the first day was about China's growth. When I opened the thick handbook, all I could see were China-related topics. This has never occurred in the history of Davos. ¶ WEF Chairman Klaus Schwab told me the arrangement was made in response to feedbacks from participants.¶ Hot discussions about China were not only reflected in the 115-page agenda, but also at forums where China was not the main subject but was constantly mentioned. ¶ The theme of this year's Davos was "Resilient Dynamism." Currently, the prospect for the recovery of developed economies is still gloomy. Though there have been signs that economies in Europe and the US are rebounding, real reforms are few, which means that the mechanisms that caused the financial crisis haven't been changed. ¶ Meanwhile, almost all developed countries have overdrawn their fiscal expenditures and are not able to do anything more. ¶ China has brought confidence and hope to a global economy that is still stuck in the mud. China's economy is developing fast in the transformation process. ¶ In 2012 when it slowed its growth rate, it still maintained a growth rate of 7.8 percent. It is expected that the figure will be about 8.2 percent in 2013. ¶ This trend has been admired by many. When I attended various forums and communicated with participants, they all spoke highly of China's economic development.¶ Of course China has its own problems. When I discussed with experts about the problems and solutions, I often heard that every country has problems, and different problems come at different times. The changes China has experienced these years show that it has the capability to solve its problems.

#### Their ev is overly-pessimistic---China’s growth is strong

Ezrati 2/1 Milton is an economics writer at On Wall Street. “China's Economy Looking More Secure,” 2013, http://www.onwallstreet.com/ows\_issues/23\_2/china-s-economic-outlook-looking-more-secure-2682937-1.html

It seems China's economic outlook at last has stopped keeping investors up at night. For the last 18 months or so, experts have worried about China's prospects. Pointing to the economy's slow growth and its bursting real estate bubble, they have fretted over economic collapse, the possibility of a "hard landing," and the potential repercussions for the global economy and its financial markets.¶ Deeper analyses and real-world probabilities always suggested that such fears were overblown, but they have persisted nonetheless. Now recent data emerging from Beijing offers still more reason for investors to set aside their worst fears about China. Its economy, of course, will not recapture the astronomical growth rates of some years ago. But still, it looks quite capable of sustaining real growth in the range of 7.5% to 8.5% a year.Considering that this rate of expansion is more than four times the pace expected for the United States, it should provide considerable opportunity in Chinese investments, both directly and through equity purchases.

#### Chinese soft power key to solve Korean conflict

Shambaugh 4 (David Shambaugh, Director of the China Policy Program in the Elliott School of International Affairs and Professor of Political Science and International Affairs at The George Washington University, The Center for Strategic and International Studies and the Massachusetts Institute of Technology, International Security, “China Engages Asia; Reshaping the Regional Order”)

China's strategy for building ties with South Korea has both an economic motive and a strategic dimension. In the early 1990s, Chinese strategists concluded [End Page 79] that China would have little leverage in shaping the eventual outcome of the divided Korean Peninsula if it did not enjoy strong ties with South Korea. Improved ties would also offset any potential threat to China from the U.S.-South Korean alliance and presence of U.S. forces on the peninsula. Further, a more robust Chinese-South Korean relationship would blunt any attempt by Japan to gain a stronger foothold on the peninsula. Beijing's strategy has been a net success for Chinese strategic interests; the bourgeoning relationship has greatly benefited both countries, and it has become a central element in the evolving balance of power in Northeast Asia. The strong state of bilateral ties has also been a key factor in forging the six-party talks (hosted by China) concerning North Korea's pursuit of nuclear weapons. Beijing and Seoul have converging and closely coordinated positions in the talks.

#### Nuclear war

Chol 11 Kim Myong Chol is author of a number of books and papers in Korean, Japanese and English on North Korea, including Kim Jong-il's Strategy for Reunification. He has a PhD from the Democratic People's Republic of Korea's Academy of Social Sciences "Dangerous games" Aug 20 www.atimes.com/atimes/Korea/MH20Dg01.html

The divided and heavily armed Korean Peninsula remains the most inflammable global flashpoint, with any conflict sparked there likely to become a full-blown thermonuclear war involving the world's fourth-most powerful nuclear weapons state and its most powerful. ¶ Any incident in Korea by design, accident, or miscalculation could erupt into a devastating DPRK-US war, with the Metropolitan US serving as a main war theater. ¶ Rodong Sinmun warned on August 16: "The Korean Peninsula is faced with the worst crisis ever. An all-out war can be triggered by any accident." ¶ Recent incidents illustrate the real danger of miscalculation leading to a total shooting war, given the volatile situation on the Land of Morning Calm. ¶ 1. The most recent case in point is the August 10 shelling of North Korea by the South. Frightened South Korea marines on Yeonpyeong Island mistook three noises from a North Korean construction site across the narrow channel for artillery rounds, taking an hour to respond with three to five artillery rounds. ¶ The episode serves as a potent reminder to the world that the slightest incident can lead to war. A reportedly malfunctioning firefinder counter-artillery radar system seems to partly account for the panicky South Korean reaction. ¶ South Korean conservative newspaper the Joong Ang Daily reported August 17: ¶ "A military source said that radar installed to detect hostile fire did not work last week when North Korea fired five shots toward the Northern Limit Line (NLL), the disputed maritime border, on Aug 10. ¶ "'We must confirm the location of the source of the firing through the ARTHUR (Artillery Hunting Radar) and HALO (hostile artillery location) systems, but ARTHUR failed to operate, resulting in a failure to determine the source of the fire,' said the source." ¶ BBC reported on November 25 last year the aggressive nature of troops on the South Korea-held five islands in North Korean waters. ¶ "Seen in this sense, they (five islands including Yeonpyeong Island) could provide staging bases for flanking amphibious attacks into North Korea if South Korea ever takes the offensive." ¶ 2. An almost catastrophic incident took place at dawn on June 17 near Inchon. South Korean marines stationed on Gyodong Island near Inchon Airport fired rifles at a civilian South Korean jetliner Airbus A320 with 119 people aboard as it was descending to land, after mistaking it for a North Korean military aircraft. ¶ The Asiana Airlines flight was carrying 119 people from the Chinese city of Chengdu. ¶ About 600 civilian aircraft fly near the island every day, including those flying across the NLL, but they face a perennial risk of being misidentified as a hostile warplane. ¶ It is nothing short of a miracle that the Airbus A320 was not hit and nobody harmed. ¶ 3. On March 26, 2010, the high-tech South Korean corvette Sokcho fired 130 rounds at flocks of birds, mistaking them for a hostile flying object. The innocent birds looked like a North Korean warplane just at a time when an alleged North Korean midget submarine had managed to escape with impunity after torpedoing the hapless Cheonan deep inside security-tight South Korean waters. ¶ The South Korean military's habit of firing at the wrong target increases the risk of an incident running out of control. ¶ CNN aired a story December 16, headlined: "General: South Korea Drill Could Cause Chain Reaction." ¶ F/A-18 pilot-turned Marine Corp General James Cartwright told the press in the Pentagon, "What we worry about, obviously, is if that it [the drill] is misunderstood or if it's taken advantage of as an opportunity. ¶ "If North Korea were to react to that in a negative way and fire back at those firing positions on the islands, that would start potentially a chain reaction of firing and counter-firing. ¶ "What you don't want to have happen out of that is ... for us to lose control of the escalation. That's the concern." ¶ Agence France-Presse on December 11 quoted former chief of US intelligence retired admiral Dennis Blair as saying that South Korea "will be taking military action against North Korea". ¶ New Korean war differs from other wars¶ Obama and the Americans seem to be incapable of realizing that North Korea is the wrong enemy, much less that a new Korean War would be fundamentally different from all other wars including the two world wars. ¶ Two things will distinguish a likely American Conflict or DPRK-US War from previous wars. ¶ The first essential difference is that the US mainland will become the main theater of war for the first time since the US Civil War (1861-1865), giving the Americans an opportunity to know what it is like to have war fought on their own land, not on faraway soil. ¶ The US previously prospered by waging aggressive wars on other countries. Thus far, the Americans could afford to feel safe and comfortable while watching TV footage of war scenes from Afghanistan, Iraq, Pakistan and Libya as if they were fires raging across the river. ¶ The utmost collateral damage has been that some American veterans were killed or returned home as amputees, with post traumatic stress disorder, only to be left unemployed and homeless. ¶ However, this will no longer be the case. ¶ At long last, it is Americans' turn to have see their homeland ravaged.¶ An young North Korea in 1950-53 was unable to carry the war all the way across the Pacific Ocean to strike back, but the present-day North Korea stands out as a fortress nuclear weapons state that can withstand massive American ICBM (Intercontinental ballistic missile) attacks and launch direct retaliatory transpacific strikes on the Metropolitan USA. ¶ The second essential difference is that the next war in Korea, that is, the American Conflict or the DPRK-USA War would be the first actual full-fledged nuclear, thermonuclear war that mankind has ever seen, in no way similar to the type of nuclear warfare described in science fiction novels or films. ¶ North Korea is unique among the nuclear powers in two respects: One is that the Far Eastern country, founded by legendary peerless hero Kim Il-sung, is the first country to engage and badly maul the world's only superpower in three years of modern warfare when it was most powerful, after vanquishing Nazi Germany and Imperial Japan. ¶ The other is that North Korea is fully ready to go the length of fighting [hu]mankind's first and last nuclear exchange with the US. ¶ The DPRK led by two Kim Il-sungs - the ever-victorious iron-willed brilliant commander Kim Jong-il and his heir designate Kim Jong-eun - is different from Russia under Nikita Khrushchev which backed down in the 1962 Cuban missile crisis. ¶ Khrushchev and his company never fought the Americans in war. As a rule, most countries are afraid to engage the Americans. As the case is with them, North Korea is the last to favor war with the Americans. ¶ However, it is no exaggeration to say that the two North Korean leaders are just one click away from ordering a retaliatory nuclear strike on the US military forces in Guam, Hawaii and metropolitan centers on the US mainland. ¶ On behalf of Supreme Leader Kim Jong-il, Kim Jong-eun will fire highly destructive weapons of like Americans have never heard of or imagined to evaporate the US. ¶ The North Koreans are too proud of being descendents of the ancient civilizations of Koguryo 2,000 years ago and Dankun Korea 5,000 years ago, to leave the Land of morning Calm divided forever with the southern half under the control of the trigger-happy, predatory US. The North Koreans prefer to fight and die in honor rather than kowtow to the arrogant Americans. ¶ At the expense of comforts of a better life, North Koreans have devoted more than half a century to preparing for nuclear war with the Americans. All available resources have been used to convert the whole country into a fortress, including arming the entire population and indigenously turning out all types of nuclear thermonuclear weapons, and developing long-range delivery capabilities and digital warfare assets. ¶ An apocalyptic Day After Tommorow-like scenario will unfold throughout the US, with the skyscrapers of major cities consumed in a sea of thermonuclear conflagration. The nuclear exchange will begin with retaliatory North Korean ICBMs detonating hydrogen bombs in outer space far above the US mainland, leaving most of the country powerless. ¶ New York, Washington, Chicago, San Francisco and major cities should be torched by ICBMs streaking from North Korea with scores of nuclear power stations exploding, each spewing as much radioactive fallout as 150-180 H-bombs.

**Chinese soft power prevents Taiwan independence**

Gill and Huang 6 Bates is an expert on Chinese foreign policy and current director of the Stockholm International Peace Research Institute. Yanzhong Huang is a senior fellow for global health at the Council on Foreign Relations (CFR). “Sources and limits of Chinese soft power,” June, Informaworld

A most intriguing example of China's soft power can be seen in its relations with Taiwan. In 2005, **China launched a charm offensive against the** politicians and people in the **island** by inviting opposition party leaders to visit the mainland, extending tuition benefits to Taiwanese studying at mainland universities, and, through a zero-tariff policy on imports of Taiwan's fruit, offering export incentive perks to farmers in the south of Taiwan (traditionally a pro-Taiwan independence stronghold). This 'hearts-and-minds' policy not only aims to reduce the perception of military threat from China, but also gives the Chinese government leverage to exercise influence in Taiwan's political culture and society, and politically **marginalise Taiwan's independence-oriented president,** Chen Shui-bian. In part **as a result** of Beijing's manoeuvres in recent years - and Chen's increasingly frustrated but worrisome responses - **the possibility for Taiwan independence seems more distant and difficult**. Chen Shiubian has increasingly alienated American supporters in Washington who do not appreciate what they see as his provocative political stance on cross-Strait issues. In the meantime, some 1 million, or about 5%, of the Taiwan population lives and works in China, and Taiwan business has invested more than $100bn on the mainland. To be sure, some of China's influence over Taiwan is not so 'soft' at all: its military build-up along the Taiwan Strait, including the deployment of more than 700 ballistic missiles targeting the island, is a coercive threat aimed at thwarting independence moves by Taiwan. On the other hand, the Taiwan legislature's inability or unwillingness since 2001 to appropriate funding to purchase some $18bn worth of weapons offered by Washington - a seemingly wise course in the face of China's growing military clout - is another indication of the mainland's ability to shape policy decisions on Taiwan in its favor. Beijing's influence still falls far short of achieving reunification with Taiwan. Indeed, the vast majority of Taiwan's citizens prefer a status quo which neither invites Chinese coercion (or worse) nor requires unification with the Communist mainland. But a combination of Beijing's soft- and hard-power instruments in recent years appears to have **stemmed the political fortunes of the pro-independence movement in Taiwan** for the time being.

#### Taiwan independence leads to nuclear war

Victor **Corpus,** (Former Brigadier General, Former head of Army Intelligence), **6**

[Asian Times, “If it comes to a shooting war”, 8-20-6, <http://www.atimes.com/atimes/China/HD20Ad03.html>]

One could call this article a worst-case scenario for the new American century. Why worst case? Because of the hard lessons from history. The Romans did not consider the worst-case scenario when Hannibal crossed the Alps with his elephants and routed them; or when Hannibal encircled and annihilated the numerically superior Roman army at the Battle of Cannae. **Taiwan declares** independence! China has anticipated and long prepared itself for this event. After observing "Operation Summer Pulse –04" when US aircraft carrier battle groups converged in the waters off China's coast in mid-July through August of 2004, Chinese planners began preparing to face its own worst-case scenario: the possibility of confronting a total of 15 carrier battle groups composed of 12 from America and three from its close British ally. China's strategists refer to its counter-strategy to defeat 15 or more aircraft carrier battle groups as the "assassin's mace" or *shashaujian*. After proper coordination with Russia and Iran and activating their previously agreed strategic plan, troops and weapon systems are pre-positioned. China then launches a missile barrage on Taiwan. Command and control nodes, military bases, logistics centers, vital war industries, government centers and air defense installations are simultaneously hit with short and medium range ballistic missiles armed with conventional, anti-radar, thermo baric and electro-magnetic pulse warheads. The assassin's mace: China's anti-satellite weapons Glee and ecstasy soon turn to shock as monitor screens suddenly go blank. Then all communication via satellites goes dead. China has drawn its second "trump card" (the assassin's mace) by activating its maneuverable "parasite" micro-satellites that have unknowingly clung to vital (NORAD) radar and communication satellites and have either jammed, blinded or physically destroyed their hosts. This is complemented by space mines that maneuver near adversary satellites and explode. Secret Chinese and Russian ground-based anti-satellite laser weapons also blind or bring down US and British satellites used for C4ISR (command, control, communication, computers, intelligence, surveillance and reconnaissance). And to ensure redundancy and make sure that the adversary C4ISR system is completely "blinded" even temporarily, hundreds of select Chinese and Russian information warriors (hackers) specifically trained to attack their adversary's C4ISR systems simultaneously launch their cyber offensive. For a few precious minutes, the US and UK advancing carrier battle groups are stunned and blinded by the "mace", ie, a defensive weapon used to temporarily blind a stronger opponent. But the word mace has another meaning; one which is deadlier and used in combination with the first. Missile barrage on advancing carrier battle groups A few seconds after the "blackout", literally hundreds of short and medium-range ballistic missiles (DF7/9/11/15s, DF4s, DF21X/As, some of which are maneuverable) pre-positioned on the Chinese mainland, and stealthy, sea-skimming and highly-accurate cruise missiles (YJ12s, YJ22s, KH31A/Ps, YJ83s, C301s, C802s, SS-N-22s, SS-NX-26/27s, 3M54s & HN3s) delivered from platforms on land, sea and air race toward their respective designated targets at supersonic speed. Aircraft carriers are allotted a barrage of more than two dozen cruise missiles each, followed by a barrage of short and medium-range ballistic missiles timed to arrive in rapid succession. Chinese and Russian missiles cocked Both Chinese and Russian inter-continental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), and the two countries' extensive air defense systems have been coordinated and ready to respond in the event that the US and UK decide to retaliate with a nuclear attack. America crippled on three major fronts In just a few hours (or days) after the outbreak of general hostilities, America, the world's lone superpower, finds itself badly crippled militarily in three major regions of the world: East Asia, Central Asia and the Middle East. Impossible? Unfortunately, the answer is *no*. China now has the know-how and the financial resources to mass-produce hundreds, if not thousands, of Moskit, Yakhont and Granit-type supersonic anti-ship cruise missiles and "squall"-type rocket torpedoes against which US and UK aircraft carriers and submarines have no known defense. Iran, on the other hand, already possesses the same supersonic cruise missiles that can destroy any ship in the Persia Gulf, including aircraft carriers. Russia and China, meanwhile, are operating on familiar grounds close to their territory, compared to the US, which needs to cross the Atlantic and Pacific to replenish troops and logistics. Grimmer scenarios There is a scenario grimmer than described above, however, and that is if strategic planners belonging to that elite group called the Project for the New American Century decide to launch a nuclear "first strike" against China and Russia and risk a **mutually-assured destruction:**

1)In defense of Taiwan ... or 2) In launching a "preventive war" to stop China from catching up economically and militarily. Or, if China decides to start an offensive against Taiwan with a one-megaton nuclear burst 40 kilometers above the center of the island. Or, if China and Russia decide to arm a number of their short and medium-range ballistic missiles and supersonic cruise missiles with tactical nuclear warheads in defending themselves against US and UK aircraft carrier battle groups. Land-attack versions of these supersonic cruise missiles armed with nuclear warheads carried by stealthy Chinese and Russian submarines can also put American coastal cities at great risk to nuclear devastation. Strategic planners must also consider these worst-case possibilities.

## 2NR

#### EMP empirically denied

Faal 10(Sorcha, Chinese EMP Attack Prompts US Missile Strike After Cruise Ship Crippled, 11 November 2010, http://www.whatdoesitmean.com/index1421.htm)

A new report circulating in the Kremlin today prepared for Prime Minister Putin by Director Anatoly Perminov of the Russian Federal Space Agency states that an Arkon-1 military satellite monitoring the western coastal regions of North America detected an “EMP anomalous event” occurring on November 8th at 0600 Pacific Standard Time (-8 hours GMT) that bore the “direct signature” of a YJ-62 subsonic anti-ship missile fired from a Chinese People’s Liberation Navy Type 041 submarine (NATO code name Yuan-Class) [photo 2nd left] known to be patrolling approximately 200 kilometers off United States coast. Nearly 11 hours after this EMP “event”, this report further says, Arkon-1 then detected a BGM-109 (Tomahawk) subsonic cruise missile launched from a US Navy Ohio-Class submarine operating off the coast of California [photo bottom left] on a “training mission” from its home port located at US Navy’s Kitsap Base in Washington State and was enroute to the largest American Naval Base on the US west coast in San Diego, California. Note: A Russian military intelligence (GRU) addendum to this report states that the “training mission” the Ohio-Class submarine was on is related to a new US law passed this year allowing for the first time in history for women to serve on US Navy subs and was an “operational exercise” testing female Naval Officers competence prior to their first “operational deployment”. The “immediate effect” of the Chinese Navy’s firing of their EMP missile, this report continues, was the “catastrophic crippling” of the US based cruise ship Carnival Splendor [photo 3rd left] that stranded its nearly 4,500 passengers and crew in a “dead in the water” boat and prompting the Americans to send the US Navy’s Ronald Reagan aircraft carrier, warplanes, and supply aircraft to protect it from further attack after all of its electronic systems were destroyed. An electromagnetic pulse (EMP) such as was used upon the Carnival Splendor is a burst of electromagnetic radiation that causes rapidly changing electric fields (or magnetic fields) that when coupling with electrical/electronic systems produces damaging current and voltage surges destroying all non-hardened electrical systems.

#### Prefer our ev – no impact to EMP

Farley 9—assistant professor at the University of Kentucky’s Patterson School of Diplomacy and International Commerce (Robert, Neocons Salivating Over Their Next Great Exaggerated "Threat": Electromagnetic Pulse Attack, 22 Oct. 2009 October 22, 2009, http://kamran1919.wordpress.com/2009/10/22/neocons-salivating-over-their-next-great-exaggerated-threat-electromagnetic-pulse-attack-politics-alternet/, AMiles)

Ulterior Motives The central political purpose of the EMP awareness movement appears to be advancement of the cause of missile defense. The most extreme estimates of the effect of EMP restore the Cold War-era existential fears of nuclear war. Schwellenbach argues “what’s driving it is the political global context—it gives the right an issue that allows them to justify hawkish behavior. It is almost a perfect solution to any argument against missile defense—North Korea and Iran.” The 90 percent casualty estimate advanced by EMP awareness advocates hypes the notion that the United States faces potential annihilation at the hands of its enemies, and goes a step farther: even the smallest nuclear power can destroy the United States with a small number of warheads. This, in turn, reaffirms the need for both a secure missile defense shield (including space-based interceptor weapons) and a grand strategy of preventive war against potential nuclear and ballistic missile proliferators. Almost all EMP awareness advocates—including Gaffney, Gingrich, and Huckabee—call for increased spending on missile defense. Gaffney and Gingrich have also called for a “robust” policy of preemptive war, including attacks on Iranian and North Korean missiles on their launching pads. The fact that EMP is poorly researched and not well understood works in its favor as a scare tactic. Since evidence of EMP’s allegedly lasting impact is purely theoretical, EMP awareness advocates can make outlandish claims regarding the threat that even the smallest nuclear arsenal poses. They can also point to allegations made by the official EMP Commission, ignoring the fact that many outside experts dispute its findings. The Niagara conference’s emphasis on strategic and policy considerations shows that alarmist predictions about EMP attacks serve as fodder for promotion of a larger nuclear weapons stockpile, for missile defense, and for preventive attacks. Little Traction Despite the effort that conservatives have devoted to this cause, it appears to have gained little traction in the mainstream media. The New York Times, the Washington Post, CNN, Fox News, and other major television news organizations declined to cover the EMPACT conference. Indeed, even the neoconservative Weekly Standard, which seems perpetually on the lookout for ways to plug purported existential threats to the homeland, stayed away from Niagara. One Standard editor said in an interview with the author, “I don’t go for that EMP stuff. Kind of more interested in dangerous scenarios that might actually happen.”

#### They have the capability and motivation

Kang and Cha 3/25—Kang, Prof. of IR and Business at USC, Cha, senior advisor for Asia and Korea chair at the CSIS and Prof. at Georgetown, Foreign Policy, "Think Again: North Korea", 2013,www.foreignpolicy.com/articles/2013/03/25/think\_again\_north\_korea?page=full&wp\_login\_redirect=0

"North Korea's not that dangerous."

Wrong. There is no threat of war on the Korean peninsula because the United States and South Korea have deterred the regime for over six decades, or so the thinking goes. And the occasional provocation from Pyongyang -- full of sound and fury -- usually ends with it blowing up in its face, signifying nothing. So why worry? Two reasons. First, North Korea has a penchant for testing new South Korean presidents. A new one was just inaugurated in February, and since 1992, the North has welcomed these five new leaders by disturbing the peace. Whether in the form of missile launches, submarine incursions, or naval clashes, these North Korean provocations were met by each newly elected South Korean president with patience rather than pique.

The difference today is that South Korea is no longer turning the other cheek. After the North blew up the South Korean navy ship the Cheonan, killing 46 sailors in 2010, Seoul re-wrote the rules of military engagement. It has lost patience and will respond kinetically to any provocation, which could escalate into a larger conflict. Second, North Korea crossed a major technology threshold in December, when it successfully launched a satellite into orbit. Though the satellite later malfunctioned, the North managed to put the payload into orbit with ballistic missile launch technology that is clearly designed to reach the United States.

This development appears to validate former U.S. Defense Secretary Bob Gates's January 2011 claim that the regime was only five years away from fielding a missile that could threaten the continental United States. To make matters worse, Pyongyang conducted a third nuclear test in February, which appears to have been more successful than the previous two. Within President Barack Obama's second term in office, North Korea could well be the third nation (after Russia and China) to field a nuclear-tipped ballistic missile targeted at the United States. Moreover, the North has sold every weapons system it has developed to the likes of Iran, Pakistan, and Syria. That's worth losing sleep over.

#### Korean war goes nuclear, spills over globally

Steven Metz 3-13, Chairman of the Regional Strategy and Planning Department and Research Professor of National Security Affairs at the Strategic Studies Institute, 3/13/13, “Strategic Horizons: Thinking the Unthinkable on a Second Korean War,” http://www.worldpoliticsreview.com/articles/12786/strategic-horizons-thinking-the-unthinkable-on-a-second-korean-war

Today, North Korea is the most dangerous country on earth and the greatest threat to U.S. security. For years, the bizarre regime in Pyongyang has issued an unending stream of claims that a U.S. and South Korean invasion is imminent, while declaring that it will defeat this offensive just as -- according to official propaganda -- it overcame the unprovoked American attack in 1950. Often the press releases from the official North Korean news agency are absurdly funny, and American policymakers tend to ignore them as a result. Continuing to do so, though, could be dangerous as events and rhetoric turn even more ominous. ¶ In response to North Korea's Feb. 12 nuclear test, the U.N. Security Council recently tightened existing sanctions against Pyongyang. Even China, North Korea's long-standing benefactor and protector, went along. Convulsed by anger, Pyongyang then threatened a pre-emptive nuclear strike against the United States and South Korea, abrogated the 1953 armistice that ended the Korean War and cut off the North-South hotline installed in 1971 to help avoid an escalation of tensions between the two neighbors. A spokesman for the North Korean Foreign Ministry asserted that a second Korean War is unavoidable. He might be right; for the first time, an official statement from the North Korean government may prove true. ¶ No American leader wants another war in Korea. The problem is that the North Koreans make so many threatening and bizarre official statements and sustain such a high level of military readiness that American policymakers might fail to recognize the signs of impending attack. After all, every recent U.S. war began with miscalculation; American policymakers misunderstood the intent of their opponents, who in turn underestimated American determination. The conflict with North Korea could repeat this pattern. ¶ Since the regime of Kim Jong Un has continued its predecessors’ tradition of responding hysterically to every action and statement it doesn't like, it's hard to assess exactly what might push Pyongyang over the edge and cause it to lash out. It could be something that the United States considers modest and reasonable, or it could be some sort of internal power struggle within the North Korean regime invisible to the outside world. While we cannot know whether the recent round of threats from Pyongyang is serious or simply more of the same old lathering, it would be prudent to think the unthinkable and reason through what a war instigated by a fearful and delusional North Korean regime might mean for U.S. security. ¶ The second Korean War could begin with missile strikes against South Korean, Japanese or U.S. targets, or with a combination of missile strikes and a major conventional invasion of the South -- something North Korea has prepared for many decades. Early attacks might include nuclear weapons, but even if they didn't, the United States would probably move quickly to destroy any existing North Korean nuclear weapons and ballistic missiles. ¶ The war itself would be extremely costly and probably long. North Korea is the most militarized society on earth. Its armed forces are backward but huge. It's hard to tell whether the North Korean people, having been fed a steady diet of propaganda based on adulation of the Kim regime, would resist U.S. and South Korean forces that entered the North or be thankful for relief from their brutally parasitic rulers. As the conflict in Iraq showed, the United States and its allies should prepare for widespread, protracted resistance even while hoping it doesn't occur. Extended guerrilla operations and insurgency could potentially last for years following the defeat of North Korea's conventional military. North Korea would need massive relief, as would South Korea and Japan if Pyongyang used nuclear weapons. Stabilizing North Korea and developing an effective and peaceful regime would require a lengthy occupation, whether U.S.-dominated or with the United States as a major contributor. ¶ The second Korean War would force military mobilization in the United States. This would initially involve the military's existing reserve component, but it would probably ultimately require a major expansion of the U.S. military and hence a draft. The military's training infrastructure and the defense industrial base would have to grow. This would be a body blow to efforts to cut government spending in the United States and postpone serious deficit reduction for some time, even if Washington increased taxes to help fund the war. Moreover, a second Korean conflict would shock the global economy and potentially have destabilizing effects outside Northeast Asia. ¶ Eventually, though, the United States and its allies would defeat the North Korean military. At that point it would be impossible for the United States to simply re-establish the status quo ante bellum as it did after the first Korean War. The Kim regime is too unpredictable, desperate and dangerous to tolerate. Hence regime change and a permanent ending to the threat from North Korea would have to be America's strategic objective. ¶ China would pose the most pressing and serious challenge to such a transformation of North Korea. After all, Beijing's intervention saved North Korean dictator Kim Il Sung after he invaded South Korea in the 1950s, and Chinese assistance has kept the subsequent members of the Kim family dictatorship in power. Since the second Korean War would invariably begin like the first one -- with North Korean aggression -- hopefully China has matured enough as a great power to allow the world to remove its dangerous allies this time. If the war began with out-of-the-blue North Korean missile strikes, China could conceivably even contribute to a multinational operation to remove the Kim regime. ¶ Still, China would vehemently oppose a long-term U.S. military presence in North Korea or a unified Korea allied with the United States. One way around this might be a grand bargain leaving a unified but neutral Korea. However appealing this might be, Korea might hesitate to adopt neutrality as it sits just across the Yalu River from a China that tends to claim all territory that it controlled at any point in its history. ¶ If the aftermath of the second Korean War is not handled adroitly, the result could easily be heightened hostility between the United States and China, perhaps even a new cold war. After all, history shows that deep economic connections do not automatically prevent nations from hostility and war -- in 1914 Germany was heavily involved in the Russian economy and had extensive trade and financial ties with France and Great Britain. It is not inconceivable then, that after the second Korean War, U.S.-China relations would be antagonistic and hostile at the same time that the two continued mutual trade and investment. Stranger things have happened in statecraft.

# PIC

## 1NC

#### TEXT: The United States federal government should determine federal law precludes relevant state and local restrictions on marine wind energy.

#### “Offshore wind” is a term of art that includes wind in lakes and oceans

Energy Union 11 “Offshore Wind Blows for Intelligent Energy,” 4/9, http://www.energyunion.eu/en/blog/offshore\_wind

Offshore wind power refers to the construction of wind farms in bodies of water to generate electricity from wind. Unlike the term typical usage of the term "offshore" in the marine industry, offshore wind power includes inshore water areas such as lakes, fjords and sheltered coastal areas, utilizing traditional fixed-bottom wind turbine technologies, as well as deep-water areas utilizing floating wind turbines.

#### Marine refers to the oceans---excludes the Great Lakes

NOAA 9 National Oceanic and Atmospheric Administration. “National Survey on Recreation and the Environment (NSRE),” July 16, http://coastalsocioeconomics.noaa.gov/core/nsre/welcome.html

For activities, "marine" is defined as activities in oceans**,** sounds, and in mixed fresh-saltwater in tidal portions of rivers and bays. For settings (e.g., beaches, watersides, water-based surroundings, etc.) "marine" is defined as saltwater or saltwater surroundings such as oceans, sounds, and mixed fresh-saltwater in tidal portions of rivers and bays. The reasoning behind referring to the marine module in this way, is that it does not include the Great Lakes, which are coastal. Some of the early reports have the word “coastal” recreation in their titles, and therefore, are not technically correct. Marine recreation is associated with saltwater or mixed fresh-saltwater in tidal portions of rivers and bays. Future NSREs may include separate breakouts of activities in the Great Lakes.

#### The plan causes Great Lakes offshore wind development

Flesher 12 John is a writer at the Associated Press. “Great Lakes Offshore Wind Farms Agreement Reached Between 5 States And Federal Government,” 3/30, http://www.huffingtonpost.com/2012/03/30/great-lakes-offshore-wind-farms\_n\_1390352.html

TRAVERSE CITY, Mich. (AP) — The Obama administration and five states announced an agreement Friday to speed up consideration of plans for offshore wind farms in the Great Lakes, which have been delayed by cost concerns and public opposition.¶ Under the deal, state and federal agencies will craft a blueprint for speeding regulatory review of proposed wind farms without sacrificing environmental and safety standards. The Great Lakes have no offshore wind turbines, although a Cleveland partnership announced plans last year for a demonstration project that would place five to seven turbines in Lake Erie about 7 miles north of the city, generating 20-30 megawatts of electricity.¶ Offshore wind projects have been proposed elsewhere in the region, including Michigan and New York, stirring fierce debate.

#### Great Lakes wind development collapses freshwater biodiversity---

GLU 9 (Great Lakes United, “Lakebeds and Offshore Wind: A New Frontier for Energy Utilities?” http://www.glu.org/campaigns/energy/lakebeds)

Energy companies view the lakebeds of the Great Lakes as a “new frontier” for the routing of cross-lake oil and gas pipelines and electric transmission lines. Efforts to harvest high-speed winds have also spurred plans to anchor wind energy systems offshore or along the coasts of the Great Lakes. Lakebeds provide critical habitat for the aquatic organisms that form the foundation of the Great Lakes food chain. An essential element of the world’s largest freshwater ecosystem, and the heart of an annual fishery worth more than $4 billion, protecting this habitat helps protect the health of the entire Great Lakes ecosystem. Extensive projects have the potential to damage these lakebeds and nearshore areas. While there are existing stretches of pipelines and transmission lines, there are currently no structures that cross the lake bottom of an entire Great Lake and no large-scale wind energy farms located offshore or anchored into the lake bottoms of the Great Lakes. The next few years present a crucial opportunity to ensure a comprehensive review of emerging energy proposals and the most environmentally appropriate siting for projects that move forward. Lake Erie’s Lakebed: The Biological Engine of the Great Lakes Lake Erie, the shallowest of the Great Lakes, is also the most biologically productive. Its average depth is only 210 feet (19 meters). In contrast, Lake Huron is over twice as deep and Lake Superior is over seven and half times as deep. Lake Erie’s western basin is very shallow, averaging only 24 feet (7 meters). This shallow lakebed, with its rocky areas, reefs and shoals, and numerous islands, offers an abundant assortment and diversity of habitat. These factors all combine to make Lake Erie’s entire lakebed vital habitat for a rich diversity of fish, plant and animal life. It also supports a world-class fishery, featuring numerous species of sportfish, such as walleye, yellow perch and smallmouth bass. Lake Erie is the most biologically productive of the Great Lakes, often producing more pounds of fish than the other Great Lakes combined. According to the Great Lakes Fishery Commission, Lake Erie’s walleye fishery is measured in the tens of millions of dollars annually and is important to the economy of all the lake’s surrounding jurisdictions. In 2001, the American Sportfishing Association valued the economic impact of Ohio’s Lake Erie sportfishing industry at $680 million. Aquatic habitat in Lake Erie is fragile and under stress. Urbanization, the development of the shoreline, loss of coastal wetlands, and sedimentation from tributaries and watersheds are damaging this valuable ecosystem. Pollution on the bottom of Lake Erie is contributing to unhealthy conditions for life forms that inhabit the lake bottom. These tiny organisms are a critical source of food for fish. The continued introduction of invasive species is causing unpredictable alterations to the food chain and is implicated in the recent outbreaks of botulism, and fish and waterfowl die-offs. A “dead zone,” an area of low oxygen, has reappeared in the bottom waters of the central basin after a period of recovery that began in the late 1970s. Lake levels in the Great Lakes are also expected to decline due to climate change, creating a shallower Lake Erie over time, and worsening its problems. All of these stresses mean that the health of Lake Erie is in a fragile balance. Lakebed development risks tipping this balance in the wrong direction if it is not done with the utmost environmental attentiveness.

#### Extinction

**Science Daily 11** (Citing Prof Michel Loreau, PhD Ecologist, and Prof Michael Scherer-Lorenzen, PhD and Professor @ University of Freiburg, " Biodiversity Key to Earth's Life-Support Functions in a Changing World," Aug 11, http://www.sciencedaily.com/releases/2011/08/110811084513.htm)

ScienceDaily (Aug. 11, 2011) — The biological diversity of organisms on Earth is not just something we enjoy when taking a walk through a blossoming meadow in spring; it is also the basis for countless products and services provided by nature, including food, building materials, and medicines as well as the self-purifying qualities of water and protection against erosion. These so-called ecosystem services are what makes Earth inhabitable for humans. They are based on ecological processes, such as photosynthesis, the production of biomass, or nutrient cycles. Since biodiversity is on the decline, both on a global and a local scale, researchers are asking the question as to what role the diversity of organisms plays in maintaining these ecological processes and thus in providing the ecosystem's vital products and services. In an international research group led by Prof. Dr. Michel Loreau from Canada, ecologists from ten different universities and research institutes, including Prof. Dr. Michael Scherer-Lorenzen from the University of Freiburg, compiled findings from numerous biodiversity experiments and reanalyzed them. These experiments simulated the loss of plant species and attempted to determine the consequences for the functioning of ecosystems, most of them coming to the conclusion that a higher level of biodiversity is accompanied by an increase in ecosystem processes. However, the findings were always only valid for a certain combination of environmental conditions present at the locations at which the experiments were conducted and for a limited range of ecosystem processes. In a study published in the current issue of the journal Nature, the research group investigated the extent to which the positive effects of diversity still apply under changing environmental conditions and when a multitude of processes are taken into account. They found that 84 percent of the 147 plant species included in the experiments promoted ecological processes in at least one case. The more years, locations, ecosystem processes, and scenarios of global change -- such as global warming or land use intensity -- the experiments took into account, the more plant species were necessary to guarantee the functioning of the ecosystems. Moreover, other species were always necessary to keep the ecosystem processes running under the different combinations of influencing factors. These findings indicate that much more biodiversity is necessary to keep ecosystems functioning in a world that is changing ever faster. The protection of diversity is thus a crucial factor in maintaining Earth's life-support functions.

## 2NC

#### Awareness of precise meaning in context is key to education---they should be responsible for defending what “offshore wind” means

Stephen McDougal, political science at University of Wisconsin, 2007 (http://www.uwlax.edu/faculty/mcdougal/pl-prep.htm)

Legal educators agree that the best undergraduate preparation for the study of law includes course work emphasizing: (1) Effectiveness in the expression and comprehension of language and reasoned argument **Language is the lawyer's working tool**. You must be able to convey meaning clearly and effectively. In oral argument and written documents, you must be able to communicate ideas convincingly and forcefully. Also, you must be able to comprehend the language of others -- to grasp exactly their meaning, to interpret precisely relevant legal provisions. To this end, prelaw students should take courses that will give them extensive experience in: (a) modern language usage, grammatical correctness, organized presentation, conciseness and clarity in writing and speaking; (b) concentration and effective recollection in reading and listening; (c) perception of meanings conveyed by words. What you seek to gain is a sensitivity to the fluidity of language, varying meanings of words in different contexts, shades of meaning, interpretive problems, hazards in use of ambiguous terms, and to the deceptiveness of language, emotionally charged words, catch phrases, hidden meanings of words, empty generalizations.

#### “Offshore wind” sites include the Great Lakes

EESI 10 Environmental and Energy Study Institute. “Offshore Wind Energy Fact Sheet,” October, http://www.eesi.org/files/offshore\_wind\_101310.pdf

Most potential offshore wind sites are relatively close to major urban load centers where energy costs are high and land for onshore wind development is limited.24 Of the 48 contiguous states, 28 have a coastal boundary on the Atlantic Ocean, Pacific Ocean, Gulf of Mexico, or Great Lakes. Those 28 states consume 78 percent of the nation’s electricity, and many states have enough offshore wind potential to meet 100 percent of their electricity needs.25

#### Multiple studies agree---“offshore” includes the Great Lakes

Uyl 96 Tim, writing for Environment Canada, the official Canadian environmental protection organization. “Nearshore Waters of the Great Lakes,” Oct 30, http://www.on.ec.gc.ca/solec/nearshore-water/paper/part1.html

The Great Lakes basin ecosystem covers about 760,000 km2 (USEPA and GC 1995), spans 9o of latitude and 19o of longitude, and lies halfway between the equator and the North Pole in a lowland corridor that extends from the Gulf of Mexico to the Arctic Ocean (Figure 1). The Great Lakes, which are the most prominent feature of this system, have a combined surface area of about 244,000 km2, a volume of 22,700 km3, and are the largest single collection of fresh water on the surface of the earth, excluding the polar ice caps (TNC 1994). The Great Lakes basin ecosystem has been divided into major elements by TNC (1994), Dodge and Kavetsky (1995), and Edsall (1996). These elements basically include open lake (including nearshore and offshore waters); connecting channel; wetland (including coastal and inland wetland); tributary; coastal shore; lakeplain; and terrestrial inland. This paper focuses on the Nearshore Waters as a significant element of the Great Lakes basin ecosystem.

#### he Great Lakes are a crucial biodiversity hotspot

GLIN 13 Great Lakes Information Network. “Environment of the Great Lakes Region,” Feb 27, http://www.great-lakes.net/envt/

The environment of the Great Lakes region is blessed with huge forests and wilderness areas, rich agricultural land, hundreds of tributaries and thousands of smaller lakes, and extensive mineral deposits. The region's glacial history and the tremendous influence of the lakes themselves create unique conditions that support a wealth of biological diversity, including more than 130 rare species and ecosystems.The environment supports a world-class fishery and a variety of wildlife, such as white-tailed deer, beaver, muskrat, weasel, fox, black bear, bobcat, moose and other furbearing animals. Bird populations thrive on the various terrains, some migrating south in the winter, others making permanent homes. An estimated 180 species of fish are native to the Great Lakes, including small- and large-mouth bass, muskellunge, northern pike, lake herring, whitefish, walleye and lake trout. Rare species making their home in the Great Lakes region include the world's last known population of the white catspaw pearly mussel, the copper redhorse fish and the Kirtland's warbler.

#### Extinction

**Science Daily 11** (Citing Prof Michel Loreau, PhD Ecologist, and Prof Michael Scherer-Lorenzen, PhD and Professor @ University of Freiburg, " Biodiversity Key to Earth's Life-Support Functions in a Changing World," Aug 11, http://www.sciencedaily.com/releases/2011/08/110811084513.htm)

ScienceDaily (Aug. 11, 2011) — The biological diversity of organisms on Earth is not just something we enjoy when taking a walk through a blossoming meadow in spring; it is also the basis for countless products and services provided by nature, including food, building materials, and medicines as well as the self-purifying qualities of water and protection against erosion. These so-called ecosystem services are what makes Earth inhabitable for humans. They are based on ecological processes, such as photosynthesis, the production of biomass, or nutrient cycles. Since biodiversity is on the decline, both on a global and a local scale, researchers are asking the question as to what role the diversity of organisms plays in maintaining these ecological processes and thus in providing the ecosystem's vital products and services. In an international research group led by Prof. Dr. Michel Loreau from Canada, ecologists from ten different universities and research institutes, including Prof. Dr. Michael Scherer-Lorenzen from the University of Freiburg, compiled findings from numerous biodiversity experiments and reanalyzed them. These experiments simulated the loss of plant species and attempted to determine the consequences for the functioning of ecosystems, most of them coming to the conclusion that a higher level of biodiversity is accompanied by an increase in ecosystem processes. However, the findings were always only valid for a certain combination of environmental conditions present at the locations at which the experiments were conducted and for a limited range of ecosystem processes. In a study published in the current issue of the journal Nature, the research group investigated the extent to which the positive effects of diversity still apply under changing environmental conditions and when a multitude of processes are taken into account. They found that 84 percent of the 147 plant species included in the experiments promoted ecological processes in at least one case. The more years, locations, ecosystem processes, and scenarios of global change -- such as global warming or land use intensity -- the experiments took into account, the more plant species were necessary to guarantee the functioning of the ecosystems. Moreover, other species were always necessary to keep the ecosystem processes running under the different combinations of influencing factors. These findings indicate that much more biodiversity is necessary to keep ecosystems functioning in a world that is changing ever faster. The protection of diversity is thus a crucial factor in maintaining Earth's life-support functions.

#### Prefer evidence that’s specific to the Great Lakes

Musial and Ram 10 Walt Musial has worked at the National Renewable Energy Laboratory (NREL) since August 1988 serving in many roles over the years. Bonnie Ram is an accomplished executive and senior analyst with 30 years experience in planning and directing multidisciplinary technical projects relating to environmental analyses and national energy use for a variety of research organizations, including federal, state, local, and international government agencies. “Large-Scale Offshore Wind Power in the United States,” September, Online PDF

Sector risks (e.g., wildlife, habitats, oceans and land use) will, of course, vary depending on the specific technology deployed, the specific site considered, the scale of the deployment, and the stakeholder concerns at particular locations. The essential difference with the previous analytical approaches in Figure 8-1 and Table 8-1 is that the integrated risk framework summarizes for each sector risk quantitative data on the probability of occurrence, the magnitude of the consequences by sector, and major uncertainties. As demonstrated by European offshore projects, risk challenges are very site specific, and this makes it difficult to determine where and when potential problems may arise. A broader overview may ensure that significant risks or public perceptions will not be missed. Specific “tools” or metrics are applied to each sector risk (e.g., radar for avian risks and tracking migration patterns for habitat risks). The next step is “risk characterization and uncertainty analysis.” The sector risk characterization and uncertainty summary provides an overview of the risks and compares them across sectors to evaluate what might be the least or the most significant. Details about the current knowledge base of sectoral risks have been gained mostly in Europe and, accordingly, the evidence is presented in Section 8.5.

#### Great Lakes wind will be in the most vulnerable environmental areas

Drag 10 Nate is a writer for Buffalo Rising. “Winds of Change? The Growing Interest in Great Lakes Offshore Wind Energy,” Feb 8, http://www.buffalorising.com/2010/02/winds-of-change-the-growing-interest-in-great-lakes-offshore-wind-energy.html

While it is of upmost importance to reduce our societies' unhealthy addiction to fossil fuels, it is also crucial that each new idea be carefully examined. We know that jumping full force into developing new ways to produce energy can lead to devastating consequences. And while wind energy may not have the risks of say, nuclear energy, there are environmental, social, and economic considerations that have to be taken in the proposed offshore wind projects that are currently under deliberation at this time. Michigan, New York, Ohio, Ontario, and Wisconsin are all in the midst of examining the feasible of constructed offshore wind turbines in the shallower but more biologically productive areas of the Lakes. The attraction to shallow areas is due to the existing offshore wind technology having a 30-meter depth restriction. In every lake, especially Lake Erie, this depth restriction could limit offshore wind projects to the ecologically sensitive nearshore areas. With that being said, there are already a number of potential projects across the entire bi-national Great Lakes Basin.

#### Wind turbines interfere with Great Lakes shipping---[also turns their ability to solve warming]

Gray 8 Richard is a writer at the Telegraph. “Wind farms may pose risk to shipping,” Oct 25, http://www.telegraph.co.uk/news/3258362/Wind-farms-may-pose-risk-to-shipping.html

The Department for Transport has told the wind energy industry that shipping operators have serious concerns about plans to build thousands of huge wind turbines out at sea in a bid to meet the Government's ambitious renewable energy targets.¶ Cargo ship owners and yachting groups fear the turbines, which will in some cases be more than 600 ft tall – as high as three Nelson's Columns – will pose a navigation hazard in already-busy stretches of water.¶ They claim that diverting large cargo ships and tankers around wind farms will lead to an increase in carbon dioxide emissions from heavy shipping, which would cancel out much of the carbon dioxide savings wind farms are intended to deliver.¶ There is also research that suggests such large structures cause interference to ships' radar, making it hard to spot other craft.

#### Peer-reviewed evidence proves Great Lakes shipping is key to the US economy

Alcalde 11 Nancy, U.S. Department of Transportation. “New Economic Study Finds Great Lakes-St. Lawrence Seaway System Supports Over 225,000 Jobs and Generates Billions in Other Benefits,” Oct 18, http://www.greatlakes-seaway.com/en/pdf/slsdc\_pr20111018.pdf

According to a new study released today, the Great Lakes-St. Lawrence Seaway navigation system supports over 225,000 jobs and generates billions of dollars in income and revenues annually in both the U.S. and Canada. The comprehensive study, “The Economic Impacts of the Great LakesSt. Lawrence Seaway System 2010,” was commissioned by the marine shipping industry in partnership with government agencies and peer reviewed by U.S. and Canadian economists. “This report bears out what we’ve long known – that the St. Lawrence Seaway is crucial to the U.S. economy,” said U.S. Transportation Secretary Ray LaHood. “Not only is marine transportation the single most fuel-efficient and cost-effective way to haul goods from one place to another, but it also supports hundreds of thousands of essential jobs and generates billions of dollars in economic activity.”

# T

#### \ Restrictions on production must ban production

Anell 89 Lars is the Chairman of the WTO panel adopted at the Forty-Fifth Session of Contracting Parties on December 5, 1989. Other panel members: Mr. Hugh Bartlett and Mrs. Carmen Luz Guarda. “Canada – Import Restrictions on Ice Cream and Yoghurt,” http://www.wto.org/english/tratop\_e/dispu\_e/88icecrm.pdf

The United States argued that Canada had failed to demonstrate that it effectively restricted domestic production of milk. The differentiation between "fluid" and "industrial" milk was an artificial one for administrative purposes; with regard to GATT obligations, the product at issue was raw milk from the cow, regardless of what further use was made of it. The use of the word "permitted" in Article XI:2(c)(i) required that there be a limitation on the total quantity of milk that domestic producers were authorized or allowed to produce or sell. The provincial controls on fluid milk did not restrict the quantities permitted to be produced; rather dairy farmers could produce and market as much milk as could be sold as beverage milk or table cream. There were no penalties for delivering more than a farmer's fluid milk quota, it was only if deliveries exceeded actual fluid milk usage or sales that it counted against his industrial milk quota. At least one province did not participate in this voluntary system, and another province had considered leaving it. Furthermore, Canada did not even prohibit the production or sale of milk that exceeded the Market Share Quota. The method used to calculate direct support payments on within-quota deliveries assured that most dairy farmers would completely recover all of their fixed and variable costs on their within-quota deliveries. The farmer was permitted to produce and market milk in excess of the quota, and perhaps had an economic incentive to do so. 27. The United States noted that in the past six years total industrial milk production had consistently exceeded the established Market Sharing Quota, and concluded that the Canadian system was a regulation of production but not a restriction of production. Proposals to amend Article XI:2(c)(i) to replace the word "restrict" with "regulate" had been defeated; what was required was the reduction of production. The results of the econometric analyses cited by Canada provided no indication of what would happen to milk production in the absence not only of the production quotas, but also of the accompanying high price guarantees which operated as incentives to produce. According to the official publication of the Canadian Dairy Commission, a key element of Canada's national dairy policy was to promote self-sufficiency in milk production. The effectiveness of the government supply controls had to be compared to what the situation would be in the absence of all government measures.

#### Vote negative:

#### Including regs is a limits disaster

Doub 76 William is a principal in the law firm of Doub and Muntzing. Previously he was a partner in LeBoeuf, Lamb, Leiby, and MacRae. He was a member of the U.S. Atomic Energy Commission (1971-1974). He served as a member of the Executive Advisory Committee to the Federal Power Commission (1968-1971) and was appointed by the President to the President’s Air Quality Advisory Board. He is a past chairman of the U.S. National Committee of the World Energy Conference. “Energy Regulation: A Quagmire for Energy Policy,” http://www.annualreviews.org/doi/abs/10.1146/annurev.eg.01.110176.003435

FERS began with the recognition that federal energy policy must result from concerted efforts in all areas dealing with energy, not the least of which was the manner in which energy is regulated by the federal government. Energy self sufficiency is improbable, if not impossible, without sensible regulatory processes, and effective regulation is necessary for public confidence. Thus, the President directed that "a comprehensive study be undertaken, in full consultation with Congress, to determine the best way to organize all energy-related regulatory activities of the government." An interagency task force was formed to study this question. With 19 different federal departments and agencies contributing, the task force spent seven months deciphering the present organizational makeup of the federal energy regulatory system, studying the need for organizational improvement, and evaluating alternatives. More than 40 agencies were found to be involved with making regulatory decisions on energy. Although only a few deal exclusively with energy, most of the 40 could significantly affect the availability and/or cost of energy. For example, in the field of gas transmission, there are five federal agencies that must act on siting and land-use issues, seven on emission and effluent issues, five on public safety issues, and one on worker health and safety issues-all before an onshore gas pipeline can be built. The complexity of energy regulation is also illustrated by the case of Standard Oil Company (Indiana), which reportedly must file about 1000 reports a year with 35 different federal agencies. Unfortunately, this example is the rule rather than the exception.

#### And precision---only direct prohibition is a restriction

Sinha 6 S.B. Sinha is a former judge of the Supreme Court of India. “Union Of India & Ors vs M/S. Asian Food Industries,” Nov 7, http://webcache.googleusercontent.com/search?q=cache:http://www.indiankanoon.org/doc/437310/

We may, however, notice that this Court in State of U.P. and Others v. M/s. Hindustan Aluminium Corpn. and others [AIR 1979 SC 1459] stated the law thus: "It appears that a distinction between regulation and restriction or prohibition has always been drawn, ever since Municipal Corporation of the City of Toronto v. Virgo. Regulation promotes the freedom or the facility which is required to be regulated in the interest of all concerned, whereas prohibition obstructs or shuts off, or denies it to those to whom it is applied. The Oxford English Dictionary does not define regulate to include prohibition so that if it had been the intention to prohibit the supply, distribution, consumption or use of energy, the legislature would not have contented itself with the use of the word regulating without using the word prohibiting or some such word, to bring out that effect."

# Px

#### Immigration will pass now

Charles Castaldi 3-27 | Take Two | KPCC – California Public Radio, March 27th, 2013, LA Archbishop Gomez keeps Mahony's promise to push for immigration reform

President Obama said he expects Congress to introduce an immigration reform bill next month. The Los Angeles Archdiocese has played a key role in advocating for change. Before he was stripped of his duties for mishandling sex abuse cases, Cardinal Roger Mahony was a leading voice on immigration reform.¶ In 2010, Cardinal Mahony spoke to a crowd of thousands at the Washington mall at a rally in support for immigrant’s rights.¶ Mahony promised the Catholic Church would stand beside immigrants in the fight for immigration reform. This was just one of many examples of his bringing his activism out to the street.¶ “Cardinal Mahony was very clear that he was going to use the pulpit and he was going to use the airwaves,” says Angelica Salas, the executive director of CHIRLA, the Coalition for Humane Immigrant Rights of Los Angeles. “He was going to march with us, he was going to use whatever public space there was in order to get the word out.”¶ Salas says that Mahony’s successor, Archbishop Jose Gomez, might not be speaking at rallies as much and certainly maintains a lower public profile, but he is very active in pushing for immigration reform.¶ “I was in a meeting with President Obama a couple of weeks ago at the White House with religious leaders,” Gomez says. “And we all came out of the meeting with the conviction that now is the time and that the president is committed to work on immigration reform. So we are enthusiastic about the possibility of an immigration reform law soon.”¶ Gomez is the chairman of the Immigration Committee of US Catholic Bishops, which makes him a key voice on immigration matters not only in the church, but also in Washington as well. Both he and Salas agree that this is a moment when there’s a real chance to see an actual immigration reform bill come out of Congress, especially with the President as committed as he is.¶ “Lots of things have also changed even within the Obama administration,” Salas says. “In 2010, I had the opportunity to meet with President Obama in much the same way that Archbishop Gomez did and at that time we were in a very different situation in which for the first time we were seeing deportations exploding. Something we were shocked to our core about. And so it was a different kind of engagement with our president."¶ But since then, she has seen a change in tone from Washington.¶ "Since that time and after a lot of pushing, he has provided deferred action for childhood arrivals, (Obama) has opened up opportunities for prosecutorial discretion," Salas says. "I think that his entire team at every single level is now committed to making sure that immigration reform gets across the finish line.”¶ Public opinion on immigration has also shifted substantially since Mahony took up the cause more than 20 years ago. Now, according to a recent USC/LA Times poll, about two-thirds of Californians support providing undocumented immigrants a path to citizenship. According to Mike Madrid, a Republican political consultant, Gomez’s low key lobbying might be a better fit for the times.

#### Plan’s controversial

Sperry 12 Todd is a writer for CNN. “Wind farm gets US approval despite controversy,” Aug 16, http://www.cnn.com/2012/08/16/us/wind-farm-faa/index.html

Washington (CNN) -- A massive offshore wind farm planned for Cape Cod that has generated fierce political and legal controversy has cleared all federal and state regulatory hurdles.¶ The Federal Aviation Administration said Wednesday the Cape Wind project, the first of its kind in the United States, would not interfere with air traffic navigation and could proceed with certain conditions.¶ Previous agency approvals were challenged in court, including a ruling last year that forced the latest FAA safety evaluation. A leading opposition group said another legal challenge was possible.¶ The Obama administration first approved the power generating project, which has now been on the books for more than a decade, in April 2010 despite opposition from residents. Opponents over the years have included the late Sen. Edward Kennedy, a Democrat of Massachusetts whose family compound is in Hyannis Port.¶ 125 years of wind power¶ Critics claim the wind farm with its 130 turbines would threaten wildlife and aesthetics of Nantucket Sound. Some local residents also fear it will drive down property values.¶ The administration has pushed a "green energy" agenda nationally as a way to create jobs and lessen U.S. dependence on oil imports. That effort, however, has been sharply criticized by congressional Republicans who have said certain high-profile projects are politically driven.¶ They also have skewered certain Energy Department programs that extended millions in taxpayer loans and other aid to alternative energy companies or projects that faltered or did not meet expectations.¶ The Republican-led House Oversight and Government Reform Committee is investigating the political assertions around Cape Wind as part of a broader review of "green energy" projects supported by the administration.

#### PC’s key

Foley 1/15 Elise is a writer @ Huff Post Politics. “Obama Gears Up For Immigration Reform Push In Second Term,” 2013, http://www.huffingtonpost.com/2013/01/15/obama-immigration-reform\_n\_2463388.html

Obama has repeatedly said he will push hard for immigration reform in his second term, and administration officials have said that other contentious legislative initiatives -- including gun control and the debt ceiling -- won't be allowed to get in the way. At least at first glance, he seems to have politics on his side. GOP lawmakers are entering -- or, in some cases, re-entering -- the immigration debate in the wake of disastrous results for their party's presidential nominee with Latino voters, who support reform by large measures. Based on those new political realities, "it would be a suicidal impulse for Republicans in Congress to continue to block [reform]," David Axelrod, a longtime adviser to the president, told The Huffington Post.¶ Now there's the question of how Obama gets there. While confrontation might work with Republicans on other issues -- the debt ceiling, for example -- the consensus is that the GOP is serious enough about reform that the president can, and must, play the role of broker and statesman to get a deal.¶ It starts with a lesson from his first term. Republicans have demanded that the border be secured first, before other elements of immigration reform. Yet the administration has been by many measures the strictest ever on immigration enforcement, and devotes massive sums to policing the borders. The White House has met many of the desired metrics for border security, although there is always more to be done, but Republicans are still calling for more before they will consider reform. Enforcing the border, but not sufficiently touting its record of doing so, the White House has learned, won't be enough to win over Republicans.¶ In a briefing with The Huffington Post, a senior administration official said the White House believes it has met enforcement goals and must now move to a comprehensive solution. The administration is highly skeptical of claims from Republicans that immigration reform can or should be done in a piecemeal fashion. Going down that road, the White House worries, could result in passage of the less politically complicated pieces, such as an enforcement mechanism and high-skilled worker visas, while leaving out more contentious items such as a pathway to citizenship for undocumented immigrants.¶ "Enforcement is certainly part of the picture," the official said. "But if you go back and look at the 2006 and 2007 bills, if you go back and look at John McCain's 10-point 'This is what I've got to get done before I'm prepared to talk about immigration,' and then you look at what we're actually doing, it's like 'check, check, check.' We're there. The border is as secure as it's been in a generation or two, so it's really time."¶ One key in the second term, advocates say, will be convincing skeptics such as Republican Sen. John Cornyn of Texas that the Obama administration held up its end of the bargain by proving a commitment to enforcement. The White House also needs to convince GOP lawmakers that there's support from their constituents for immigration reform, which could be aided by conservative evangelical leaders and members of the business community who are pushing for a bill.¶ Immigrant advocates want more targeted deportations that focus on criminals, while opponents of comprehensive immigration reform say there's too little enforcement and not enough assurances that reform wouldn't be followed by another wave of unauthorized immigration. The Obama administration has made some progress on both fronts, but some advocates worry that the president hasn't done enough to emphasize it. The latest deportation figures were released in the ultimate Friday news dump: mid-afternoon Friday on Dec. 21, a prime travel time four days before Christmas.¶ Last week, the enforcement-is-working argument was bolstered by a report from the nonpartisan Migration Policy Institute, which found that the government is pouring more money into its immigration agencies than the other federal law-enforcement efforts combined. There are some clear metrics to point to on the border in particular, and Doris Meissner, an author of the report and a former commissioner of the U.S. Immigration and Naturalization Service, said she hopes putting out more information can add to the immigration debate.¶ "I've been surprised, frankly, that the administration hasn't done more to lay out its record," she said, adding the administration has kept many of its metrics under wraps.¶ There are already lawmakers working on a broad agreement. Eight senators, coined the gang of eight, are working on a bipartisan immigration bill. It's still in its early stages, but nonmembers of the "gang," such as Sen. Marco Rubio (R-Fla.) are also talking about reform.¶ It's still unclear what exact role the president will play, but sources say he does plan to lead on the issue. Rep. Zoe Lofgren (D-Calif.), the top Democrat on the House immigration subcommittee, said the White House seems sensitive to the fact that Republicans and Democrats need to work out the issue in Congress -- no one is expecting a fiscal cliff-style arrangement jammed by leadership -- while keeping the president heavily involved.

#### Ag industry’s collapsing now---immigration’s key

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

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

#### Extinction

Lugar 2k | Chairman of the Senator Foreign Relations Committee and Member/Former Chair of the Senate Agriculture Committee (Richard, a US Senator from Indiana, is Chairman of the Senate Foreign Relations Committee, and a member and former chairman of the Senate Agriculture Committee. “calls for a new green revolution to combat global warming and reduce world instability,” pg online @ http://www.unep.org/OurPlanet/imgversn/143/lugar.html)

In a world confronted by global terrorism, turmoil in the Middle East, burgeoning nuclear threats and other crises, it is easy to lose sight of the long-range challenges. But we do so at our peril. One of the most daunting of them is meeting the world’s need for food and energy in this century. At stake is not only preventing starvation and saving the environment, but also world peace and security. History tells us that states may go to war over access to resources, and that poverty and famine have often bred fanaticism and terrorism. Working to feed the world will minimize factors that contribute to global instability and the proliferation of [WMDs] weapons of mass destruction. With the world population expected to grow from 6 billion people today to 9 billion by mid-century, the demand for affordable food will increase well beyond current international production levels. People in rapidly developing nations will have the means greatly to improve their standard of living and caloric intake. Inevitably, that means eating more meat. This will raise demand for feed grain at the same time that the growing world population will need vastly more basic food to eat. Complicating a solution to this problem is a dynamic that must be better understood in the West: developing countries often use limited arable land to expand cities to house their growing populations. As good land disappears, people destroy timber resources and even rainforests as they try to create more arable land to feed themselves. The long-term environmental consequences could be disastrous for the entire globe. Productivity revolution To meet the expected demand for food over the next 50 years, we in the United States will have to grow roughly three times more food on the land we have. That’s a tall order. My farm in Marion County, Indiana, for example, yields on average 8.3 to 8.6 tonnes of corn per hectare – typical for a farm in central Indiana. To triple our production by 2050, we will have to produce an annual average of 25 tonnes per hectare. Can we possibly boost output that much? Well, it’s been done before. Advances in the use of fertilizer and water, improved machinery and better tilling techniques combined to generate a threefold increase in yields since 1935 – on our farm back then, my dad produced 2.8 to 3 tonnes per hectare. Much US agriculture has seen similar increases. But of course there is no guarantee that we can achieve those results again. Given the urgency of expanding food production to meet world demand, we must invest much more in scientific research and target that money toward projects that promise to have significant national and global impact. For the United States, that will mean a major shift in the way we conduct and fund agricultural science. Fundamental research will generate the innovations that will be necessary to feed the world. The United States can take a leading position in a productivity revolution. And our success at increasing food production may play a decisive humanitarian role in the survival of billions of people and the health of our planet.

# Exports DA

#### DOE will limit LNG exports now because of concerns about domestic supply and demand---the plan resolves that and triggers exports

Charles Ebinger et al 12, a senior fellow and director of the Energy Security Initiative at the Brookings Institution; Kevin Massy, Assistant Director of the Energy Security Initiative at Brookings; and Govinda Avasarala, Senior Research Assistant in the Energy Security Initiative at Brookings, May 2012, “Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas,” http://www.brookings.edu/~/media/research/files/reports/2012/5/02%20lng%20exports%20ebinger/0502\_lng\_exports\_ebinger.pdf

From the perspective of the U.S. federal government, the issue of implications is viewed in terms of “public interest.” Under existing legislation, exports of natural gas to countries with a free trade agreement (FTA) with the United States are, by law, deemed to be in the public interest and authorization is required to be given without modification or delay. Projects looking for authorization to export LNG to countries without an FTA, which account for roughly 96 percent of current global LNG demand, are required to be approved by the Secretary of Energy unless, after public hearing, the Department of Energy finds that such exports are not in the public interest.80 Although the legal definition of “public interest” is not explicitly given in existing legislation, according to public statements by officials from the Department of Energy, “public interest” includes:

• Adequate domestic natural gas supply; • Domestic demand for natural gas proposed for export; • Economic impacts of exports (on GDP, consumers, and industry); • U.S. energy security; • Job creation; • U.S. balance of trade; • International considerations; • Environmental considerations; • Consistency with DoE’s policy of promoting market competition through free negotiation of trade81

The first two of these criteria were addressed in Part I. The remainder focus on the various domestic and international implications of U.S. LNG exports.

Domestic Implications

The domestic implications of U.S. LNG exports include their impact on natural gas prices, natural gas price volatility, jobs and competitiveness, and on overall energy security.

Price of domestic natural Gas

The domestic price impact of natural gas exports will be a significant factor in determining whether or not the United States should export LNG. While it is generally acknowledged that a domestic price increase will result from largescale LNG exports, the size of the price increase is the subject of debate, with a number of studies suggesting a range of possible outcomes. The important considerations when analyzing the results and conclusions of the various existing studies are the assumptions and models that are used when making price forecasts. Below are the results and methodologies of five major pricing studies done by the EIA and three consultancies: Deloitte, ICF International, and Navigant Consulting, which published two studies.

2012 Energy information Administration study In January 2012, the EIA published a study entitled “Effect of Increased Natural Gas Exports on Domestic Energy Markets.”82 The study, conducted at the request of the Office of Fossil Energy of the Department of Energy, analyzed four different export scenarios across four different resource base or economic assumptions to project price responses to LNG exports. In addition to a “baseline” scenario, where no LNG is exported, the EIA model considered four different export scenarios: • A low export/slow growth scenario, where 6 bcf/day of LNG is exported, phased in at a rate of 1 bcf/day per year; • A low export/rapid growth scenario, where 6 bcf/day of LNG is exported, phased in at a rate of 3 bcf/day per year; • A high export/slow growth scenario, where 12 bcf/day of LNG is exported, phased in at a rate of 1 bcf/day per year; • A high export/rapid growth scenario, where 12 bcf/day of LNG is exported, phased in at a rate of 3 bcf/day per year. Given the uncertainty over the actual size of the shale gas resource base and the future growth of the U.S. economy, each of these scenarios (both “baseline” and export) were applied to four alternate background cases: • A reference case, based on the EIA’s 2011 Annual Energy Outlook; • A low-shale estimated ultimate recovery (EUR) case, in which shale gas production from new, undrilled wells is 50 percent below the reference case scenario; • A high-shale EUR case, in which shale gas production from new, undrilled wells is 50 percent higher than the reference case; • A high economic growth case, in which U.S. GDP grows at 3.2 percent as opposed to the 2.7 percent assumed in the reference case. Given the range of assumptions, the range of results was unsurprisingly wide. The results range from a 9.6 percent increase (from $3.56 to $3.90/ mcf) in domestic natural gas prices in 2025 due to exports (in the case of high shale gas recovery, low export volumes and a slow rate of export growth) to a 32.5 percent increase (in the case of low shale gas recovery, high export volumes and a high rate of export growth). The percentage premium for domestic natural gas prices in 2025 for each scenario relative to the baseline scenario price estimate is detailed in table 3. In addition to the price premium for exporting natural gas that exists in each case, the EIA study projected a short-term spike in natural gas prices as a result of LNG exports. As figure 7 below illustrates, in 2015, the first year that LNG exports occur, domestic natural gas prices rise rapidly until total export capacity is reached. In the “lowrapid” scenario prices peak in 2016, after the 6 bcf/day of export capacity is built over 2 years; in the “high-slow” scenario, natural gas prices peak in 2026, after the 12 bcf/day of export capacity is built over 12 years. The immediate jump in price becomes more pronounced in the scenarios where LNG export capacity increases quickly. In the “low-rapid” scenario, the price of natural gas peaks at nearly 18 percent above the baseline case; in the “high-rapid” scenario, natural gas prices peak at 36 percent above the baseline case. This price impact is exacerbated in the Low Shale EUR and High Macroeconomic Growth cases, as LNG exports further tighten domestic natural gas markets. In the most extreme example, the high-rapid scenario for exports in a Low Shale EUR case, the price for natural gas peaks at more than 50 percent than the baseline case.83 There are two factors that should be considered when interpreting the results of this price impact study. The first is the assumption regarding the rate at which LNG could be exported. The results of EIA’s analysis represent an extreme scenario for LNG exports. In the existing LNG market, it is particularly unlikely that either the “low-rapid” or the “high-rapid” scenarios would materialize. The former assumption stipulates that the United States would export 6 bcf/day of LNG by 2016. Given that, at the time of writing, only one facility has been approved to export 2.2 bcf/day to nonFTA countries starting in 2015, it is unlikely that another three plants would be approved and built in such a short time frame.84 The latter scenario, that the United States would be exporting 12 bcf/ day of LNG by 2018, suggests that in the next several years, the United States would grow from exporting negligible volumes of LNG to having roughly one-third of the global LNG export capacity. Not only would this supply growth outpace growth in global LNG demand, but this capacity addition would also have to compete with roughly 11 bcf/day of Australian-origin LNG that is expected to hit the market around the same time.85 The second issue is the model’s assumptions for incremental investment in natural gas production as a result of increased export capacity. The spike in price depicted in figure 7 occurs because investment from gas producers lags additional demand. In the model, producers respond to, rather than anticipate, additional demand. For this reason, prices peak once the export capacity is filled, before steadily decreasing. In reality, the expectation of future demand would likely induce gas producers to invest in additional production before incremental demand occurs. As a result, the increase in prices would likely begin earlier and peak at a lower level than suggested by the model. deloitte study An earlier study released in November 2011 from the Deloitte Center for Energy Solutions highlighted the producer-response in its model. In addition to finding that LNG exports would produce a smaller increase in gas prices than the EIA report suggests, the Deloitte study points out that “producers can develop more reserves in anticipation of demand growth, such as LNG exports. There will be ample notice and time in advance of the exports to make supplies available.”86 Using a dynamic model, in which production increased in anticipation of new demand, the Deloitte study found that 6 bcf/day of exports of LNG would result in, on average, a 1.7 percent increase (from $7.09 to $7.21/MMBtu) in the price of natural gas between 2016 and 2035. Further, the Deloitte study noted that there would be regional variations to the increase in natural gas prices resulting from LNG exports. As most of the proposed liquefaction terminals are expected to be on the Gulf Coast, the price of Henry Hub gas, which is the key benchmark for natural gas from the Gulf Coast, will increase by $0.22/ MMBtu by 2035 as a result of U.S. LNG exports. This is more than double the price increase projected in regions further away from the LNG export terminals. In New York and Illinois, natural gas prices are projected to increase by less than $0.10/MMBtu. This is particularly important in the Northeast, which historically experiences some of the highest natural gas prices in the country, but will benefit from the development and consumption of natural gas from the nearby Marcellus shale play. other studies Three other studies of note have analyzed the price impacts of U.S. LNG exports. In August 2010, Navigant Consulting found that 2 bcf/day of LNG exports would cause a price increase of between 7 and 7.9 percent from 2015 to 2035 relative to a scenario with no gas exports. ICF International found in August 2011 that 6 bcf/day of exports would result in an 11 percent ($0.64/MMBtu) increase in natural gas prices over the same period.87 More recently, Navigant released another study that analyzed the impact of two separate export scenarios. The first scenario modeled the impact of 3.6 bcf/day of LNG exports from three terminals in North America: Sabine Pass in Louisiana, Kitimat in British Columbia, and Coos Bay in Oregon. The second scenario modeled the impact of 6.6 bcf/day of LNG exports from the three aforementioned export projects and 2 bcf/day of added exports from the Gulf Coast and 1 bcf/day from Maryland.88 This Navigant study found that 6.6 bcf/day of LNG exports would result in a 6 percent ($0.35/MMBtu) increase in natural gas prices from 2015 to 2035. As with the EIA and Deloitte studies, the results of both Navigant and ICF’s studies must be analyzed in the context of their respective methodologies and assumptions. Navigant’s first study uses a more static supply model, which, unlike dynamic supply models, does not fully take account of the effect that higher prices have on spurring additional production. As a result, it takes a conservative estimate of supply growth potential. The report acknowledges that the price outcomes modeled in its analysis “establish the upper range of impacts that exports […] might have on natural gas prices.”89 This study also did not factor in the reemergence of the industrial sector as a major consumer of natural gas following the shale gas “revolution.” The study assumes that natural gas consumption by the industrial sector will decline by 0.3% per year to 2035. By contrast, the EIA model assumes that industrial sector demand will increase by roughly 1% per year over the same period.90 The ICF study factors in various levels of production response from an increase in price. Under its 6 bcf/day export scenario, the price impact ranges from a $0.52/ MMBtu increase in a more responsive drilling activity scenario to a $0.75/MMBtu increase in a less responsive drilling activity scenario. which study is right? Given that these studies forecast natural gas prices two decades into the future, it is difficult to determine which study is most accurate. (table 4 shows a comparison of the price impact forecasts of the various models.) However, policymakers would benefit from having a better understanding of the results that are generated from each report. This includes choosing the most relevant results from each report. For instance, following the release of the EIA study, many commentators were quick to highlight that natural gas prices could increase by more than 50 percent as a result of LNG exports. However, this ignored the assumptions behind this number: it was based on the price of natural gas in one year under the most extreme assumptions of exports and domestic resource base. A more comprehensive analysis should include an assessment of the average price impact from 2015 to 2035. When distinguishing between the various studies, policymakers should identify which assumptions most resemble the existing natural gas market and its likely direction, and which models are most reflective of the complex nature of domestic and global natural gas trade. Assuming realistic volumes of natural gas exports as well as a reasonable supply response by natural gas producers are important considerations. It is important to note that the supply curves in the various studies reflect different interpretations of the economics of marginal production. The Power sector and industrial sector Part I indicated that the power-generation and industrial sectors would account for most of the demand for newly available natural gas resources. As shown above, LNG exports are likely to increase domestic prices of natural gas, suggesting negative consequences for these two competing sectors. In their analyses, both Deloitte and EIA found that the majority—63 percent, according to both studies—of the exported natural gas will come from new production as opposed to displaced consumption from other sectors. By contrast, between 17 and 38 percent of supply of natural gas for export would be met by reduced demand, as higher prices pushes some domestic consumers to use less gas.

In the power generation and industrial sectors, the price impacts of LNG exports are likely to have modest impacts. In the power sector, natural gas has historically been used as a back up to coal and nuclear base-load generation. For such gas used at the margin, the increase in electricity prices as a result of LNG exports would be limited by its competitiveness relative to other fuels: as soon as it becomes more expensive than the alternative for back up generation, power producers will substitute away from gas.91 According to ICF International, a $0.64/MMBtu increase in the price of natural gas would result in an electricity price increase of between $1.66 and $4.97/megawatt-hour (MWh), depending on how often gas is used as the marginal fuel for electricity. Deloitte estimates that the price increase of electricity would not be more than $1.65/MWh. 92 EIA estimates that electricity price impacts will be marginal as well (between $1.40/MWh and $2.90/MWh) except in the “highrapid” export scenario.93 The EIA Annual Energy Outlook 2011 estimates that, without exporting LNG, the average price of electricity (across all fuels) in 2035 will be $92/MWh.94

In the longer term, natural gas is itself likely to be used for more base-load generation. The rapid increase in shale gas production, coupled with the retirements of as much as 50 gigawatts (GW) of coal-fired electricity due to plant age or inability to adhere to possibly forthcoming EPA regulations is likely to increase the demand for natural gas in the power sector. According to some analysts, the near-term demand caused by the retirements of the oldest and least efficient coal-fired power plants could result in an additional natural gas demand of 2 bcf/day.95 Given the lack of environmentally and economically viable alternatives, a moderate increase in gas prices is unlikely to result in a large move away from natural gas, although increased costs will be transferred to customers. Natural gas consumption in the power sector has been considered economic at prices much higher than those resulting from LNG exports in even the highest price-impact projections. Even prior to the shale gas “revolution,” when natural gas prices were high, natural gas demand was increasing in the power sector. The EIA Annual Energy Outlook 2005— published in a year when average well head prices were over $7/MMBTU—projected that natural gas demand in the electricity sector would increase by 70 percent between 2003 and 2015.96

Unlike the power sector, which continued to build natural-gas fired generation during a period of increasing gas prices, the industrial sector was negatively affected by growing natural gas import dependence, high gas prices, and gas price volatility. Between 2000 and 2005, the price of natural gas increased by 99 percent and LNG imports more than doubled.97 By 2005, the ratio of the price of oil to the price of natural gas was approximately 6:1, just below the 7:1 oil-to-gas price ratio at which U.S. petrochemical and plastics producers are globally competitive.98 That same year Alan Greenspan, then-Chairman of the Federal Reserve, noted that because of natural gas price increases “the North American gas-using industry [was] in a weakened competitive position.”99 Since then the price of natural gas has collapsed. In 2011, the oil-to-natural gas price ratio was more than 24:1. In 2012 it has been even higher. The decline in natural gas prices has galvanized the industrial sector. A joint study by PwC and the National Association for Manufacturers, an industry trade group, found that the development of shale gas could save manufacturers as much as $11.6 billion per year in feedstock costs through 2025.100 New investments in petrochemical and plastics producing facilities are occurring throughout the East and Southeast, largely predicated on the availability of inexpensive natural gas. Opponents of LNG exports contend that such investments would be deterred in the future as a result of increases in the price of natural gas. However, the evidence suggests that the competitive advantage of U.S. industrial producers relative to its competitors in Western Europe and Asia is not likely to be affected significantly by the projected increase in natural gas prices resulting from LNG exports. As European and many Asian petrochemical producers use oil-based products such as naphtha and fuel oil as feedstock, U.S. companies are more likely to enjoy a significant cost advantage over their overseas competitors. Even a one-third decline in the estimated price of crude oil in 2035 would result in an oil-to-gas ratio of 14:1.101 There is also the potential for increased exports to help industrial consumers. Ethane, a liquid byproduct of natural gas production at several U.S. gas plays, is the primary feedstock of ethylene, a petrochemical product used to create a wide variety of products. According to a study by the American Chemistry Council, an industry trade body, a 25 percent increase in ethane production would yield a $32.8 billion increase in U.S. chemical production. By providing another market for cheap dry gas, LNG exports will encourage additional production of natural gas liquids (NGL) that are produced in association with dry gas. According to the EIA, ethane production increased by nearly 30 percent between 2009 and 2011 as natural gas production from shale started to grow substantially. Ethane production is now at an alltime high, with more than one million barrels per day of ethane being produced.102 Increased gas production for exports results in increased production of such natural gas liquids, in which case exports can be seen as providing a benefit to the petrochemical industry.

natural gas price volatility

A major concern among domestic end users of natural gas is the possibility of an increase in natural gas price volatility resulting from an increase in U.S. LNG exports. As figure 8 demonstrates, the price volatility experienced during the 2000s was the highest the domestic gas market has experienced in the past three decades.

The volatility of the natural gas market in the 2000s was largely caused by a tight supply-demand balance. Natural gas demand increased substantially as the U.S. economy grew and natural gas was viewed as environmentally preferable to coal for power generation. This increase in demand coincided with a reduction in domestic supply and an increased reliance on imports. The recent surge in U.S. natural gas production has resulted in less market volatility since 2010. According to EIA, the standard deviation of the price of natural gas (a general statistical indicator of volatility) between 2010 and 2011 was one-third what it was during the 2000s.103 Potential exports of U.S. LNG concerns some domestic consumers for two principal reasons: greater volatility in domestic natural gas prices; and exposure of domestic natural gas prices to higher international prices resulting in a convergence between low U.S. prices and high international prices.

There is an insufficient amount of data and quantitative research on the relationship between domestic natural gas price volatility and LNG exports. However, certain characteristics of the LNG market are likely to limit volatility. LNG is bound by technical constraints: it must be liquefied and then transported on dedicated tankers before arriving at terminals where a regasification facility must be installed. Liquefaction facilities have capacity limits to how much gas they can turn into LNG. If they are operating at or close-to full capacity, such facilities will have a relatively constant demand for natural gas, therefore an international price or supply shock would have little impact on domestic gas prices. Moreover, unlike oil trading, in which an exporter—theoretically—sells each marginal barrel of production to the highest bidder in the global market, the capacity limit on LNG production and export means that LNG exporters have an infrastructure-limited demand for natural gas leaving the rest of the natural gas for domestic consumption. As most LNG infrastructure facilities are built on a project finance basis and underpinned by long-term contracts, this demand can be anticipated by the market years in advance, reducing the likelihood of volatility. The macroeconomy and jobs The macroeconomic and job implications of LNG exports depend on two principal factors: the gains from trade from exploiting pricing differentials and inefficiencies of the global market; and the employment implications of those gains, higher domestic natural gas prices, and greater domestic natural gas production. The Department of Energy has commissioned a study on both the macroeconomic and employment implications of U.S. LNG exports, which will be released later this year. This study will provide a qualitative assessment of the implications of LNG exports to the U.S. economy and employment. LNG exports are likely to be a net benefit to the U.S. economy, although probably not a significant contributor in terms of total U.S. GDP. Exports of U.S. natural gas will take advantage of the benefits of the existing producer’s surplus resulting from the pricing differentials between the natural gas markets in the United States, Europe, and Asia. Contractual terms will determine how this surplus is shared between U.S. sellers and foreign buyers.104 The benefit of this trade will likely outweigh the cost to domestic consumers of the increase in the price of natural gas as most of the natural gas demanded by exports will come from new natural gas production as opposed to displacing existing production from domestic consumers. On the other hand, LNG exports from the United States are likely to put marginal upward pressure on the relative value of the U.S. dollar. In March 2012, Citigroup released a report on North American hydrocarbon production that included a model of the macroeconomic impact of U.S. oil and gas exports. The Citi analysis found that oil and gas exports would cause a nearly two percent decline in the current account deficit by 2020, but that the exchange rate implications would be modest. By 2020, the U.S. dollar would appreciate by between 1.6 and 5.4 percent.105 The implications of LNG exports on job creation are similarly difficult to quantify. Other than temporary construction jobs created by the need to build liquefaction capacity, pipelines, and other ancillary infrastructure, the operation of the liquefaction facility will likely provide little permanent employment benefit. As outlined in the section on price impacts above, as much of the gas for export will come from new production, rather than the displacement of consumption in other sectors, the negative economic, and therefore jobrelated, effects on those sectors is likely to be limited. Beyond the labor required for additional gas production to satisfy LNG exports, the net impact of LNG exports is likely to be minimal. Further upstream, the job potential may be greater. By increasing domestic natural gas production, employment from additional oil and gas producers will increase, as will the demand for manufacturers of equipment for oil and gas production, gathering, and transportation. domestic energy security

Aside from the price impact of potential U.S. LNG exports, a major concern among opponents is that such exports would diminish U.S. “energy security”; that exports would deny the United States of a strategically important resource. The extent to which such concerns are valid depends on several factors, including the size of the domestic resource base, and the liquidity and functionality of global trade. As Part I of this report notes, geological evidence suggests that the volumes of LNG export under consideration would not materially affect the availability of natural gas for the domestic market. Twenty years of LNG exports at the rate of 6 bcf/day, phased in over the course of 6 years, would increase demand by approximately 38 tcf. As presented in Part I, four existing estimates of total technically recoverable shale gas resources range from 687 tcf to 1,842 tcf; therefore, exporting 6 bcf/day of LNG over the course of twenty years would consume between 2 and 5.5 percent of total shale gas resources. While the estimates for shale gas reserves are uncertain, in a scenario where reserves are perceived to be lower than expected, domestic natural gas prices would increase and exports would almost immediately become uneconomic. In the long-term, it is possible that U.S. prices and international prices will converge to the point at which they settle at similar levels. In that case, the United States would have more than adequate import capacity (through bi-directional import/export facilities) to import gas when economic.

A further gas-related consideration with regard to energy security is the effects of increased production of associated natural gas with the increasing volumes of U.S. unconventional oil. As the primary energy-security concern for the United States related to oil, the application of fracking and horizontal drilling in oil production is reducing U.S. oil import dependence, while simultaneously producing substantial volumes of natural gas, which, given the relative economics of oil and gas, is effectively delivered at zero (or, in the case of producers who have to invest in equipment to manage flaring and venting, negative) cost. To the extent that associated gas from unconventional oil production is used for LNG export, it can be seen as a consequence of—rather than a threat to—increased U.S. energy security. international implications The international implications of LNG exports from the United States can be divided into pricing, geopolitics, and environment. international Pricing As discussed in Part I, the global LNG market is informally separated into three markets: North America, the Atlantic Basin (mostly Europe), and the Pacific Basin (including Japan, South Korea, Taiwan, China, and India). These markets are separated because of important technical differences that impact the pricing structure for LNG in each market. The North American natural gas market is competitive and prices are traded in a transparent and open market. The Atlantic Basin is dominated by European LNG consumers such as the United Kingdom, Spain, France, and Italy, and is a hybrid of a competitive U.K. market that was liberalized in the mid-1990s and a Continental European market that is dominated by oil-linked, take-or-pay contracts. In recent years, the U.K. hub, the National Balancing Point (NBP), has traded at a premium to the U.S. hub, the Henry Hub. The Pacific Basin is a more rigid market that depends heavily on oilindexed contracts that are more expensive than those used in the Atlantic Basin. While they have no central trading hub, the Pacific Basin consumers such as Japan and South Korea (which is implementing its recently-signed free-trade agreement with the United States) currently import LNG based on a pricing formula known informally as the Japan Crude Cocktail, the average price of custom-cleared oil imports into Tokyo. Many Pacific Basin contracts have a built-in price floor and price ceiling depending on the price of oil.106 Without exporting any natural gas, the U.S. shale gas “revolution” has already had a positive impact on the liquidity of global LNG markets. Many LNG cargoes that were previously destined for gas-thirsty U.S. markets were diverted and served spot demand in both the Atlantic and Pacific Basins. The increased availability of LNG cargoes has helped create a looser LNG market for other consumers (see figure 9). This in turn has helped apply downward pressure to the terms of oillinked contracts resulting in the renegotiation of some contracts, particularly in Europe. Increased availability of LNG cargoes also accelerated a recent trend of increasing reliance of consumers on spot LNG markets. In 2010 short-term and spot contracts represented 19 percent of the total LNG market, up from only a fraction one decade earlier.107 In this case, increasing demand for spot cargoes indicates that consumers are taking advantage of spot prices that are lower than oilindexed rates. LNG exports will help to sustain market liquidity in what looks to be an increasingly tight LNG market beyond 2015 (see figure 10). Should LNG exports from the United States continue to be permitted, they will add to roughly 10 bcf/day of LNG that is expected to emerge from Australia between 2015 and 2020. Nevertheless, given the projected growth in demand for natural gas in China and India and assuming that some of Japan’s nuclear capacity remains offline, demand for natural gas will outpace the incremental supply. This makes U.S. LNG even more valuable on the international market. Although it will be important to global LNG markets, it is unlikely that the emergence of the United States as an exporter of LNG will change the existing pricing structure overnight. Not only is the market still largely dependent on long-term contracts, the overwhelming majority of new liquefaction capacity emerging in the next decade (largely from Australia) has already been contracted for at oil-indexed rates.108 The incremental LNG volumes supplied by the United States at floating Henry Hub rates will be small in comparison. But while U.S. LNG will not have a transformational impact, by establishing an alternate lower price for LNG derived through a different market mechanism, U.S. exports may be central in catalyzing future changes in LNG contract structure. As previously mentioned, this impact is already being felt in Europe. A number of German utilities have either renegotiated contracts or are seeking arbitration with natural gas suppliers in Norway and Russia. The Atlantic Basin will be a more immediate beneficiary of U.S. LNG exports than the Pacific Basin as many European contracts allow for periodic revisions to the oil-price linkage.109 In the Pacific Basin this contractual arrangement is not as common and most consumers are tied to their respective oil-linkage formulae for the duration of the contract.110 Despite the increasing demand following the Fukushima nuclear accident, however, Japanese LNG consumers are actively pursuing new arrangements for LNG contracts.111 There are other limits to the extent of the impact that U.S. LNG will have on global markets. It is unlikely that many of the LNG export facilities under consideration will reach final investment decision. Instead, it is more probable that U.S. natural gas prices will have rebounded sufficiently to the point that exports are not commercially viable beyond a certain threshold. (figure 11 illustrates the estimated costs of delivering LNG to Japan in 2020.) This threshold, expected by many experts to be roughly 6 bcf/day by 2025, is modest in comparison to the roughly 11 bcf/day of Australian LNG export projects that have reached final investment decision and are expected to be online by 2020. Also, the impact of U.S. LNG exports could be limited by a number of external factors that will have a larger bearing on the future of global LNG prices. For instance, a decision by the Japanese government to phase-out nuclear power would significantly tighten global LNG markets and probably displace any benefit provided by U.S. LNG exports. Conversely, successful and rapid development of China’s shale gas reserves would limit the demand of one of the world’s fastest-growing natural gas consumers. However, to the extent that U.S. LNG exports can help bring about a more globalized pricing structure, they will have economic and geopolitical consequences. Geopolitics A large increase in U.S. LNG exports would have the potential to increase U.S. foreign policy interests in both the Atlantic and Pacific basins. Unlike oil, natural gas has traditionally been an infrastructure-constrained business, giving geographical proximity and political relations between producers and consumers a high level of importance. Issues of “pipeline politics” have been most directly visible in Europe, which relies on Russia for around a third of its gas. Previous disputes between Moscow and Ukraine over pricing have led to major gas shortages in several E.U. countries in the winters (when demand is highest) of both 2006 and 2009. Further disagreements between Moscow and Kiev over the terms of the existing bilateral gas deal have the potential to escalate again, with negative consequences for E.U. consumers. The risk of high reliance on Russian gas has been a principal driver of European energy policy in recent decades. Among central and eastern European states, particularly those formerly aligned with the Soviet Union such as Poland, Hungary, and the Czech Republic, the issue of reliance on imports of Russian gas is a primary energy security concern and has inspired energy policies aimed at diversification of fuel sources for power generation. From the U.S. perspective such Russian influence in the affairs of these democratic nations is an impediment to efforts at political and economic reform. The market power of Gazprom, Russia’s state-owned gas monopoly, is evident in these countries. Although they are closer to Russia than other consumers of Russian gas in Western Europe, many countries in Eastern and Central Europe pay higher contract prices for their imports, as they are more reliant on Russian gas as a proportion of their energy mixes. In the larger economies of Western Europe, which consume most of Russia’s exports, there are efforts to diversify their supply of natural gas. The E.U. has formally acknowledged the need to put in place mechanisms to increase supply diversity. These include market liberalization approaches such as rules mandating third-party access to pipeline infrastructure (from which Gazprom is demanding exemption), and commitments to complete a single market for electricity and gas by 2014, and to ensure that no member country is isolated from electricity and gas grids by 2015.112 Despite these formal efforts, there are several factors retarding the E.U.’s push for a unified effort to reduce dependence on Russian gas. National interest has been given a higher priority than collective, coordinated E.U. energy policy: the gas cutoffs in 2006 and 2009 probably contributed to the acceptance of the Nord Stream project, which carries gas from Russia into Germany. Germany’s decision to phase out its fleet of nuclear reactors by 2022 will result in far higher reliance on natural gas for the E.U.’s biggest economy. The environmental imperative to reduce carbon emissions—codified in the E.U.’s goal of essentially decarbonizing its power sector by the middle of century—mean that natural gas is being viewed by many as the short-to medium fuel of choice in power generation. Finally, the prospects for European countries to replicate the unconventional gas “revolution” that has resulted in a glut of natural gas in the United States look uncertain. Several countries, including France and the U.K., have encountered stiff public opposition to the techniques used in unconventional gas production, while those countries, such as Poland and Hungary, that have moved ahead with unconventional-gas exploration have generally seen disappointing early results. Collectively, these factors suggest that the prospects for reduced European reliance on Russian gas appear dim. The one factor that has been working to the advantage of advocates of greater European gas diversity has been the increased liquidity of the global LNG market, discussed above. Russia’s dominant position in the European gas market is being eroded by the increased availability of LNG. Qatar’s massive expansion in LNG production in 2008, coupled with the rise in unconventional gas production in the United States as well as a drop in global energy demand due to the global recession, produced a global LNG glut that saw many cargoes intended for the U.S. market diverted into Europe. As mentioned previously, with an abundant source of alternative supply, some European consumers, mainly Gazprom’s closest partners, were able to renegotiate their oil-linked, takeor-pay contracts with Gazprom. As figure 10 illustrates, however, in the wake of the Fukushima natural disaster and nuclear accident in Japan and a return to growth in most industrialized economies, the LNG market is projected to tighten considerably in the short-term, potentially returning market power to Russia. However, there is a second, structural change to the global gas market that may have more lasting effects to Russia’s market power in the European gas market. LNG is one of the fastest growing segments of the energy sector. The growth of the LNG market, both through long-term contract and spot-market sales, is likely to put increasing pressure on incumbent pipeline gas suppliers. A significant addition of U.S. LNG exports will accelerate this trend. In addition to adding to the size of the market, U.S. LNG contracts are likely to be determined on a “floating” basis, with sales terms tied to the price of a U.S. benchmark such as Henry Hub, eroding the power of providers of long-term oil linked contract suppliers such as Russia. While U.S. LNG will not be a direct tool of U.S. foreign policy—the destination of U.S. LNG will be determined according to the terms of individual contracts, the spot-price-determined demand, and the LNG traders that purchase such contracts—the addition of a large, market-based producer will indirectly serve to increase gas supply diversity in Europe, thereby providing European consumers with increased flexibility and market power. Increased LNG exports will provide similar assistance to strategic U.S. allies in the Pacific Basin. By adding supply volumes to the global LNG market, the U.S. will help Japan, Korea, India, and other import-dependent countries in South and East Asia to meet their energy needs. The desire on the part of Pacific Basin countries for the U.S. to become a gas supplier to the region has been underlined by the efforts of the Japanese government, which has attempted to secure a free-trade agreement waiver from the United States to allow exports. As with oil price-linked Russian gas contracts in Eu-rope, U.S. LNG exports linked to a floating Henry Hub benchmark, have the potential to weaken the market power of incumbent LNG providers to Asia, increasing the negotiating power of consumers and decreasing the price. As U.S. foreign policy undergoes a “pivot to Asia,” the ability of the U.S. to provide a degree of increased energy security and pricing relief to LNG importers in the region will be an important economic and strategic asset. Beyond the basin-specific considerations of U.S. LNG exports, they would provide a source of predictable natural gas supply that is relatively free from unexpected production or shipping disruption. With Qatar representing roughly one-third of the global LNG market, a blockade or military intervention in the Strait of Hormuz or a direct attack on Qatar’s liquefaction facilities by Iran would inflict chaos on world energy markets. While the United States government will be unable to physically divert LNG cargoes to specific markets or strategic allies that are most affected (gas allocation will be made by the market players), additional volumes of LNG on the world market will benefit all consumers. international Environmental implications Proposed LNG exports from the United States have encountered domestic opposition on environmental grounds. As outlined in Part I, natural gas production causes greenhouse gas emissions in the upstream production process through leakages, venting, and flaring. The greenhouse gas footprint of shale gas production has been the subject of vigorous debate, with some studies suggesting that methane from the production process leads to shale gas having a higher global warming impact than that of other hydrocarbons including coal. While the methodology underlying such studies has been widely criticized, there is no doubt that leakage and venting of natural gas is a serious negative environmental consequence of natural gas production and transportation: EPA has estimated that worldwide leakages and venting volumes were 3,353.5 bcf in 2010.113 By contrast, some advocates of U.S. exports of LNG maintain that they have the potential to bring global environmental benefits if they are used to displace more carbon-intensive fuels. According to the IEA, natural gas in general has the potential to reduce carbon dioxide emissions by 740 million tonnes in 2035, nearly half of which could be achieved by the displacement of coal in China’s power-generation portfolio. Natural gas—in the form of LNG—also has the potential to displace more carbon-intensive fuels in other major energy users, including across the EU and in Japan, which is being forced to burn more coal and oil-based fuels to make up for the nuclear generation capacity lost in the wake of the Fukushima disaster. In addition to its relatively lower carbon-dioxide footprint, natural gas produces lower emissions of pollutants such as sulfur dioxide nitrogen oxide and other particulates than coal and oil. Natural gas—both in the form of LNG and compressed natural gas—is also being viewed as a potential replacement for oil in the vehicle transportation fleet, with large carbon dioxide abatement potential.114 However, as discussed in Part I, even the United States with its low gas prices is unlikely to see any significant move toward natural gas vehicles in the absence of government policies; the prospects for such vehicles entering the European or Asian markets, where gas is several times as expensive, are remote. On the other hand, additional volumes of natural gas in the global power generation fleet may also have longer-term detrimental consequences for carbon emissions. According to the IEA, by backing out nuclear and renewable energy generation, natural gas could add 320Mt of carbon dioxide by 2035.115 Whether U.S. LNG exports contribute to reduced carbon dioxide emissions through the displacement of coal fired power generation or to the crowding out of renewable and nuclear energy in the global energy mix is something of a moot point. According to the IEA, global power generation is projected to exceed 27,000 terawatt hours per year by 2020.116 Even assuming U.S. exports of 6 bcf/day (on the upper end of the range of expectations), zero losses due to transportation, regasification, and transmission, and a high natural gas power plant efficiency level of 60 percent, such volumes would account for just over one percent of total global power generation.117 Therefore, although the domestic environmental impacts associated with shale gas extraction may, pending the outcome of further study, prove to be a cause for concern with respect to greenhouse gas emissions, the potential for U.S. LNG exports to make a meaningful impact on global emissions through changes to the global power generation mix is negligible. Part III: Conclusions and Recommendations

This paper has attempted to answer two questions: Are U.S. LNG exports feasible? If so, what are the implications of U.S. LNG exports? For exports to be feasible, several demand and supply-related conditions need to be met. On the supply side, adequate resources must be available and their production must be sustainable over the long-term. The regulatory and policy environment will need to accommodate natural gas production to ensure that the resources are developed. The capacity and infrastructure required to enable exports must also be in place. This includes the adequacy of the pipeline and storage network, the availability of shipping capacity, and the availability of equipment for production and qualified engineers.

On the demand side, LNG exports will compete with two main other domestic end uses for natural gas: the power-generation sector, and the industrial and petrochemical sector. According to most projections, the U.S. electricity sector will see an increased demand for natural gas as it seeks to comply with policies and regulations aimed at reducing carbon-dioxide emissions and pollutants from the power-generation fleet. Cheaper natural gas in the industrial sector has the potential to lower the cost of petrochemical production and to improve the competitiveness of a range of refining and manufacturing operations. Advocates of natural gas usage in the transportation fleet – particularly in heavy-duty vehicles (HDVs) – see it as a way to decrease the country’s dependence on oil, although absent major policy support, this sector is unlikely to represent a significant source of gas demand.

For increased U.S. LNG exports to be feasible, they will also need to be competitive with supplies from other sources. The major demand centers that would import U.S. LNG would be Pacific Basin consumers (Japan, South Korea, and Taiwan, and increasingly China and India), and Atlantic Basin consumers, mostly in Europe. The supply and demand balance in the Atlantic and Pacific Basins and, therefore the feasibility for natural gas exports from the United States, depend heavily on the uncertain outlook for international unconventional natural gas production. Recent assessments in countries such as China, India, Ukraine, and Poland indicate that each country has significant domestic shale gas reserves. If these reserves are developed effectively—which is likely to be difficult in the short-term due to a lack of infrastructure, physical capacity, and human capacity—many of these countries would dramatically decrease their import dependence, with negative implications for existing and newcomer LNG exporters.

Detailed analysis of the foregoing factors suggests that the exportation of liquefied natural gas from the United States is logistically feasible. Based on current knowledge, the domestic U.S. natural gas resource base is large enough to accommodate the potential increased demand for natural gas from the electricity sector, the industrial sector, the residential and commercial sectors, the transportation sector, and exporters of LNG. Other obstacles to production, including infrastructure, investment, environmental concerns, and human capacity, are likely to be surmountable. Moreover, the current and projected supply and demand fundamentals of the international LNG market are conducive to competitive U.S.-sourced LNG.

While LNG exports may be practically feasible, they will be subject to approval by policy makers if they are to happen. In making a determination on the advisability of exports, the federal government will focus on the likely implications of LNG exports: i.e. whether LNG exports are in the “public interest.” The extent of the domestic implications is largely dependent upon the price impact of exports on domestic natural gas prices. While it is clear that domestic natural gas prices will increase if natural gas is exported, most existing analyses indicate that the implications of this price increase are likely to be modest. Natural gas producers will likely anticipate future demand from LNG exports and will increase production accordingly, limiting price spikes. The impact on the domestic industrial sector is likely to be marginal: to the extent that LNG exports raise domestic gas prices above the level at which they would have been in the absence of such exports, they will negatively affect the competitiveness of U.S. industry relative to international competitors. However, the competitiveness of natural-gas intensive U.S. companies relative to their counterparts is likely to remain strong, given the large differential between projected U.S. gas prices and oil prices, which are the basis for industrial feedstock by competitor countries. Further, LNG exports are likely to stimulate domestic gas production, potentially resulting in greater production of natural gas liquids such as ethane, a valuable feedstock for industrial consumers. LNG exports are also unlikely to result in an increase in price volatility. The volume of LNG exports is capped by the capacity limitations of liquefaction terminals. If liquefaction terminals are running at close to full capacity, an increase in international demand will do little to affect domestic demand for —and therefore domestic prices of —natural gas.

#### U.S. LNG exports send a signal of energy competition with Russia---destroys energy coop key to broader relations

Richard Weitz 13, senior fellow and director of the Center for Political-Military Affairs at Hudson Institute, 1/29/13, “Global Insights: Oil Sector a Challenge for Russia, Opportunity for U.S.,” <http://www.worldpoliticsreview.com/articles/12672/global-insights-oil-sector-a-challenge-for-russia-opportunity-for-u-s>

In the view of Russians interviewed by the authors, this paucity of cooperation results from perceived impediments erected by the U.S. government. Similarly, Russian officials see the shale gas revolution as a conspiracy on the part of the United States to undermine Russia’s role in energy markets.

Absent forward momentum, the Russia-U.S. energy relationship might even deteriorate. The United States could soon become a major energy exporter again, which would lead to direct energy sales competition between Russia and the United States for the first time in history. One major opportunity for enhanced partnership, as opposed to competition, is the deal reached last August between Exxon Mobil and Rosneft. The project has only recently begun the preliminary seismic surveys, technical assessments and environmental studies that would allow any substantial drilling to start.

Bringing the project to fruition, and augmenting it with near-term cooperation on tight oil and other energy projects, is important for both sides. Concrete Russia-U.S. energy collaboration could help dispel mutual misconceptions and perhaps spur U.S. and Russian economic cooperation in other areas. That in turn could help to increase the number of stakeholders in both countries that share an interest in maintaining good relations. These kinds of private-sector ties, as much as political will in Washington and Moscow, will contribute to the health of bilateral ties moving forward.

#### Extinction

Graham Allison 11, Director of the Belfer Center for Science and International Affairs at Harvard’s Kennedy School of Government, 10/30/11, “10 reasons why Russia still matters,” http://dyn.politico.com/printstory.cfm?uuid=161EF282-72F9-4D48-8B9C-C5B3396CA0E6

That central point is that Russia matters a great deal to a U.S. government seeking to defend and advance its national interests. Prime Minister Vladimir Putin’s decision to return next year as president makes it all the more critical for Washington to manage its relationship with Russia through coherent, realistic policies. No one denies that Russia is a dangerous, difficult, often disappointing state to do business with. We should not overlook its many human rights and legal failures. Nonetheless, Russia is a player whose choices affect our vital interests in nuclear security and energy. It is key to supplying 100,000 U.S. troops fighting in Afghanistan and preventing Iran from acquiring nuclear weapons. Ten realities require U.S. policymakers to advance our nation’s interests by engaging and working with Moscow. First, Russia remains the only nation that can erase the United States from the map in 30 minutes. As every president since John F. Kennedy has recognized, Russia’s cooperation is critical to averting nuclear war. Second, Russia is our most consequential partner in preventing nuclear terrorism. Through a combination of more than $11 billion in U.S. aid, provided through the Nunn-Lugar [CTR] Cooperative Threat Reduction program, and impressive Russian professionalism, two decades after the collapse of the “evil empire,” not one nuclear weapon has been found loose. Third, Russia plays an essential role in preventing the proliferation of nuclear weapons and missile-delivery systems. As Washington seeks to stop Iran’s drive toward nuclear weapons, Russian choices to sell or withhold sensitive technologies are the difference between failure and the possibility of success. Fourth, Russian support in sharing intelligence and cooperating in operations remains essential to the U.S. war to destroy Al Qaeda and combat other transnational terrorist groups. Fifth, Russia provides a vital supply line to 100,000 U.S. troops fighting in Afghanistan. As U.S. relations with Pakistan have deteriorated, the Russian lifeline has grown ever more important and now accounts for half all daily deliveries. Sixth, Russia is the world’s largest oil producer and second largest gas producer. Over the past decade, Russia has added more oil and gas exports to world energy markets than any other nation. Most major energy transport routes from Eurasia start in Russia or cross its nine time zones. As citizens of a country that imports two of every three of the 20 million barrels of oil that fuel U.S. cars daily, Americans feel Russia’s impact at our gas pumps. Seventh, Moscow is an important player in today’s international system. It is no accident that Russia is one of the five veto-wielding, permanent members of the U.N. Security Council, as well as a member of the G-8 and G-20. A Moscow more closely aligned with U.S. goals would be significant in the balance of power to shape an environment in which China can emerge as a global power without overturning the existing order. Eighth, Russia is the largest country on Earth by land area, abutting China on the East, Poland in the West and the United States across the Arctic. This territory provides transit corridors for supplies to global markets whose stability is vital to the U.S. economy. Ninth, Russia’s brainpower is reflected in the fact that it has won more Nobel Prizes for science than all of Asia, places first in most math competitions and dominates the world chess masters list. The only way U.S. astronauts can now travel to and from the International Space Station is to hitch a ride on Russian rockets. The co-founder of the most advanced digital company in the world, Google, is Russian-born Sergei Brin. Tenth, Russia’s potential as a spoiler is difficult to exaggerate. Consider what a Russian president intent on frustrating U.S. international objectives could do — from stopping the supply flow to Afghanistan to selling S-300 air defense missiles to Tehran to joining China in preventing U.N. Security Council resolutions.

# States

#### TEXT: The 50 states should create a uniform permitting process for offshore wind production, include offshore wind energy production as a qualifying energy in existing Renewable Portfolio Standards, and provide a long term investment tax credit for offshore wind development in the United States.

#### States should remove state and local restrictions on offshore wind energy because federal law precludes it.

#### CP solves offshore wind development

Gordon 12 (VP for Energy Policy at American Progress, April, Taking Action on Clean Energy and Climate Protection in 2012, http://www.americanprogress.org/wp-content/uploads/issues/2012/04/pdf/energy\_solutions.pdf)

Expedite permitting processes for offshore wind development in state waters Why it matters: Offshore wind is a commercially scalable source of renewable energy. Some of the best wind resources in the world exist in close proximity to some of the most densely populated regions in America, such as the northeast and Mid-Atlantic. In Maine, Rhode Island, New Jersey, and Maryland, legislatures and governors are eager to tap into this resource for its potential clean energy contribution and the opportunity to establish a beachhead in their state for an industry with the potential to create hundreds of thousands of jobs, according to “Untapped Wealth: Offshore Wind Can Deliver Cleaner, More Affordable Energy and More Jobs Than Offshore Oil,” a 2010 study by the ocean protection nonprofit organization Oceana. States only control ocean space out to three miles from their shoreline, which limits the potential size of wind farms in state waters. Yet **the immense value of these installations as pilot projects** is compounded by the relative ease of permitting—**taking the federal government out of the process eliminates numerous hurdles**. A concerted push from a state government to expedite its permitting process will allow that state to **stake an early claim to “first in the nation” status for a demonstration project and** provide a launching pad for a renewable energy industry with tremendous economic promise.

# Oceans Adv

## 1NC

#### CP: The United States federal government should prohibit trawling inside areas that would be eligible for offshore wind development if not for state and local restrictions on offshore wind energy, and should erect non-energy generating structures that model the foundations of wind turbines to act as artificial reefs in areas restricted for offshore wind energy by state and local restrictions.

#### And the United States federal government should increase its investment in port upgrades including but not limited to deepening ports.

#### Solves the case---their Casey ev says offshore wind solves trawling because it’s prohibited in areas surrounding wind farms---their Musial ev says the turbine foundations act as artificial reefs---the CP constructs analogous foundations, just not for wind turbines.

#### Nothing else in the 1AC is a solvency warrant---every other highlighted warrant in their internal link ev is about why offshore wind is not that bad---i.e., doesn’t kill that many birds, doesn’t interfere with fish, etc---zero solvency deficits because we’re directly addressing their internal links.

#### Their O’Hare ev votes for the counterplan

O’Hare, 1/28/13 [US risks falling behind competition¶ By Kerry O'Hare¶ Vice President, Director of Policy, Building America's Future, http://transportation.nationaljournal.com/2013/01/ports-matter-too.php]

It is clearly time for policymakers to get serious about modernizing the nation’s infrastructure policy. We need a long term strategy that prioritizes investment in our economically vital gateways and corridors and on projects that will provide the greatest economic returns. MAP-21 has started to lay the groundwork for much needed policy reforms with regard to surface transportation but more needs to be done. For example, it has been roughly five years since Congress approved that last WRDA bill. This looks to change in the 113th Congress as both Chairmen Shuster and Boxer have made passage of a new WRDA a bill a priority for both of their committees. That is welcome news.¶ But until these long term strategies are put in place, the U.S. risks having our global economic competitors pass us by. We must not allow that to happen.

## 2NC

#### Climate change proves Oceans and marine bioD are resilient – alarmist predictions empirically denied

Taylor 10 [James M. Taylor is a senior fellow of The Heartland Institute and managing editor of Environment & Climate News., “Ocean Acidification Scare Pushed at Copenhagen,” Feb 10 http://www.heartland.org/publications/environment%20climate/article/26815/Ocean\_Acidification\_Scare\_Pushed\_at\_Copenhagen.html]

With global temperatures continuing their decade-long decline and United Nations-sponsored global warming talks falling apart in Copenhagen, alarmists at the U.N. talks spent considerable time claiming carbon dioxide emissions will cause catastrophic ocean acidification, regardless of whether temperatures rise. The latest scientific data, however, show no such catastrophe is likely to occur. Food Supply Risk Claimed The United Kingdom’s environment secretary, Hilary Benn, initiated the Copenhagen ocean scare with a high-profile speech and numerous media interviews claiming ocean acidification threatens the world’s food supply. “The fact is our seas absorb CO2. They absorb about a quarter of the total that we produce, but it is making our seas more acidic,” said Benn in his speech. “If this continues as a problem, then it can affect the one billion people who depend on fish as their principle source of protein, and we have to feed another 2½ to 3 billion people over the next 40 to 50 years.” Benn’s claim of oceans becoming “more acidic” is misleading, however. Water with a pH of 7.0 is considered neutral. pH values lower than 7.0 are considered acidic, while those higher than 7.0 are considered alkaline. The world’s oceans have a pH of 8.1, making them alkaline, not acidic. Increasing carbon dioxide concentrations would make the oceans less alkaline but not acidic. Since human industrial activity first began emitting carbon dioxide into the atmosphere a little more than 200 years ago, the pH of the oceans has fallen merely 0.1, from 8.2 to 8.1. Following Benn’s December 14 speech and public relations efforts, most of the world’s major media outlets produced stories claiming ocean acidification is threatening the world’s marine life. An Associated Press headline, for example, went so far as to call ocean acidification the “evil twin” of climate change. Studies Show CO2 Benefits Numerous recent scientific studies show higher carbon dioxide levels in the world’s oceans have the same beneficial effect on marine life as higher levels of atmospheric carbon dioxide have on terrestrial plant life. In a 2005 study published in the Journal of Geophysical Research, scientists examined trends in chlorophyll concentrations, critical building blocks in the oceanic food chain. The French and American scientists reported “an overall increase of the world ocean average chlorophyll concentration by about 22 percent” during the prior two decades of increasing carbon dioxide concentrations. In a 2006 study published in Global Change Biology, scientists observed higher CO2 levels are correlated with better growth conditions for oceanic life. The highest CO2 concentrations produced “higher growth rates and biomass yields” than the lower CO2 conditions. Higher CO2 levels may well fuel “subsequent primary production, phytoplankton blooms, and sustaining oceanic food-webs,” the study concluded. Ocean Life ‘Surprisingly Resilient’ In a 2008 study published in Biogeosciences, scientists subjected marine organisms to varying concentrations of CO2, including abrupt changes of CO2 concentration. The ecosystems were “surprisingly resilient” to changes in atmospheric CO2, and “the ecosystem composition, bacterial and phytoplankton abundances and productivity, grazing rates and total grazer abundance and reproduction were not significantly affected by CO2-induced effects.” In a 2009 study published in Proceedings of the National Academy of Sciences, scientists reported, “Sea star growth and feeding rates increased with water temperature from 5ºC to 21ºC. A doubling of current [CO2] also increased growth rates both with and without a concurrent temperature increase from 12ºC to 15ºC.” Another False CO2 Scare “Far too many predictions of CO2-induced catastrophes are treated by alarmists as sure to occur, when real-world observations show these doomsday scenarios to be highly unlikely or even virtual impossibilities,” said Craig Idso, Ph.D., author of the 2009 book CO2, Global Warming and Coral Reefs. “The phenomenon of CO2-induced ocean acidification appears to be no different.

#### Alt causes to overfishing

Edmonton Journal 8 (Elaine O’Connor, “World's oceans at risk of becoming soupy swill; Rising temperatures, runoff toxins creating 'dead zones'” 9/15/2008, www.canada.com/edmontonjournal/news/story.html?id=3c40fbee-40e4-443a-b736-c70c6072649e)

VANCOUVER - Sally Cole came home from a sailing trip in August looking forward to a hot shower. But when she turned on her tap, all she got was slime. "I turned on the tap and it just flooped. Just a bit of viscous gloop came out. It was really horrible," said the resident of B.C's Saltspring Island between the mainland and Vancouver Island. The culprit was an algae bloom on the nearby lake that had choked the water pipes of hundreds of the area's residents. It took three days to clear. The incident is one example of how seas and lakes are suffocating in slime. That toxic slime -- algae feasting on pollutants and fertilizers, and starving the ocean of oxygen -- is killing off sea life at an alarming rate. A new study published in August reveals the world's "dead zones" have doubled in size every decade since 1960. Coastal waters with once rich marine life -- Chesapeake Bay, the Baltic Sea, the Black Sea and off Peru, Chile and Namibia -- are rapidly losing species. According to the report by two U.S. scientists, there are 405 asphyxiating dead zones in our oceans. The cause, predictably, is pollution. The culprits are fertilizer runoff in estuaries, sewage, global warming, overfishing and industrial waste. Millions of tonnes of "nutrient pollution" -- chemical fertilizer that adds phosphates and nitrogen to the water -- feed algae blooms. Some zones are vast -- the Baltic Sea's 70,000-square-kilometre aquatic graveyard is the largest. The Gulf of Mexico harbours North America's giant dead zone: A 22,000-square-km sea morgue, or something roughly the size of New Jersey. Other dead zones have been discovered off California, in Lake Erie, around the Florida Keys, in North and South Carolina creeks and in Washington's Puget Sound. Together, they have turned 246,048 square kilometres of the seas -- an area the equivalent of all five of the Great Lakes -- into marine wastelands. Robert Diaz, a Virginia Institute of Marine Science professor and co-author of the study, says the problem is already evident in Canadian waters. In B.C., a dead zone was first spotted in the Saanich Inlet in 1960. Dead zones have been recorded in P.E.I. fish-farming bays since 2000. If fish swim into a dead zone, they often become unconscious and cannot escape. Shellfish and bottom-dwellers move too slowly, so a stew of rotting marine life is left behind. Even when fish survive in low-oxygen water, research shows their reproduction suffers, which could jeopardize wild fish stocks. Diaz says this could be catastrophic for our local marine life and aquaculture. He says zones are likely to intensify as their contributing factors of algal blooms and intensive fish-farming are "problems that will continue into the future." Already, the impact of ocean deterioration is being felt all along the Pacific coast. Fishermen are bringing up cages of dead Dungeness crabs and salmon researchers have found low oxygen from the Columbia River on Oregon border's to northern Washington. As fish stocks fall, seabird populations are dying of starvation. Deadly algae are also becoming common on the Pacific West Coast. They have been blamed for the erratic behaviour and mass die-offs of sea mammals since some algae act as neurotoxins and impair brain function. Some 14,000 seals, sea lions and dolphins have washed up sick or dead in California in the last 10 years, and 650 grey whales have beached. Deadly algae have been a problem in the region since the 1980s, but scientists say they're increasingly frequent and intense. Algae is also storming international seas and claiming human victims. Near Sweden, cyanobacteria blooms at times turn the Baltic Sea into a brown slush that makes residents' eyes burn. On Florida's Gulf Coast, toxic tides have killed hundreds of manatees and caused breathing problems for area residents. Algae has smothered 80 per cent of coral reefs in the Caribbean and ruined 75 per cent of California's fish-rich kelp forests. Poison day-glo-green caulerpa algae is killing fish off the coasts of 11 countries. What will become of our oceans? One U.S. oceanographer has a succinct answer: slime. Jeremy Jackson, a Scripps Institution of Oceanography professor, released a report in August warning of "mass extinction" in oceans due to dead zones, global warming, overfishing, pollution, ocean acidification, ecosystem destruction and invasive species.

# Ports Adv

#### Only the federal government has jurisdiction to dredge-- they won’t provide funding

AIMU 6 American Institute of Marine Underwriters. “Dredging and Marine Contractors,” May, http://www.aimu.org/Dredging%20&%20Marine%20Contractors.pdf

The U.S. Army Corps of Engineers (USACE) is responsible for the maintenance of waterways and ports/harbors within the U.S. Consequently, they control and award all dredging projects on U.S. waters. Before any dredging project can begin, there first must be a type of cost benefit analysis performed by the USACE called Net Economic Development Benefits (NED). The NED attempts to determine if the project would be in the government’s interest to undertake. This can often lead to competition between neighboring ports. For example, is it in the public’s best interest to pursue the deepening of the channel for the Port of Philadelphia, or to commit our limited resources to the deepening of the Port of New York/ New Jersey? Although not necessarily mutually exclusive, sometimes the answer may mean that one port will grow, while the other will decline.

#### Congress won’t provide any funding

Spivak 11 -- senior research analyst at the HNTB Corporation, a transportation design and engineering firm (Jeffrey, "The Battle of the Ports", May/June, American Planning Association, aapa.files.cms-plus.com/Battle%20of%20the%20Ports%20-%20Planning%20mag%20-%20May\_June%202011.pdf)

The fact is, with the federal deficit-cutting climate in Washington D.C., getting funding for port projects could become more difficult. For one thing, the Harbor Maintenance Trust Fund is tapped every year to help offset the federal deficit. For another, Congress has sworn off the earmarks, or individual projects requested by lawmakers, that were a major source of port funding. "There is too much competition for scarce federal dollars," says Russell Held of the Virginia Port Authority.

#### onomic leadership’s resilient and inevitable

Eric S. Edelman 10, former Under Secretary of Defense for Policy, was Principal Deputy Assistant to the Vice President for National Security Affairs, 2010, “Understanding America’s Contested Primacy,” Center for Strategic and Budgetary Assessments

Morgenthau talks about national morale and character as key elements of national power; characteristics that don’t normally weigh heavily in declinist literature which favors the easily quantifiable measures such as national shares of global economic product. As Robert Lieber has recently argued, US resilience, which results from the openness of American society and its resulting flexibility and adaptability, will benefit the United States as it responds to the Great Recession and the prospect of national decline. In that regard the often-criticized American “capitalisme sauvage,” which many foreign critics blame for producing the economic crisis, may assist the United States in recovering more quickly than others. As a recent Economist survey of business in America noted, the Schumpeterian process of “creative destruction” means that “America’s non-financial businesses are suffering. But they will emerge from the recession leaner and stronger than ever.” Niall Ferguson predicts that “when the crisis ends, America will still be the best place in the world to do business.” That is fully consistent with the findings of the recently released third annual Legatum Institute Prosperity Index which rated the United States number one in the world for innovation and entrepreneurship and found that “the ability of a nation’s people to innovate is more strongly related to the soundness of its economy than any other factor.”129

Openness to innovation may also play an important role in extending the United States’ leading role in the international economy. Some scholars believe that innovation is the key to countries emerging as system leaders in sectors that power long waves of economic activity and growth. Failure to maintain system leadership in these sectors is a key cause of decline. Twenty years ago William R. Thompson observed “a key, if not the key to the relative economic decline of the United States will be what happens in the next upturn of the leading sector long wave. This assumes that there will be an upturn and that the long wave dynamic will continue into the twenty-first century when biotechnology, computers, robotics, lasers, and new sources of energy may well lay the leading sector foundation for the upswing.” US leadership and facility with information technology has been one of the drivers of US increased productivity in the past twenty years. A study by the London School of Economics has demonstrated that, as its title declares, “Americans do I.T. better.” US-owned UK subsidiaries, for example, use information technology better than non-US owned UK firms because they are organized to use IT more efficiently. This offers yet another strategic advantage vis-à-vis China, which seems to have great difficulty with both innovation and managing the social and collaborative uses of information technology.130

#### No impact

Robert Jervis 11, Professor in the Department of Political Science and School of International and Public Affairs at Columbia University, December 2011, “Force in Our Times,” Survival, Vol. 25, No. 4, p. 403-425

Even if war is still seen as evil, the security community could be dissolved if severe conflicts of interest were to arise. Could the more peaceful world generate new interests that would bring the members of the community into sharp disputes? 45 A zero-sum sense of status would be one example, perhaps linked to a steep rise in nationalism. More likely would be a worsening of the current economic difficulties, which could itself produce greater nationalism, undermine democracy and bring back old-fashioned beggar-my-neighbor economic policies. While these dangers are real, it is hard to believe that the conflicts could be great enough to lead the members of the community to contemplate fighting each other. It is not so much that economic interdependence has proceeded to the point where it could not be reversed – states that were more internally interdependent than anything seen internationally have fought bloody civil wars. Rather it is that even if the more extreme versions of free trade and economic liberalism become discredited, it is hard to see how without building on a preexisting high level of political conflict leaders and mass opinion would come to believe that their countries could prosper by impoverishing or even attacking others. Is it possible that problems will not only become severe, but that people will entertain the thought that they have to be solved by war? While a pessimist could note that this argument does not appear as outlandish as it did before the financial crisis, an optimist could reply (correctly, in my view) that the very fact that we have seen such a sharp economic down-turn without anyone suggesting that force of arms is the solution shows that even if bad times bring about greater economic conflict, it will not make war thinkable.

# Fism Adv

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#### Squo solves – massive increase in federal preemption of state laws

Robert Glicksman 8, CPR Member Scholar, Law Prof @ GWU, 11-14-2008, “Revitalizing Cooperative Federalism by Limiting Federal Preemption of State law,” Center for Progressive Reform, http://www.progressivereform.org/CPRBlog.cfm?idBlog=98B13094-1E0B-E803-CA3815A3369755D4

In recent years, and especially during the last eight years, this cooperative federalism model has foundered. The Bush Administration, virtually across the board, has endeavored to weaken federal measures for protecting public health and the environment. It has typically done so in the face of scientific evidence that existing controls are, if anything, too weak. In response to these alarming efforts by the Bush Administration to serve the interests of its business and industrial allies instead of those of the American people, many states have proposed or enacted environmental laws to provide the vitally needed protections that the federal government has failed to provide. The most obvious (and important) examples concern global climate change. The Bush Administration has obstinately refused to take any meaningful action, either alone or in combination with other nations, to reduce greenhouse gas emissions that contribute to climate change, even though it represents the most far-reaching environmental threat the nation and the world have ever faced. State governments across the nation responded by adopting programs to address climate change. Indeed, state and local governments have been more active and innovative in the last several years than ever before in their environmental protection efforts. The Bush Administration’s response has been to attempt to shackle these efforts by prohibiting the adoption of state and local protective measures, even in areas in which the federal government has refused to act. In a sense, then, the Bush Administration has turned the notion of cooperative federalism on its head. Instead of seeking to ensure that all levels of government cooperate to achieve necessary levels of environmental protection, the Bush Administration has worked to gut federal environmental laws while simultaneously blocking the efforts of state and local governments to do what the federal government will not. The Administration has used different tools to implement this strategy. One of the most important -- and perverse -- of these relies on an over-reading of the doctrine of federal preemption. The Supremacy Clause of the U.S. Constitution provides that, in the event of a conflict, federal law supersedes state law. Thus, if Congress wants to preempt state law, thereby preserving for the federal government the exclusive authority to legislate in a particular field, it may do so by explicitly providing in a statute that the federal statute precludes supplemental state law. Even when a federal statute is silent on preemption matters, the Supreme Court has recognized that Congress may preempt state law implicitly, if there is evidence that Congress intended to prohibit all state and local activity in a particular field, compliance with both federal and state law would be impossible, or the pursuit of state law would frustrate federal policies. Until recently, preemption of more stringent state environmental protection laws was rare. Many statutes include “savings clauses,” which explicitly preserve the power of states and localities to supplement federal environmental laws with their own more protective measures. This practice of preserving state power to go beyond federal requirements is an important component of the cooperative federalism model on which environmental laws are built. The Bush Administration, however, has subverted cooperative federalism by invoking federal preemption in a variety of settings to invalidate needed state environmental laws. Agencies such as the Food and Drug Administration, the Environmental Protection Agency (EPA), and the National Highway Traffic Safety Administration (NHTSA) have all asserted that the laws they administer implicitly preempt state law. NHTSA, for example, has argued that federal fuel efficiency standards implicitly preempt state laws that restrict greenhouse gas emissions, despite the federal government’s refusal to take measures of its own.

#### The aff doesn’t set a precedent for other issues

William D. Araiza, Law Prof @ Brooklyn, Summer 2012, “PLAYING WELL WITH OTHERS-BUT STILL WINNING,” 46 Ga. L. Rev. 1059, ln

How can a judge undermine precedent while still following it? This Essay considers the methods by which Supreme Court Justices may weaken precedent without explicitly overruling cases by strategically adopting an approach to stare decisis that is less explicitly aggressive than their colleagues'. Adding to the literature of "stealth overruling," this Essay considers examples of such methods from Chief Justice Roberts's first five years on the Supreme Court. These examples indicate that Chief Justice Roberts knows how to engage in stealth overruling and, more broadly, how to use his colleagues' preferences to maintain a formal commitment to judicial humility while achieving jurisprudential change. As such, they reveal important insights about how Justices can operate strategically to achieve their preferences within both the opportunities and the confines inherent in a multi-judge court. After five years, many have accused the Roberts Court of aggressively attacking precedent. No less a figure than Justice O'Connor, whose retirement marked the effective start of that Court, has expressed concern about the Roberts Court's willingness to overrule prior decisions. n1 Then-Judge Roberts's famous confirmation hearing analogy of judging to umpiring n2 and his professed respect for stare decisis n3 make for a dramatic narrative in which a nominee piously describes a humble role for judges but then, once safely confirmed, sets out with a wrecking ball. The charge may have merit, but a short essay is not the vehicle to make that determination. Simply pointing to a few high-profile [\*1061] overrulings, as critics sometimes do, proves little. n4 Rather, an in-depth examination of the issue requires considering the situations where the overruling dog did not bark-that is, where the Court could have overruled a prior case but declined to do so. n5 Such an investigation also calls for both historical perspective and nuance. n6 Reaching interesting conclusions about the Roberts Court's treatment of stare decisis requires that we identify a baseline of how previous Courts have treated that principle. If impressionistic conclusions based on a few dramatic examples are enough to consider the charge proven, then the Rehnquist n7 and Warren n8 Courts are presumably guilty also. Moreover, not all overrulings are created equal. Determining the extent of the Roberts Court's alleged disregard of precedent also requires considering the importance of the precedents the Court has in fact rejected. Consider Justice White's dissent in INS v. Chadha. n9 White characterized the majority's rejection of the legislative veto as effectively striking down hundreds of statutes and eliminating a then-major feature of the modern administrative state. n10 Chadha was not a case where the Court overruled precedent. Justice White's complaint about the far-reaching nature of the Court's decision, however, reminds us that identifying judicial aggressiveness, whatever its form, requires [\*1062] more than simply adding up the number of cases where the Court has acted aggressively. n11 This Essay considers the Roberts Court and stare decisis from a different angle. It examines several methods by which Chief Justice Roberts arguably has used the multi-judge nature of the Supreme Court to his advantage in undermining precedent without explicitly calling for its overruling. n12 These examples do not prove that the Court as a whole, or the Chief Justice in particular, is bent on undoing the work of prior Courts. Instead, they illustrate the ways in which a Justice can work within the formal confines of precedent to achieve fundamentally different results, either in the short or long term. n13 The methods described below depend in part on the distinction between the result a court reaches in a case and the reasoning it employs. The nature of the Supreme Court as a multi-judge court makes this distinction possible: often times, the Court may agree on a result but split sharply on its reasoning. n14 This opens up room for a creative Justice to undermine precedent, even as the Justice expresses reasons that appear moderate-in particular, more moderate than those who are more inclined to overrule explicitly. In so doing, the Justice may create the conditions for the ultimate rejection of that precedent, even while publicly counseling restraint-indeed, even while voting to uphold that [\*1063] precedent. n15 In short, this Essay considers methods by which Justices can play well with others-both those that came before (via respect for stare decisis) and current colleagues (by strategically positioning themselves among them)-and still achieve their ultimate goal. n16 This Essay situates itself at the intersection of two ongoing debates about judicial behavior. The first examines the concept of stealth overruling-the practice of limiting or even eviscerating a precedent while ostensibly remaining faithful to it. n17 This phenomenon has become a major topic of scholarly discussion during the last five years, n18 as scholars have identified and analyzed examples of the Roberts Court engaging in such conduct-conduct generally thought to have resulted from the replacement of a sometimes centrist Justice O'Connor with a more reliably conservative Justice Alito. n19 The examples in this Essay illustrate instances where the Court or a plurality thereof arguably has engaged in such conduct. n20 The lessons one can draw from these examples will help shape an understanding of the stealth overruling phenomenon, and the extent to which the Roberts Court performs it. Second, this Essay engages the debate about the implications of the Supreme Court's character as a collegial body. Scholars long have acknowledged that critiques of the Court must account for its collegial nature rather than simply treating it as a purposive [\*1064] individual. n21 This Essay contributes to that debate by considering how Chief Justice Roberts may in certain cases strategically use his colleagues' calls for more explicit overruling of precedent as a tool in maintaining his and the Court's reputation as faithful to stare decisis while nevertheless pushing the law away from precedents.

#### he aff doesn’t cause dynamic federalism---only angers the states

Sierra B. Weaver, JD Harvard, 2002, “Local Management of Natural Resources: Should Local Governments be Able to Keep Oil Out?” 26 Harv. Envtl. L. Rev. 231, ln

C. Cooperative Federalism in the Agencies and Courts The promise of cooperation embodied in OCSLA and the CZMA has not come to pass. Despite the new legislation and explicit changes to OCSLA during the late 1970s, federal and state governments have continued to work largely at cross-purposes. The federal government has remained interested primarily in energy security and has refused to abandon the large revenues it gains from OCS leasing by scaling back development. n42 The state governments, on the other hand, have looked to preserve their citizens' oceanfront property values, environmental health, and local economies based on fishing or tourism--interests that have historically conflicted with energy development. OCSLA and the CZMA have thus walked the two tiers of government through the procedural motions of cooperation, but OCS management decisions have ultimately remained with the federal government. As a result, state and local interests not represented by the federal government have been forced to turn to other means of protection. [\*239] Over the course of program implementation, federal agencies and courts have been called on to mediate between both the competing resources of the OCS and the competing levels of government. Almost universally, they have favored federal, and hence, extractive interests above all others. For example, during the early 1980s, the Reagan administration's Interior Department pursued a vigorous expansion of OCS exploration and development over the vehement objections of several coastal states, most notably California. Courts came into this debate as arbiters and interpreters of how the competing interests of energy and environment, national and local, were to be balanced. With the first decisions coinciding with the birth of "Chevron deference," n43 courts were, not surprisingly, supportive of federal interests as expressed through the agencies. Moreover, courts upheld the expansion of federal leasing by reading deferentially the statutory purpose of "expeditious and orderly development" of the OCS, thereby failing to give equal weight to the competing purposes recognized in the same subchapter of OCSLA. n44

#### o monolithic form of federalism---doesn’t create a coherent system

Heather K. Gerken, lecturer @ William & Mary, April 2012, “OUR FEDERALISM(S),” 53 Wm. & Mary L. Rev. 1549, ln

Like all academics, federalism scholars typically divide into camps. Some favor state sovereignty; others favor state autonomy. Some insist that states require formal, judicially enforceable protections against federal intrusion; others favor the informal protections afforded by the political process. Some favor cooperative federalism; others are not even sure that cooperative regimes can properly be called federalism. Scholars even divide as to the source of state power in its ongoing competition with the national government. Some imagine states occupying a separate sphere from the federal government. n1 Others assume that some level of state-federal integration is not just inevitable but healthy. Still others imagine that it is useful to have states serve as fully integrated administrative units within the federal system. When scholars write about these debates, they often write as if we must choose between these different accounts of federalism -that we need one theory to rule them all (with apologies to Tolkien). It is not surprising that federalism scholarship usually rests on this assumption. Academics mostly write about the case law. And in a given case, one usually does have to make a choice between one theory or another. n2 In the legislative and administrative arenas, however, our choices are far more varied. We need not hew exclusively to one vision of federalism. We can choose all of them at once. And we do. Every flavor of federalism can be found somewhere in our system. Institutional structures and interactions vary dramatically from domain to domain, program to program. Substantial variegation can be found within the same statutory scheme. n3 Indeed, even in the judicial context, we can-and do- choose more than one vision [\*1551] of federalism. "Our Federalism," n4 in short, contains multitudes. It would be more accurate to call it "Our Federalism(s)." n5 It would be useful if federalism debates were more attentive to the fact that there are many federalisms, not one. In this Article, I identify three main reasons why federalism debates would improve if we paid more attention to federalism's many facets. First, federalism debates have an all-or-nothing quality to them, as if different accounts of federalism are mutually exclusive. Arguments typically rest on the assumption that different forms of state power are substitutes for one another. As a result, scholars have largely neglected the possibility that these forms of state power can also be complements. Sovereignty can be leveraged to give states more power within the national policy-making process. States' status as administrative insiders can help them preserve their power outside of national policymaking. It would be useful if scholars were more attentive to the fact that the questions federalism raises need not involve an either/or answer. Often they will involve a both/and.

#### ero risk of a global drones precedent---it’s inevitable regardless of what the U.S. does

Robert Wright 12, “The Incoherence of a Drone-Strike Advocate,” 11/14/12, http://www.theatlantic.com/international/archive/2012/11/the-incoherence-of-a-drone-strike-advocate/265256/

Naureen Shah of Columbia Law School, a guest on the show, had raised the possibility that America is setting a dangerous precedent with drone strikes. If other people start doing what America does--fire drones into nations that house somebody they want dead--couldn't this come back to haunt us? And haunt the whole world? Shouldn't the U.S. be helping to establish a global norm against this sort of thing? Host Warren Olney asked Boot to respond. ¶ Boot started out with this observation:¶ I think the precedent setting argument is overblown, because I don't think other countries act based necessarily on what we do and in fact we've seen lots of Americans be killed by acts of terrorism over the last several decades, none of them by drones but they've certainly been killed with car bombs and other means.¶ That's true--no deaths by terrorist drone strike so far. But I think a fairly undeniable premise of the question was that the arsenal of terrorists and other nations may change as time passes. So answering it by reference to their current arsenal isn't very illuminating. In 1945, if I had raised the possibility that the Soviet Union might one day have nuclear weapons, it wouldn't have made sense for you to dismiss that possibility by noting that none of the Soviet bombs dropped during World War II were nuclear, right? ¶ As if he was reading my mind, Boot immediately went on to address the prospect of drone technology spreading. Here's what he said: ¶ You know, drones are a pretty high tech instrument to employ and they're going to be outside the reach of most terrorist groups and even most countries. But whether we use them or not, the technology is propagating out there. We're seeing Hezbollah operate Iranian supplied drones over Israel, for example, and our giving up our use of drones is not going to prevent Iran or others from using drones on their own. So I wouldn't worry too much about the so called precedent it sets..."

#### **Squo regs and physical barriers prevent fracking water contamination**

Loris 12 – Nicolas D. Loris is the Herbert and Joyce Morgan Fellow in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation, August 29th, 2012, "Hydraulic Fracturing: Critical for Energy Production, Jobs, and Economic Growth," [www.thecuttingedgenews.com/index.php?article=75622&pageid=&pagename](http://www.thecuttingedgenews.com/index.php?article=75622&pageid=&pagename)=

Myth #1: Hydraulic fracturing threatens underground water sources and has led to the contamination of drinking water.¶ Fact: Hydraulic fracturing is subject to both federal and state regulations, and there have been no instances of fracking causing contamination of drinking water.¶ Groundwater aquifers sit thousands of feet above the level at which fracking takes place, and companies construct wells with steel-surface casings and cement barriers to prevent gas migration. Studies by the Environmental Protection Agency (EPA), the **Groundwater Protection Council, and independent agencies** have **found** no evidence of groundwater contamination. In May 2011, EPA Administrator Lisa Jackson stated before the U.S. House Oversight and Government Reform Committee that “I am not aware of any proven case where the fracking process itself affected water although there are investigations ongoing.” Three of those investigations are in Texas, Wyoming, and Pennsylvania, and thus far the EPA has found no evidence of contamination; in the case of Wyoming, however, the EPA published faulty data with speculative and heavily contested conclusions. In all three cases the EPA ignored state regulators’ management of the alleged problems. Although previous EPA analysis of hydraulic fracturing found the process to be safe, the EPA now plans to publish a full study on hydraulic fracturing and drinking water that ostensibly demonstrates lack of safety. Analysis of the EPA’s “Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources” by the nonprofit technology research and development organization Battelle highlighted a number of concerns, including cherry-picking of data, lack of peer review, poor quality control, and a lack of transparency.¶

#### Multiple factors make Asia war unlikely

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

#### est data proves climate change doesn’t cause conflict---cooling’s more likely to cause war

Erik Gartzke 11, Associate Professor of Political Science at UC-San Diego, March 16, 2011, “Could Climate Change Precipitate Peace?,” online: <http://dss.ucsd.edu/~egartzke/papers/climate_for_conflict_03052011.pdf>

An evolving consensus that the earth is becoming warmer has led to increased interest in the social consequences of climate change. Along with rising sea levels, varying patterns of precipitation, vegetation, and possible resource scarcity, perhaps the most incendiary claims have to do with conflict and political violence. A second consensus has begun to emerge among policy makers and opinion leaders that global warming may well result in increased civil and even interstate warfare, as groups and nations compete for water, soil, or oil. Authoritative bodies, leading government officials, and even the Nobel Peace prize committee have highlighted the prospect that climate change will give rise to more heated confrontations as communities compete in a warmer world.

Where the basic science of climate change preceded policy, this second consensus among politicians and pundits about climate and conflict formed in the absence of substantial scientific evidence. While anecdote and some focused statistical research suggests that civil conflict may have worsened in response to recent climate change in developing regions (c.f., Homer-Dixon 1991, 1994; Burke et al. 2009). these claims have been severely criticized by other studies (Nordas & Gleditsch 2007; Buhaug et al. 2010: Buhaug 2010).1 In contrast, long-term macro statistical studies find that conflict increases in periods of climatic chill (Zhang et al. 2006, 2007; Tol & Wagner 2010).2 Research on the more recent past reveals that interstate conflict has declined in the second half of the twentieth century, the very period during which global warming has begun to make itself felt (Goldstein 2002; Levy et al. 2001; Luard 1986, 1988; Hensel 2002; Sarkees, et al. 2003; Mueller 2009).3 While talk of a ''climatic peace” is premature, broader claims that global warming causes conflict must be evaluated in light of countervailing evidence and a contrasting set of causal theoretical claims.4

## 2NC

#### Massive federal preemption of states in the context of wind

Sierra B. Weaver, JD Harvard, 2002, “Local Management of Natural Resources: Should Local Governments be Able to Keep Oil Out?” 26 Harv. Envtl. L. Rev. 231, ln

Since the statutory scheme, as interpreted by federal agencies and courts, has left state and local governments with little protection from federal leasing policies, California and its coastal communities have looked to other ways of controlling offshore development. At the state level, congressional delegations from California and other coastal states have used their powers over appropriations to rein in the relevant federal agencies. n65 This tactic has proven extremely effective in blocking leasing on a year-to-year basis and has sent a clear message to the federal government that these states oppose drilling off their coasts. n66 By 1990, this [\*243] message was loud enough to cause President George H. W. Bush, and then President Bill Clinton in 1998, to protect much of the nation's coastline. n67 The use of appropriations control as a tool, however, requires that such battles be fought on a yearly basis and by no means guarantees victory for anti-oil forces. For example, in the winter of 1985, Congress lifted the moratorium on offshore leasing that had protected the California coast since fiscal year 1982. n68 Despite the California congressional delegation's effort to reinstate the moratorium, the effort lost by one vote in the House Appropriations Committee. n69

#### EPA already tried to preempt---the courts overturned it --- proves no precedent established---even if the federal hijacks state authority the court will protect states in future instances

Mike Norman, 8-16-2012, “Texas claims a victory over the EPA,” Star-Telegram, http://www.star-telegram.com/2012/08/16/4186995/texas-claims-a-victory-over-the.html

Monday was "I told you so" day for some top Texas officials. A three-judge panel of the 5th U.S. Circuit Court of Appeals ruled for the state in a legal battle with the federal Environmental Protection Agency. "This decision is a big win for jobs and a big win for Texas," said Gov. Rick Perry in a statement released after the ruling. He said the appeals court finding "affirms that states have the right to develop permitting processes that balance the priorities of protecting the environment and allowing our industries to thrive." Texas brought the case after the EPA, in 2010, disallowed the Texas Flexible Permit Program, the state's plan for air quality control at industrial plants. State officials had a right to gloat about the ruling. Atty. Gen. Greg Abbott grabbed the opportunity. "The Court rightfully rejected EPA's attempt to hijack Texas' air permitting program -- a program that was created over 16 years ago by Governor Ann Richards," Abbott said in his own post-ruling statement. "The decision also chided the EPA for attempting to force its own draconian policies on Texas, noting that federal law requires EPA to work cooperatively with the States." Bryan Shaw, chairman of the Texas Commission on Environmental Quality, which issues air quality permits, sent a commentary on the ruling to news organizations across the state. He wrote that 120 flexible permit holders "spent millions of dollars to 'de-flex,' in what amounts to no more than a bureaucratic paper exercise." The 2-1 court majority rejected the EPA's arguments against the Texas plan and declared the federal agency guilty of regulatory overreach. "It is clear that Congress had a specific vision when enacting the Clean Air Act," the majority opinion said. "The Federal and State governments were to work together, with assigned statutory duties and responsibilities, to achieve better air quality. The EPA's final rule disapproving Texas's Flexible Permit Program transgresses the [Clean Air Act's] delineated boundaries of this cooperative relationship."

#### No evidence of fracking contaminating water

Lawson 12 – General Richard Lawson (USAF), May 2012, "Fueling America and the Energy Water Nexus: How and Why it Impacts the Nexus and What Next" [www.acus.org/files/EnergyEnvironment/062212\_EEP\_FuelingAmericaEnergyWaterNexus.pdf](http://www.acus.org/files/EnergyEnvironment/062212_EEP_FuelingAmericaEnergyWaterNexus.pdf)

However, there is at present little or no evidence **of groundwater contamination** from hydraulic fracturing of shales at normal depths. Although claims have been made that “out-of-zone” fracture propagation or intersection with natural fractures, could occur, this study found no instances where either of these has actually taken place. In the long term after fracturing is completed, **the fluid flow is toward (not away from) the well** as gas enters the well bore during production. Some allegations indicate a relatively small risk to water supplies from individual well fracturing operations, but that a large number of wells (in the Marcellus shale) has a higher likelihood of negative impacts. However, the evidence for this risk is not clearly defined. **No evidence of chemicals** from hydraulic fracturing fluid has been found in aquifers as a result of fracturing operations. ...[I]t appears that the risk of such chemical additives is greater from surface spills of undiluted chemicals than from actual fracturing activities.44¶ To date, evidence does not point to groundwater contamination by fracking fluids from drilled wells, which are almost uniformly located far below the groundwater aquifers. Contamination of groundwater due to surface operation accidents are a separate issue and are discussed below.

#### No South Asian conflict

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Fearful of imminent war, the media has indulged in frantic hand wringing about Indian and Pakistani nuclear arsenals and renewed fears about the Indian subcontinent being “the most dangerous place on earth.” As an observer of the subcontinent for over a decade, I am optimistic that war will not be the end result of this event. As horrifying as the Mumbai attacks were, they are not likely to drive India and Pakistan into an armed international conflict. The media frenzy over an imminent nuclear war seems the result of the media being superficially knowledgeable about the history of Indian-Pakistani relations, of feeling compelled to follow the most sensationalistic story, and being recently brainwashed into thinking that the only way to respond to a major terrorist attack was the American way – a war. Here are four reasons why the Mumbai attacks will not result in a war: 1. For both countries, a war would be a disaster. India has been successfully building stronger relations with the rest of the world over the last decade. It has occasionally engaged in military muscle-flexing (abetted by a Bush administration eager to promote India as a counterweight to China and Pakistan), but it has much more aggressively promoted itself as an emerging economic powerhouse and a moral, democratic alternative to less savory authoritarian regimes. Attacking a fledgling democratic Pakistan would not improve India’s reputation in anybody’s eyes. The restraint Manmohan Singh’s government has exercised following the attacks indicates a desire to avoid rash and potentially regrettable actions. It is also perhaps a recognition that military attacks will never end terrorism. Pakistan, on the other hand, couldn’t possibly win a war against India, and Pakistan’s military defeat would surely lead to the downfall of the new democratic government. The military would regain control, and Islamic militants would surely make a grab for power – an outcome neither India nor Pakistan want. Pakistani president Asif Ali Zardari has shown that this is not the path he wants his country to go down. He has forcefully spoken out against terrorist groups operating in Pakistan and has ordered military attacks against LeT camps. Key members of LeT and other terrorist groups have been arrested. One can hope that this is only the beginning, despite the unenviable military and political difficulties in doing so. 2. Since the last major India-Pakistan clash in 1999, both countries have made concrete efforts to create people-to-people connections and to improve economic relations. Bus and train services between the countries have resumed for the first time in decades along with an easing of the issuing of visas to cross the border. India-Pakistan cricket matches have resumed, and India has granted Pakistan “most favored nation” trading status. The Mumbai attacks will undoubtedly strain relations, yet it is hard to believe that both sides would throw away this recent progress. With the removal of Pervez Musharraf and the election of a democratic government (though a shaky, relatively weak one), both the Indian government and the Pakistani government have political motivations to ease tensions and to proceed with efforts to improve relations. There are also growing efforts to recognize and build upon the many cultural ties between the populations of India and Pakistan and a decreasing sense of animosity between the countries. 3. Both countries also face difficult internal problems that present more of a threat to their stability and security than does the opposite country. If they are wise, the governments of both countries will work more towards addressing these internal threats than the less dangerous external ones. The most significant problems facing Pakistan today do not revolve around the unresolved situation in Kashmir or a military threat posed by India. The more significant threat to Pakistan comes from within. While LeT has focused its firepower on India instead of the Pakistani state, other militant Islamic outfits have not. Groups based in the tribal regions bordering Afghanistan have orchestrated frequent deadly suicide bombings and clashes with the Pakistani military, including the attack that killed ex-Prime Minister Benazir Bhutto in 2007. The battle that the Pakistani government faces now is not against its traditional enemy India, but against militants bent on destroying the Pakistani state and creating a Taliban-style regime in Pakistan. In order to deal with this threat, it must strengthen the structures of a democratic, inclusive political system that can also address domestic problems and inequalities. On the other hand, the threat of Pakistani based terrorists to India is significant. However, suicide bombings and attacks are also carried out by Indian Islamic militants, and vast swaths of rural India are under the de facto control of the Maoist guerrillas known as the Naxalites. Hindu fundamentalists pose a serious threat to the safety of many Muslim and Christian Indians and to the idea of India as a diverse, secular, democratic society. Separatist insurgencies in Kashmir and in parts of the northeast have dragged on for years. And like Pakistan, India faces significant challenges in addressing sharp social and economic inequalities. Additionally, Indian political parties, especially the ruling Congress Party and others that rely on the support of India’s massive Muslim population to win elections, are certainly wary about inflaming public opinion against Pakistan (and Muslims). This fear could lead the investigation into the Mumbai attacks to fizzle out with no resolution, as many other such inquiries have. 4. The international attention to this attack – somewhat difficult to explain in my opinion given the general complacency and utter apathy in much of the western world about previous terrorist attacks in places like India, Pakistan, and Indonesia – is a final obstacle to an armed conflict. Not only does it put both countries under a microscope in terms of how they respond to the terrible events, it also means that they will feel international pressure to resolve the situation without resorting to war. India and Pakistan have been warned by the US, Russia, and others not to let the situation end in war. India has been actively recruiting Pakistan’s closest allies – China and Saudi Arabia – to pressure Pakistan to act against militants, and the US has been in the forefront of pressing Pakistan for action. Iran too has expressed solidarity with India in the face of the attacks and is using its regional influence to bring more diplomatic pressure on Pakistan.

#### Shared interests solve China-Russia

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Since the end of the Cold War, the improved political and economic relationship between Beijing and Moscow has affected a range of international security issues. China and Russia have expanded their bilateral economic and security cooperation. In addition, they have pursued distinct, yet parallel, policies regarding many global and regional issues.

Yet, Chinese and Russian approaches to a range of significant subjects are still largely uncoordinated and at times in conflict. Economic exchanges between China and Russia remain minimal compared to those found between most friendly countries, let alone allies.

Although stronger Chinese-Russian ties could present greater challenges to other countries (e.g., the establishment of a Moscow-Beijing condominium over Central Asia), several factors make it unlikely that the two countries will form such a bloc.

The relationship between the Chinese and Russian governments is perhaps the best it has ever been. The leaders of both countries engage in numerous high-level exchanges, make many mutually supportive statements, and manifest other displays of Russian-Chinese cooperation in what both governments refer to as their developing strategic partnership.

The current benign situation is due less to common values and shared interests than to the fact that Chinese and Russian security concerns are predominately directed elsewhere.

Although both countries have experienced a geopolitical resurgence during the past two decades, Chinese and Russian security concerns are not directed at each other but rather focus on different areas and issues, with the notable exceptions of maintaining stability in Central Asia and constraining North Korea’s nuclear activities.

Most Chinese policy makers worry about the rise of separatist movements and Islamist terrorism in western China and about a potential military clash with the United States in the Asia-Pacific region, especially regarding Taiwan and the contested maritime regions of the South China and East China Seas.

In contrast, most Russian analysts see terrorism in the North Caucasus, maintaining influence in Europe, and managing security relations with Washington as the main security challenges to their country.

Neither Chinese nor Russian military experts perceive a near-term military threat from the other’s country. The Russian government has even provided sophisticated navy, air, and air defense platforms to the Chinese military, confident that the People’s Liberation Army (PLA) would only employ these systems, if at all, against other countries. In addition, China and Russia have resolved their longstanding border disputes as well as contained their rivalries in Central Asia, the Korean Peninsula, and other regions.

Since the Soviet Union’s disintegration in the early 1990s, China and Russia have resolved important sources of their Cold War-era tensions. Through protracted negotiations, the two governments have largely solved their boundary disputes, which had erupted in armed border clashes in the late 1960s and early 1970s. The stoking of anti-Chinese sentiment by politicians in the Russian Far East impeded the ability of Russia’s first President, Boris Yeltsin, to make substantial progress during the 1990s in demarcating the Russia-China border. These politicians sought to rally local support by accusing Moscow of planning to surrender territory to Beijing. By the mid-2000s, Yeltsin’s successor, Vladimir Putin, managed to centralize sufficient political power in the Kremlin to ignore these local sentiments. Furthermore, Russia and China have demilitarized their lengthy shared frontier through a series of arms control and disarmament measures.

Chinese and Russian leaders share a commitment to a philosophy of state sovereignty (non-interference) and territorial integrity (against separatism). Although Russian and Chinese leaders defend national sovereignty by appealing to international law, their opposition also reflects more pragmatic considerations---a shared desire to shield their human rights and civil liberties practices, and those of their allies, from Western criticism.

Chinese and Russian officials refuse to criticize each other’s foreign and domestic policies in public. They also have issued many joint statements calling for a multi-polar world in which no one country (e.g., the United States) dominates. During the past few years, their leaders have commonly blamed American economic mismanagement for precipitating the global recession.

They regularly advocate traditional interpretations of national sovereignty that exempt a government’s internal policies from foreign criticism. Beijing and Moscow oppose American democracy promotion efforts, U.S. missile defense programs, and Washington’s alleged plans to militarize outer space.

The two countries strive to uphold the authority of the United Nations, where the Chinese and Russian delegations frequently collaborate to dilute resolutions seeking to impose sanctions on Burma, Iran, Zimbabwe, and other governments they consider friendly. In July 2008, they finally demarcated the last pieces of their 4,300-km (2,700 mile) frontier, one of the world’s longest land borders, ending a decades-long dispute.

Chinese and Russian officials have expressed concern about the efforts by the United States and its allies to strengthen their ballistic missile defense (BMD) capabilities. Their professed fear is that these strategic defense systems, in combination with the strong American offensive nuclear capabilities, might enable the United States to obtain nuclear superiority over China and Russia.

Both governments have also expressed unease regarding U.S. military programs in the realm of outer space. Russian and Chinese experts claim that the United States is seeking to acquire the means to orchestrate attacks in space against Russian and Chinese reconnaissance satellites and long-range ballistic missiles, whose trajectories passes through the upper atmosphere. In response, the Russian and Chinese governments have proposed various arms control initiatives purportedly aimed at preventing the militarization of space.

For example, the Russian and Chinese representatives have unsuccessfully sought for years at the UN Conference on Disarmament to negotiate a treaty on the “Prevention of an Arms Race in Outer Space,” which would seek to prohibit the militarization of outer space. More recently, China and Russia have submitted a joint Space Treaty to the Conference on Disarmament in Geneva, which would impose legal constraints on how the United States could use outer space. They have sought to link progress on other international arms control initiatives to the adoption of these space limitations.

The bilateral defense relationship has evolved in recent years to become more institutionalized and better integrated. As befits two large and powerful neighbors, the senior military leaders of Russia and China now meet frequently in various formats. Their direct encounters include annual meetings of their defense ministers and their armed forces chiefs of staff. Since 1997, they have also organized yearly “strategic consultations” between their deputy chiefs of the general staff. In March 2008, the Chinese defense minister established a direct telephone line with his Russian counterpart, the first such ministerial hotline ever created by China and another country. In December 2008, the chiefs of the Chinese and Russian general staffs created their own direct link.

Senior Russian and Chinese defense officials also typically participate in the regular heads of government meetings between Russia and China, which occur about once a year as bilateral summits. They also confer frequently at sessions of multinational gatherings, such as at meetings of the SCO, which host regular sessions for defense ministers. Contacts are even more common among mid-level military officers, especially those in charge of border security units and military units in neighboring Chinese and Russian territories.

Russian and Chinese military experts also engage in regular direct discussions related to their functional expertise such as communications, engineering, and mapping. Substantial academic exchanges also regularly occur. More than 1,000 Chinese students have studied at over 20 Russian military academies since 1996. The two defense communities conduct a number of larger exchanges and engagements. The best known are the major biennial military exercises that they have been holding since 2005, but smaller-scale engagements also frequently occur.

Chinese and Russian leaders also have developed shared perspectives and independent offensive capabilities regarding governmental activities in the cyber domain. The two governments have been developing their information warfare capabilities and now possess an extensive variety of offensive and defensive tools in this domain.

Furthermore, recent revelations regarding Chinese cyber-espionage activities suggest the extent to which Chinese operatives have penetrated Western information networks. In Russia’s case, cyber attacks against Estonia, Georgia, and other countries illustrate the extensive offensive capabilities available to that country’s forces. Russia’s hybrid August 2008 campaign against Georgia was particularly effective in disabling Georgia’s infrastructure as well as demonstrating a potential capacity to inflict widespread physical damage.

Both countries appear to have already conducted extensive surveying of U.S. digital vulnerabilities and to have prepared targeted campaign plans to exploit U.S. network vulnerabilities if necessary. Although these offensive and defensive preparations are being conducted independently, the Chinese and Russian governments are collaborating, along with other Eurasian allies in the SCO, to deny Internet resources to civil liberties groups and other opponents of their regimes.

Central Asia perhaps represents the geographic region where the security interests of China and Russia most overlap. Although China and Russia often compete for Central Asian energy supplies and commercial opportunities, the two governments share a desire to limit potential instability in the region. They especially fear ethnic separatism in their border territories supported by Islamic fundamentalist movements in Central Asia. Russian authorities dread the prospect of continued instability in the northern Caucasus, especially Chechnya and neighboring Dagestan. China’s leaders worry about separatist agitation in the Xinjiang Uighur Autonomous Region.

The shared regional security interests between Beijing and Moscow have meant that the newly independent states of Central Asia---Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan---have become a generally unifying element in Chinese-Russian relations. Their overlapping security interests in Central Asia have manifested themselves most visibly in the Shanghai Cooperation Organization (SCO).