# \*\*\*NATURAL GAS BAD—CHINA

# Notes

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**Chinese natural gas demand is projected to increase exponentially**

**Yan 11** (Zhou, “China's natural gas imports expected to increase” China Daily, December 12 2011, <http://www.asianewsnet.net/home/news.php?id=25529>)//MR

**China's reliance on natural gas imports will continue, accounting for more than half of the country's total consumption, as demand surges for the fuel** for both industrial and residential use. **China**, which is widely estimated to realize more than 9 percent growth in GDP in 2011**, imported 3.1 billion cubic meters** (cu m) **of natural gas in November, 1.5 times higher than** during **the same month last year**, according to figures from the National Development and Reform Commission (NDRC). The increase in November saw the nation's total imports of natural gas in the first 11 months of the year grow by 91.5 per cent year-on-year to 28.1 billion cu m. The country produced 91.4 billion cu m of natural gas between January and November, with growth of 6 per cent compared with the same period in 2010, the NDRC said. **China's imports of natural gas are expected to hit 30 billion cu m this year, said** Duan **Zhaofang, a natural gas researcher at the Economics & Technology Research Institute of China National Petroleum Corp**, the country's biggest energy producer. The institute's **statistics show that China imported 17 billion cu m of gas in 2010, accounting for 16 percent of the nation's total consumption. China's energy demand will rise in tandem with the country's economic growth**, said Li Junfeng, deputy director of the NDRC's Energy Research Institute. **Natural gas imports will increase** greatly **to** account for **more than 50 per cent of total consumption in the future**, said Li, but without providing a timeframe. As supplies increase through the China-Central Asia gas pipeline and liquefied natural gas carried in storage tanks, imports will play an important role in the diversification of supplies of natural gas, Duan said. The nation's reliance on crude oil imports surpassed 50 per cent for the first time last year, and experts estimate that the figure will hit 65 percent by 2020. **Between January and November, the country's apparent consumption** - including imports and domestic production but excluding exports - **of natural gas rose 20.5 per cent from a year earlier to 115.9 billion cu m**, the NDRC said.

**Prioritizing carbon infrastructure ends the shift to natural gas**

**Frank et al 9** - research associate in the CSIS Energy and National Security Program

Matthew, “Crossing the Natural Gas Bridge,” CSIS, http://csis.org/files/attachments/090624\_Crossing\_Bridge.pdf

**Aggressive action on** renewables, efficiency, **CCS**, and nuclear power **is needed to ensure that** a wide range of **low-carbon energy options are available as emission reduction targets become more stringent**. Therefore, **reducing** costs and **barriers to deploying low-carbon technologies at the required scale are an important part of making sure the shift to natural gas is not too drastic or long-lived** without the ability to sequester the emissions. Just as the U.S. should maintain a diverse mix of gas suppliers, **we should** also **diversify our** electricity **portfolio** to balance a variety of sources of low- or no-carbon emissions. **Policies that will help ensure development of a portfolio of zero-carbon electricity technologies should seek to: • Prioritize** clean energy **infrastructure, especially transmission corridors to enable a greater share o**f renewable power and **CCS pipelines.** Promote deployment of a diverse set of renewable energy technologies through a strong federal policy such as a renewable portfolio standard and an ambitious package of renewable energy investment incentives; • **Continue R&D to reduce the cost of CCS and support** commercial-scale **demonstration of integrated CCS projects** that employ all capture approaches (pre-combustion, postcombustion and oxy-fuel combustion); • Improve the safety, waste management, cost, and proliferation risks currently hindering expansion of nuclear power; and • Increase the support for and effectiveness of energy R&D spending.

**That’s modeled internationally**

**MIT 7**

(Interdisciplinary Study, The Future of Coal, http://web.mit.edu/coal/)

According to Dr. Deutch, "As the world's leading energy user and greenhouse gas emitter, **the U.S. must take the lead in showing the world CCS can work. Demonstration of** technical, economic, and institutional features of **CCS** at commercial scale coal combustion and conversion plants **will give policymakers and the public confidence that a practical carbon mitigation control option exists, will reduce cost of CCS should carbon emission controls be adopted, and will maintain the** low-cost **coal option** in an environmentally acceptable manner." Dr. Moniz added, "There are many opportunities for enhancing the performance of coal plants in a carbon-constrained world – higher efficiency generation, perhaps through new materials; novel approaches to gasification, CO2 capture, and oxygen separation; and advanced system concepts, perhaps guided by a new generation of simulation tools. An aggressive R&D effort in the near term will yield significant dividends down the road, and should be undertaken immediately to help meet this urgent scientific challenge." Key findings in this study: **Coal is a** low-cost, per BTU, **mainstay of both the developed and developing world, and its use is projected to increase**. Because of coal's high carbon content, **increasing use will exacerbate the problem of climate change unless coal plants are deployed with** very high efficiency and large scale **CCS** is implemented. **CCS is the critical enabling technology because it allows significant reduction in CO2 emissions while allowing coal to meet future energy needs**. A significant charge on carbon emissions is needed in the relatively near term to increase the economic attractiveness of new technologies that avoid carbon emissions and specifically to lead to large-scale CCS in the coming decades. **We need large-scale** demonstration projects of the technical, economic and environmental performance of an integrated **CCS** system. **We should proceed with carbon sequestration projects as soon as possible**. Several integrated large-scale demonstrations with appropriate measurement, monitoring and verification are needed in the United States over the next decade with government support. This is important for establishing public confidence for the very large-scale sequestration program anticipated in the future. **The regulatory regime for** large-scale commercial **sequestration should be developed with** a greater sense of **urgency**, with the Executive Office of the President leading an interagency process. The U.S. government should provide assistance only to coal projects with CO2 capture in order to demonstrate technical, economic and environmental performance. Today, IGCC appears to be the economic choice for new coal plants with CCS. However, this could change with further RD&D, so it is not appropriate to pick a single technology winner at this time, especially in light of the variability in coal type, access to sequestration sites, and other factors. The government should provide assistance to several "first of a kind" coal utilization demonstration plants, but only with carbon capture. Congress should remove any expectation that construction of new coal plants without CO2 capture will be "grandfathered" and granted emission allowances in the event of future regulation. This is a perverse incentive to build coal plants without CO2 capture today. Emissions will be stabilized only through global adherence to CO2 emission constraints. **China and India are unlikely to adopt carbon constraints unless the U.S. does so and leads the way in the development of CCS technology.** Key changes must be made to the current Department of Energy RD&D program to successfully promote CCS technologies. The program must provide for demonstration of CCS at scale; a wider range of technologies should be explored; and modeling and simulation of the comparative performance of integrated technology systems should be greatly enhanced.

**Even absent modeling, domestic development leads to Chinese CCS integration**

**Yang 12** – Washington, D.C.-based business journalist and communications professional, with in-depth experience in China, technology, economics, and other policy issues (Catherine, “Amid U.S.-China Energy Tension, "Clean Coal" Spurs Teamwork” National Geographic News, The Great Energy Challenge, February 13 2012, [http://news.nationalgeographic.com/news/energy/2012/12/120213-us-china-teamwork-on-clean-coal/)//MR](http://news.nationalgeographic.com/news/energy/2012/12/120213-us-china-teamwork-on-clean-coal/%29//MR)

**In China, coal is king. U.S. energy companies**, from small start-ups to one of the nation's largest utilities, Duke Energy, **have concluded that they must work with China to keep a hand in** technology to reducethe greenhouse gas emissions of coal-fired electricity: **carbon capture and storage** (CCS). **Although the U**nited **S**tates **has poured billions of dollars into CCS research and development** over 25 years, **progress has been halting**, and several high-profile projects have been abandoned due to high costs. The building of coal power plants has been so slowed by environmental concerns and the rise of natural gas as an alternative that **the U**nited **S**tates **has not proven to be a fertile ground for accelerating CCS. China, on the other hand, has been building one new coal-fired plant a week** on average **to stoke its growing economy.** Among those who have been watching CCS closely, there's a growing belief that **the best path forward for CCS is a partnership between the two nations that lead the world in both carbon emissions and coal reserves.**

**Coal is key to energy security**

**CAT 7** (“Viewpoint: Perspectives on Modern Mining” Caterpillar Global Mining, 2007, http://mining.cat.com/cda/files/2785323/7/Coal\_Eng.pdf)//MR

**As countries grow increasingly dependent on imported fuel, they become more vulnerable to disruptions** in supply. **Embargoes, permanent loss of fuel sources, soaring prices, and** events and **catastrophes that affect energy sources on a global basis** can **threaten** the **energy security** of countries that lack indigenous energy supplies or have tenuous relationships with supply countries. Energy resources are essential to sustain the world population, improve the quality of life and help developing countries. “In today’s world, **energy means life**,” says Phil Hansen, a Caterpillar Inc. commercial mining manager. “**If you take away energy**, you’re not just making people uncomfortable; **you are taking away a basic element of survival. We can’t sustain this population without efficient and effective energy**.” **To achieve energy security, countries need a source of energy that is stable in price and reliable in supply**. “Widespread, **indigenous sources of coal provide energy security for many countries**,” says Johnston. “And **some of the largest energy users in the world—the U**nited **S**tates, **India and China—have the largest reserves.**” In addition, **coal is a flexible energy source.** “Today, it’s primarily used for electric power,” Johnston says. “But **it can be converted** for other uses. New technologies give coal the potential **to reduce or replace oil** imports. **Coal can be converted to synthetic gasoline, diesel, hydrogen or other mobile fuels**.” In South Africa, for example, years of oil embargoes forced the country to use the energy source it had—coal—to produce the fuels it needed.

**Chinese natural gas demands strengthen the Sino-Russian alliance and undermine US-China energy cooperation**

**Medlock et al. 11** – Kenneth B. Medlock III, Ph.D., James A. Baker III and Susan G. Baker Fellow in Energy and Resource Economics; Amy Myers Jaffe, Wallace S. Wilson Fellow in Energy Studies, Peter R. Hartley, Ph.D., Rice Scholar, James A. Baker III Institute for Public Policy, and George and Cynthia Mitchell Professor of Economics, Rice University (“Shale Gas and U.S. National Security” James A. Baker III Institute for Public Policy, Rice University, July 2011, <http://www.bakerinstitute.org/publications/EF-pub-DOEShaleGas-07192011.pdf>)//MR

**Under all scenarios, China becomes a major importer of natural gas** both via pipeline and LNG. In fact, **China is the largest driver of growth in LNG trade going forward** under all scenarios. **This makes the question of Chinese demand growth** a **pivotal** one **when analyzing the geopolitics of natural gas.** Although not addressed herein, the Baker Institute is engaged in a separate study that considers the impact of Chinese demand growth, domestic supplies, and import supply options on global gas market developments. Like the United States, **China benefits grow growing shale gas production**, which reduces its overall reliance on potentially volatile Middle East suppliers such as Iran. The case in which no new shale is developed (Scenario Two) drives an increase in Chinese imports from both pipeline and LNG, and a decline in domestic production due the removal of shale gas. Higher prices also result in this scenario, which slows Chinese demand growth somewhat. Nevertheless, the scale of the changes resulting in Scenario Two is dwarfed by the scale of demand and import growth indicated in the Reference Case. However, **in all cases examined** herein, **strong Chinese demand for natural gas leads to the strengthening of energy ties between Russia and China.** Although this is not necessarily directly against U.S. interests, **it could** nonetheless **make it more difficult for the U**nited **S**tates **to promote U.S.-China energy cooperation. China may be less interested in** strong **bilateral or multilateral consumer energy relations involving the U**nited **S**ates **if it has strong pipeline-oriented dependencies.** One can also imagine that **a deeper relationship between China and Russia** in general **might influence the balance of power in Northeast Asia in a manner** that is **detrimental to U.S. allies in the region.**

**Russia-China military alliance kills U.S. hegemony and causes war**

**Blank 9**

(Stephen Blank, Research Professor of National Security Affairs at the Strategic Studies Institute of the U.S. Army War College, March 2009, “Russia And Arms Control: Are There Opportunities For The Obama Administration?,” online: <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub908.pdf>)

Consequently**, the danger is** that this ideological-strategic rivalry will harden, leading to a polarized, bilateral, and **hostile division of Asia into blocs based on a Sino-Russian bloc confronting a U.S. alliance system** led by alliances with Japan, South Korea, and Australia. Some Western writers have already opined that Sino- Russian relations appear to be tending towards an anti- American alliance in both Northeast and Central Asia.235 But more recently both Asian and Western writers have begun to argue that such a polarization in Asia could be taking shape. The shared interest of perceiving America as an ideological and geopolitical threat has also united Moscow and Beijing in a common cause.236 Already in the 1990s, prominent analysts of world politics like Richard Betts and Robert Jervis, and then subsequent Central Intelligence Agency (CIA) studies, postulated that **the greatest security threat to American interests would be a Russian-Chinese alliance**.237 Arguably, that is happening now and occurs under conditions of the energy crisis that magnifies Russia’s importance to China beyond providing diplomatic support, cover for China’s strategic rear, and arms sales.238 **That alliance would encompass** the following points of friction with Washington: **strategic resistance to U.S. interests in Central and Northeast Asia, resistance to antiproliferation and pressures upon** the regimes in **Iran and North Korea, an energy alliance, an ideological counteroffensive against U.S. support for democratization abroad, and the rearming of both Russia and China**, if not their proxies and allies, **with a view towards conflict with America**.239 One South Korean columnist, Kim Yo’ng Hu’i, wrote in 2005 that, China and Russia are reviving their past strategic partnership to face their strongest rival, the United States. A structure of strategic competition and confrontation between the United States and India on the one side, and Russia and China on the other is unfolding in the eastern half of the Eurasian continent including the Korean peninsula. **Such a situation will definitely bring a huge wave of shock to the Korean peninsula**, directly dealing with the strategic flexibility of U.S. forces in Korea. If China and Russia train their military forces together in the sea off the coast of China’s Liaodong Peninsula, it will also have an effect on the 21st century strategic plan of Korea. We will now need to think of Northeast Asia on a much broader scale. The eastern half of Eurasia, including Central Asia, has to be included in our strategic plan for the future.240 Since then, Lyle Goldstein and Vitaly Kozyrev have similarly written that. If the Kremlin favors Beijing, **the resulting Sino-Russian energy nexus**—joining the world’s fastest growing energy consumer with one of the world’s fastest growing producers—**would support China’s growing claim to regional preeminence.** From Beijing’s point of view, this relationship would promise a relatively secure and stable foundation for one of history’s most extraordinary economic transformations. At stake are energy reserves in eastern Russia that far exceed those in the entire Caspian basin. Moreover, according to Chinese strategists, robust Sino-Russian energy links would decrease the vulnerability of Beijing’s sea lines of communication to forms of “external pressure” in case of a crisis concerning Taiwan or the South China Sea. From the standpoint of global politics, the formation of the Sino-Russian energy nexus would represent a strong consolidation of an emergent bipolar structure in East Asia, with one pole led by China (and including Russia) and one led by the United States (and including Japan).241 **Russia’s tie to China** certainly expresses a deep strategic identity or congruence of interests on a host of issues from Korea to Central Asia and **could have significant military implications**. Those implications are not just due to Russian arms sales to China, **which are clearly tied to an anti-American military scenario,** most probably connected with Taiwan. They also include the possibility of joint military action in response to a regime crisis in the DPRK.

**Energy cooperation is key to US-China relations**

**BBC 11** (“China, USA discuss future energy cooperation” BBC Monitoring Asia Pacific, 19 January 2011, <http://proquest.umi.com.proxy.lib.umich.edu/pqdlink?vinst=PROD&fmt=3&startpage=-1&vname=PQD&RQT=309&did=2241800261&scaling=FULL&vtype=PQD&rqt=309&cfc=1&TS=1341344946&clientId=17822>)//MR

Constructive **cooperation between China and the United States in the clean energy field could serve as a role model for bilateral ties** in different areas and also for other countries, said John Thornton, chairman of the Washington-based Brookings Institution, a co-organizer of the forum. The two-day gathering includes panel discussions and working group meetings under the theme of US-China relations in the next decade. Experts said that **as the largest producers and consumers of energy, the U**nited **S**tates **and China were working together to solve common challenges including energy safety and seeking more common ground and mutual interests.** LOTS OF ROOM FOR COOPERATION **China is a passionate player in the** global **green economy**, as the nation is trying to reduce its energy use while developing its economy. **Green energy investment between China and the U**nited **S**tates **could help job creation and economies not only in those countries, but also around the world and help them cope with** challenges including **climate change**, Justin Yifu Lin, the World Bank's chief economist and senior vice-president said. US Ambassador to China Jon Huntsman also pointed out that **close bilateral cooperation in clean energy would be conducive to building trust between the two nations**, also **for future generations. Cooperation on clean energy development could** help **boost employment and create vast business opportunities in both countries. This effort was** also **crucial to a green future for both countries and the world**, Huntsman said. Zheng Bijian, chairman of the China Institute for Innovation and Development Strategy, said that **China-US** practical **cooperation in clean energy** surely **could expand and deepen the convergence of interests.** "I believe the discussion at this forum will not only contribute to the global efforts to address the challenge of climate change, but also help promote low-carbon development and energy security of the two countries," Zheng said. WIN-WIN TIES **Economists said that the clean energy sector could be a "bright spot" for China and the U**nited **S**tates, while there was huge room for the two nations to create more benefits. "We have been cooperating for several years on a variety of projects. Duke is very committed to sharing technology with Chinese companies. We are great partners with China's ENN Group, and we have found win-win ways to work together," James Rogers, Duke Energy chairman and CEO, told Xinhua in an exclusive interview. Duke Energy's big market and ENN's innovation capabilities are a mutually beneficial combination, Rogers said. The two companies inked an agreement on Tuesday entitled "Future Energy Technology Demonstration Platform" in an effort to promote joint development of technologies to help build green cities in China and the United States. Chinese and US business executives joined government officials such as Zhang Guobao, former head of China's National Energy Administration, and US Energy Secretary Steven Chu in a signing ceremony on Tuesday with a host of important business cooperation agreements sealed among energy and power giants, including ENN Group, China Huaneng, China Shenhua Energy Company, Duke Energy, American Electric Power (AEP) and General Electric (GE). **Constructive cooperation between Chinese and US companies would tremendously boost bilateral economic partnership and create more common interests**, China's ENN Group chairman Wang Yusuo said.

**US China relations solve global nuclear war and extinction**

**Wittner 11**—emeritus professor of history at SUNY (Lawrence, pg. 11/28/11 http://www.huntingtonnews.net/14446)//MR

But what would that “victory” entail? **A nuclear attack by China would immediately slaughter at least 10 million Americans in a great storm of blast and fire**, while **leaving many more dying horribly of sickness and radiation poisoning.** **The Chinese death toll in a nuclear war would be far higher. Both nations would be reduced to smoldering, radioactive wastelands.** Also, **radioactive debris sent aloft by the nuclear explosions would blot out the sun and bring on a “nuclear winter” around the globe—destroying agriculture, creating worldwide famine, and generating chaos and destruction.** Moreover, **in another decade the extent of this catastrophe would be far worse. The Chinese government is** currently **expanding its nuclear arsenal, and by** the year **2020 it is expected to more than double its number of nuclear weapons** that can hit the United States. **The U.S. government**, in turn, **has plans to spend hundreds of billions of dollars “modernizing” its nuclear weapons** and nuclear production facilities over the next decade. **To avert the enormous disaster of a U.S.-China nuclear war,** there are two obvious actions that can be taken. The first is to get rid of nuclear weapons, as the nuclear powers have agreed to do but thus far have resisted doing. The second, conducted while the nuclear disarmament process is occurring, is to **improve U.S.-China relations. If the American and Chinese people are interested in ensuring their survival and that of the world, they should be working to encourage these policies.**

# Chinese Natural Gas High

**Chinese demand for natural gas is exploding**

**Ng 6/5**/12 – Associated Press (Eileen, “IEA: China natural gas demand to double by 2017” Businessweek, June 5 2012, <http://www.businessweek.com/ap/2012-06/D9V6TLBG0.htm>)//MR

**Global demand for natural gas will** likely **grow 17 percent over the next five years as Chinese consumption doubles, the I**nternational **E**nergy **A**gency **said** Tuesday. **China's demand for natural gas should expand 13 percent a year through 2017** while U.S. consumption will probably grow 13 percent by 2017, the Paris-based IEA said. It forecast European demand to increase by 7.9 percent. "**Asia will by far be the fastest growing region, driven** primarily **by China which will emerge as the third largest gas user by 2013**," said the IEA, which is made up of 28 countries, including the U.S. and most European nations.

**Chinese natural gas demand is increasing exponentially**

**Jiping 6/7**/12 – President of CNPC (Zhou, “The Rapidly Growing World and Chinese Natural Gas Markets” 25th World Gas Conference, June 7 2012, http://www.cnpc.com.cn/en/press/speeches/The\_Rapidly\_Growing\_World\_and\_Chinese\_Natural\_Gas\_Markets.htm)//MR

**The robust growth of natural gas consumption in Asia-Pacific provides a broad market space for developing the** natural gas **sector**. Similar to the shift of world economic powerhouse, **the gravity center of natural gas market is being** gradually **transferred to Asia-Pacific. Within the past 10 years, Asia Pacific's annual gas consumption has doubled**, growing from less than 300 bcm to 630 bcm. And its proportion in global gas consumption has rapidly increased to 20% from 12%. The **gas consumption in this region is expected to be doubled again over the next 20 years, and Asia Pacific is very likely to surpass the U.S. and Europe to become the largest gas consumer in the world.** Secondly, **China injects new life into the world natural gas market.**

**Chinese natural gas demand set to increase—utilities switching away from coal now**

**Berdikeeva 6/19**/12 (Saltanat, “China Turns to Natural Gas to Fuel their Economic Growth” OilPrice.com, June 19 2012, <http://oilprice.com/Energy/Natural-Gas/China-Turn-to-Natural-Gas-to-Fuel-their-Economic-Growth.html>)//MR

The Chinese economy has grown by an average of 10 percent a year over the past two decades, crossing the milestone to become the second-largest economy and energy user in 2010 after the U.S., as well as the world's largest emitter of greenhouse gases. Stable energy supplies being at the core of China’s rise, they remain pivotal to its continued economic growth, especially coal, oil and gas. **While coal** still **constitutes around 68 percent of China’s energy use, Chinese policymakers and energy executives lean** more and more **towards** cleaner fuel sources, particularly **natural gas.** According to International Energy Agency’s June 2012 report, **the share of natural gas is set to rise in China’s energy mix**, which is expected to have strong implications on the country’s energy usage in the years to come. Given the increased importance of gas, what is China’s natural gas policy? Who are the main players in the Chinese gas market? What kind of problems does Beijing face as the share of natural gas grows in the country’s energy market? **Energy supply security based on** reliance on primarily **domestic production and energy diversification coupled with control of** greenhouse gas **emission** and environmental protection **constitute the core of China’s energy policy** and appear frequently in statements of Chinese policymakers and leaders of energy companies. As part of its 12th Five-Year Plan (2011-2015), China has put a particular emphasis on cutting carbon emissions by reducing its use of coal and oil. **Natural gas is the preferred energy source** to achieve this goal. **The Chinese government has set a**n ambitious **goal of increasing the share of natural gas in the energy mix** from its current 4 percent **to 10 percent by 2020** and cutting carbon emissions by 17 percent between 2011 and 2015 through closure of energy-intensive enterprises. Although the industrial sector is the major consumer of natural gas (45 percent in 2007), **residential and utilities sectors have** also **upped their gas consumption and imports in recent years**. As illustrated in Figure 1**, gas consumption in China went up from 25** billion cubic meters (**bcm**) in 2000 **to over 100 bcm in 2010**, overtaking domestic production since 2007. **The volume of gas imports has also** steadily **increased since 2006, going up sharply in 201**0, as shown in Figure 2. To meet an expected increase in gas demand, **China hopes to** nearly **double domestic gas production** from its 102 bcm in 2011 to 180 bcm a year **by 2020. The country is** also **expected to increase natural gas imports** from 28.1 bcm in 2011 **to** estimated **77 bcm a year by 2020.**

# Link—Certainty

**Certainty is key – otherwise investors will demand a switch to natural gas**

**Weiss 10** - Senior Fellow and the Director of Climate Strategy at American Progress

Daniel, “Efforts to Save Coal Could End Up Destroying It,” Center for American Progress, http://www.americanprogress.org/issues/2010/09/coal\_senators.html

But even without global warming pollution reductions the U. S. Energy Information Administration found that coal’s share of electricity generation has slipped while natural gas and renewable electricity are on the rise over the last three years. Coal’s future could be even bleaker. A recent analysis by the The Wall Street Journal found that: Power companies are increasingly switching to natural gas to fuel their electricity plants, driven by low prices and forecasts of vast supplies for years to come. While the trend started in the late 1990s, the momentum is accelerating and comes at the **expense of coal**. Some utilities are closing coal-fired plants; others are converting them to run on gas. The switch is occurring globally and is getting a push from regulators who want to limit emissions that contribute to climate change, haze and health problems such as respiratory illness. Though efforts in Congress to pass legislation attaching a price to carbon emissions appear stalled for now, utilities still anticipate eventual carbon restrictions. The Tennessee Valley Authority, for example, recently announced a 20-year development plan that emphasizes nuclear and gas, and includes fewer coal units. Coal-burning facilities are expected to slip to 10% of total new capacity in the U.S. in 2013, down from 18% in 2009, the U.S. Energy Information Administration reports. Gas, meanwhile, is expected to soar to 82% of new capacity in 2013 from 42% last year. Big coal companies should be most concerned with the projection that there will be a nearly 10 percent decline “in coal-fired generation, 2015 versus 2009.” Much of this decline will be due to the retirement of old, inefficient coal-fired power plants that will be too expensive to adapt to new public health standards for sulfur and mercury air pollution. It is also due to **uncertainty** about future global warming reductions—investors are reluctant to bet on new coal plants until it is clear whether and how many reductions in global warming pollution are required. Delaying EPA health standards on global warming pollution would only prolong uncertainty and further delay investments in new coal plants.

# Link—Signal

**Signal of pipeline investments is key**

**Parfomak et al 9** – Specialist in Energy and Infrastructure @ CRS

Paul, “Carbon Dioxide (CO2) Pipelines for Carbon Sequestration: Emerging Policy Issues,” Scholar

In addition to these issues, Congress may examine how CO2 pipelines fit into the nation’s overall strategies for energy supply and environmental protection. The need for CO2 pipelines ultimately derives from the nation’s consumption of fossil fuels. Policies affecting the latter, such as energy conservation, and the development of new renewable, nuclear, or hydrogen energy resources, could substantially affect the need for and configuration of CO2 pipelines. If policy makers encourage continued consumption of fossil fuels under CCS, then the need to foster the other energy options may be diminished—and vice versa. Thus decisions about CO2 **pipeline infrastructure** could have consequences for a **broader array** of energy and environmental policies.

**Prioritizing carbon infrastructure ends the shift to natural gas**

**Frank et al 9** - research associate in the CSIS Energy and National Security Program

Matthew, “Crossing the Natural Gas Bridge,” CSIS, http://csis.org/files/attachments/090624\_Crossing\_Bridge.pdf

Aggressive action on renewables, efficiency, CCS, and nuclear power is needed to ensure that a wide range of low-carbon energy options are available as emission reduction targets become more stringent. Therefore, reducing costs and barriers to deploying low-carbon technologies at the required scale are an important part of making sure the shift to natural gas is not too drastic or long-lived without the ability to sequester the emissions. Just as the U.S. should maintain a diverse mix of gas suppliers, we should also diversify our electricity portfolio to balance a variety of sources of low- or no-carbon emissions. Policies that will help ensure development of a portfolio of zero-carbon electricity technologies should seek to: • **Prioritize** clean energy **infrastructure**, especially transmission corridors to enable a greater share of renewable power and **CCS** **pipelines.** Promote deployment of a diverse set of renewable energy technologies through a strong federal policy such as a renewable portfolio standard and an ambitious package of renewable energy investment incentives; • Continue R&D to reduce the cost of CCS and support commercial-scale demonstration of integrated CCS projects that employ all capture approaches (pre-combustion, postcombustion and oxy-fuel combustion); • Improve the safety, waste management, cost, and proliferation risks currently hindering expansion of nuclear power; and • Increase the support for and effectiveness of energy R&D spending.

# Link—CCS

**CCS solves demand for natural gas**

**Frank et al 9** - research associate in the CSIS Energy and National Security Program

Matthew, “Crossing the Natural Gas Bridge,” CSIS, http://csis.org/files/attachments/090624\_Crossing\_Bridge.pdf

An EIA analysis of one legislative proposal, the Climate Security Act of 2007, illustrates how a carbon cap could increase demand for natural gas. The analysis projects that when clean power generation technologies (renewables, nuclear, and carbon capture and storage) progress quickly and are deployed on a fairly aggressive timeframe (before 2030), total natural gas consumption decreases. 24 However, the analysts conclude that “if new nuclear, renewable, and fossil plants with carbon capture and storage (CCS) are not developed and deployed in a timeframe consistent with the emissions reduction requirements, covered entities are projected to turn to increased natural gas use to offset reductions in coal generation, resulting in markedly higher delivered prices of natural gas”. The analysis projects that gas consumption for electricity generation would increase above the reference case by 21 to 72 percent by 2020, and 96 to 142 percent by 2030, if advanced technology and alternative compliance options were not available. 25, 26 In these cases, prices rise and total natural gas demand increases by up to 2.5 trillion cubic feet (tcf) per year (11 percent) in 2020 and by 2.7-4.3 tcf per year (12 to 19 percent) in 2030.

**Reverse causal – CCS collapses natural gas demand**

**Frank et al 9** - research associate in the CSIS Energy and National Security Program

Matthew, “Crossing the Natural Gas Bridge,” CSIS, http://csis.org/files/attachments/090624\_Crossing\_Bridge.pdf

These conclusions are supported by a model of economy-wide emissions developed by the Department of Energy’s Pacific Northwest National Laboratory (PNNL). The model’s scenarios depict several different combinations of technologies and fuels that could meet energy demand while also emitting less CO2, thereby stabilizing atmospheric CO2 concentrations at 450 ppm. 64 In all scenarios, natural gas continues to make up a portion of the energy mix out to the end of the century, mainly due to its feedstock and non-electricity uses (ranging from 7 to 17 percent in 2100 compared to 22 percent currently). In scenarios where carbon capture and storage (CCS) technology becomes widely available at reasonable cost, natural gas with CCS provides a share of low-emissions electricity out to 2095 (between **2 and 13 percent** of the electricity mix depending on other technology assumptions). 65 Under scenarios without deployment of CCS, the electricity sector’s use of gas would peak around 2035, and then provide a decreasing share of the nation’s electricity, disappearing from the sector between 2050 and 2065. These scenarios also show a much greater reliance on other sources of energy (nuclear and renewables) and significant demand reduction. While emissions modeling through the end of the century is always imprecise, these results suggest that to meet emissions goals, use of natural gas without CCS will need to start declining in the next 25 years. This implies that policymakers should look beyond the short term, and provide a long-term price signal that is stringent enough to encourage alternatives to natural gas without CCS, while finding ways to manage the costs of the transition.

# Link—Plan Modeled

**Only the plan is modeled – BRIC countries won’t cut emissions unless they can avoid economic cost**

**Apt et al 7** – PhD in Physics @ MIT, Professor of Technology, Tepper School of Business and Engineering and Public Policy

Jay, “Incentives for Near-Term Carbon Dioxide Geological Sequestration,” Carnegie Mellon, http://wpweb2.tepper.cmu.edu/ceic/pdfs\_other/Incentives\_for\_Near-Term\_Carbon\_Dioxide\_Geological\_Sequestration.pdf

The Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report projects that if current greenhouse gas emissions trends continue, the average global temperatures in 2090-2099 will be 3.6 – 10 degrees Fahrenheit warmer than average temperatures in 1980-1999. 20 When past emissions are factored in, the United States is responsible for just over a quarter of all anthropogenic CO2 from fossil fuels currently in the atmosphere. Europe, China, and India are responsible for 19%, 9%, and 3% respectively. The EU has agreed to reduce emissions to 8% below 1990 levels by 2012; the United States has made no such commitments, although several states and groups of states have begun to make commitments. EU emissions are the same as in 1990; U.S. emissions have increased by 20%. And because a large fraction of CO2 emissions remain in the atmosphere for over a century, the largest single share of atmospheric CO2 will continue to belong to the United States for many decades, despite China’s growth. If no action is taken to reduce its emissions, the Energy Information Administration Annual Energy Outlook estimates that the US will emit approximately 8,000 million metric tonnes (8,800 million short tons) of CO2 by 2030, an increase over 2005 emission levels of more than 33 percent. 21 27 Since the United States has put the largest single share of CO2 into the air, it is under intense pressure to begin to **take the lead** in reducing it. In a few decades, China, India, Brazil, and other developing countries also will have to undertake serious controls. But they will not do so **until** the U.S. **takes the lead** and shows how it can be done in an **efficient and affordable** way. By seizing the opportunity provided by industrial coal gasification, the nation can get the experience required to reduce the technical and commercial unknowns of carbon dioxide **capture and sequestration** at commercial scale within the next decade. Coal combustion is responsible for 30% of the total U.S. greenhouse gas emissions; coal and petcoke together account for 32% of the total U.S. GHG emissions. The sources and sector uses of greenhouse gases in the 2005 U.S. economy are shown in figure 28 below.

**Schell et al. 9** (Orville Schell, Albert G. Chang, Laura Chang, Andrew Light, Julian L. Wong, Dan Sanchez, Scott R. Daniels, Kurt Dassel, Vivek Sekhar, John Benjamin Woo, S. Julio Friedmann “A Roadmap for U.S.-China Collaboration on Carbon Capture and Sequestration” Asia Society Center on U.S.-China Relations, Center for American Progress, Monitor Group, and Lawrence Livermore National Laboratory, November 2009, <http://asiasociety.org/files/pdf/AS_CCS_TaskForceReport.pdf>)//MR

China has installed more than 100 coal gasifiers that produce as a byproduct pure streams of CO2 that are currently vented directly into the atmosphere. Emissions from these gasifier plants are more straightforward and less costly to capture than emissions from combustion plants and should therefore be the immediate focus of collaboration. **The U**nited **S**tates **and China should work together during the first phase of CCS collaboration on developing rapid, large-scale demonstrations of geological sequestration for** these **pure streams of CO2 that exist today in China**. These **existing streams are** relatively **easier to capture and** should **provide an early successful collaboration between the U**nited **S**tates **and China.** The United States and China should identify a set of projects at multiple sites in China, and **the U**nited **S**tates **should make substantial contributions to those projects in practice, equipment, and science**. Such **collaboration could test and compare various sequestration technologies while building the regulatory and financial infrastructure and protocols needed for widespread deployment**.

**Schell et al. 9** (Orville Schell, Albert G. Chang, Laura Chang, Andrew Light, Julian L. Wong, Dan Sanchez, Scott R. Daniels, Kurt Dassel, Vivek Sekhar, John Benjamin Woo, S. Julio Friedmann “A Roadmap for U.S.-China Collaboration on Carbon Capture and Sequestration” Asia Society Center on U.S.-China Relations, Center for American Progress, Monitor Group, and Lawrence Livermore National Laboratory, November 2009, <http://asiasociety.org/files/pdf/AS_CCS_TaskForceReport.pdf>)//MR

**The U**nited **S**tates **and China are the world’s largest greenhouse gas emitters. Collaboration between the two nations**, therefore, **offers the greatest opportunity for achieving meaningful reductions in** global **greenhouse gas emissions. The time is ripe for** such **collaboration. The two countries have participated in** various **global commitments on technology cooperation**, including the 2007 Bali Action Plan and the Major Economies Forum declarations on Energy and Climate after the G-8 summit in Italy this July. The United States and China also made joint commitments at the July 2009 U.S. -China Strategic and Economic Dialogue in the form of a “Memorandum of Understanding to Enhance Cooperation on Climate Change, Energy and the Environment,” and during U.S. Energy Secretary Steven Chu’s recent trip to China. **The U**nited **S**tates **can translate this political goodwill into concrete action, but it will need to begin laying out a roadmap for progress** on areas of mutual concern. **U.S. leadership in this critical area would strengthen bilateral relations between the U**nited **S**tates **and China**, while building momentum towards a successful outcome at the United Nations multilateral climate change negotiations in Copenhagen this December. **One critical pathway for collaboration** specifically identified in the United States and China’s recent joint commitments **is carbon capture and sequestration** technology, or CCS, which has the potential to mitigate emissions from coal-fired power plants. The United States and China’s continued reliance on coal-fired power to generate electricity is a reality that must be addressed in any comprehensive climate change policy. CCS is a process that separates and captures carbon dioxide, or CO2, from industrial and power plant flue streams, then compresses the gas and stores it underground, most likely in geological formations. The process essentially captures the greenhouse gas emissions before they enter the atmosphere and stores them underground. The technology has advanced significantly over the past decade and components of CCS have already proven successful in projects around the world. **While CCS still faces considerable** technological, financial, and regulatory **hurdles**, it offers a potential pathway for helping achieve the scientifically-required reductions in global greenhouse gas emissions that energy efficiency, conservation and renewable energies are unlikely to meet on their own. Nothing in our report should be interpreted as suggesting that any one carbon abatement option is more important than any other. **It is clear**, however, **that neither country can achieve** the **emissions reductions** it needs to make **without addressing its** heavy **reliance on coal. CCS should therefore be included** in a portfolio of climate change mitigation efforts, if it is demonstrated to offer effective and meaningful reductions in carbon emissions. While the general purpose of this report is to help bring about a new partnership between the U.S. and China, **the immediate aim is to** help **catalyze U.S. leadership to action by sketching out a concrete, collaborative** new **plan of action on carbon capture and sequestration that the U**nited **S**tates **government can adopt** as it confronts the twin challenges of addressing climate change and strengthening Sino-U.S. relations.

# Link—Cooperation

**Yang 12** – Washington, D.C.-based business journalist and communications professional, with in-depth experience in China, technology, economics, and other policy issues (Catherine, “Amid U.S.-China Energy Tension, "Clean Coal" Spurs Teamwork” National Geographic News, The Great Energy Challenge, February 13 2012, [http://news.nationalgeographic.com/news/energy/2012/12/120213-us-china-teamwork-on-clean-coal/)//MR](http://news.nationalgeographic.com/news/energy/2012/12/120213-us-china-teamwork-on-clean-coal/%29//MR)

The coal power capacity that China has added in the past five years exceeds that of all the U.S. coal power plants combined. By 2015, Chinese capacity is expected to triple that of the United States. **Both China and the United States sit atop enormous stores of coal**, together amounting to about a third of the world's reserves. But lacking the oil and natural gas resources of the United States, **China leans** far more **heavily on coal for energy security. Coal provides 80 percent of China's electricity, compared to 50 percent** and falling **in the United States.** China took the lead from the United States as the world's top carbon emitter in recent years, but **China deems clean technology a national priority**, spelled out in its 12th Five-Year Plan (2011-2015). **Big state-owned enterprises**, such as the electric generation giant Huaneng Group and Shenhua Group, China's largest coal-mining firm, **are investing** heavily **in technologies**, especially coal gasification. Capturing the CO2 from gasified coal has advantages over technologies that aim to capture CO2 after combustion from the power plant flue, where it is mixed with other gases and contaminants. **China has been working on both pre-combustion and post-combustion carbon capture, but it's been expensive to develop. China's fast-growing coal industry**, however, **has been investing the funds.** "Projects of $1 to $2 billion apiece are just noise there," says Armond Cohen, founder of the Clean Air Task Force (CATF), a Boston-based nonprofit that brokers partnerships between U.S. and Chinese clean tech companies. "In the U.S., we could live off the fumes and table scraps" from China's megaprojects, he said. **The United States** also **brings advantages to the table, including a long history of research. While Chinese companies so far have focused on carbon capture, rather than storage, the United States has** developed **technology for both. Because carbon capture constitutes three-fourths of the cost of CCS, any cost reductions China can generate would** help **make the technology more feasible**, says Ming Sung, CATF's chief representative for Asia and the Pacific. **But** carbon **capture alone won't protect the atmosphere, unless sequestration** of the carbon dioxide **is part of the solution. That's where cooperation with the United States comes in.** "**We will never get to substantial CO2 reductions until the U.S. and China work together**," says S. Julio Friedmann, carbon management program leader at the U.S. Department of Energy's Lawrence Livermore National Laboratory in California. **When it comes to energy, the U.S.-China relationship has been far more rivalry than collaboration,** most notably in the trade dispute over China's subsidies to its burgeoning solar industry. **But there may be an opening for the two energy giants to work together on clean coal.** Friedmann is now conducting a study of whether the low costs reported at a Huaneng's post-combustion carbon capture plant outside Shanghai could be applied to Duke Energy's largest power plant, its Gibson facility in Owensville, Indiana.

#  AT China Say No

**ESI 10** – Energy Studies Institute (“The Real Drivers of Carbon Capture and Storage in China” ESI Bulletin, Vol. 3, Issue 2, November 2010, http://www.esi.nus.edu.sg/publications/2012/02/09/the-real-drivers-of-carbon-capture-and-storage-in-china) //MR

**The stark reality is that China’s incentives for being at the forefront of CCS** technology learning **do not translate into incentives to massively deploy CCS in power plant applications as** climate mitigation **goals would have it. A few CCS projects are** now **being developed** for the Chinese market. **The first major CCS projects** in China - Shenhua’s coal-to-liquids (CTL) project in Ordos, Inner Mongolia, and the GreenGen integrated gasification combined cycle (IGCC) plant in Tianjin - **have progressed rapidly because they explore technology with implications for China’s long-term energy security. However, in the case of crucial post-combustion technologies** which do not have potential benefits for fuel security, **China has been slower to undertake major projects and is eager to spread risks across international partnerships.**

**China won’t implement CCS absent incentives—their economy takes priority**

**Morse et al. 9** – Richard K., research associate at the Program on Energy and Sustainable Development, leads PESD’s research on global coal markets; Varun Rai, research fellow at the Program on Energy and Sustainable Development, focuses on technologies and policies for CCS; Gang He, research associate at the Program on Energy and Sustainable Development, leads research on China (“THE REAL DRIVERS OF CARBON CAPTURE AND STORAGE IN CHINA AND IMPLICATIONS FOR CLIMATE POLICY” Stanford Program on Energy and Sustainable Development, August 2009, http://iis-db.stanford.edu/pubs/22621/WP\_88\_Morse\_He\_Rai\_CCS\_in\_China.pdf)//MR

The first option, domestic financial support for deploying CCS at scale, is highly unlikely given China’s current energy strategy. China currently has few strategic or financial incentives to deploy CCS beyond the demonstration phase. While China is increasingly stressing sustainable development, this has not mean CO2 mitigation thus far and economic development is still China’s top priority. Spending on CO2 mitigation through CCS is a diversion from that goal. Opportunity costs are high (see Section III.b above), and CCS will not measure up against other development and economic priorities. Further, investment in environmental controls at power plants is focused not on CO2 mitigation but on abatement of local pollutants from coal combustion like SO2 and NOX that directly impact China’s citizens on a daily basis. Controlling these pollutants also requires large investments, and China is moving ahead with the planning and deployment of these technologies. Support for CCS RD&D will continue because it aligns with longer-term Chinese objectives of energy security, but as the locus of domestic priorities lies elsewhere, new and much stronger incentives will be required for any type of CCS deployment at scale in the Chinese power market.

# Ext—Coal K/ Energy Security

**Utilizing coal solves Chinese energy security—key to prevent resource conflicts**

**Jian 11** – Consultant, Office of the Chief Economist, World Bank (Dr. Zhang, “China’s Energy Security: Prospects, Challenges, and Opportunities” The Brookings Institution, July 2011, <http://www.brookings.edu/~/media/research/files/papers/2011/7/china%20energy%20zhang/07_china_energy_zhang_paper.pdf>)//MR

**The Western** industrialization economic **model that relies heavily on high carbon output may not be a good example for China** to replicate. **China needs to design its own energy security given its natural resource endowments, technological level, and potential growth.** Figure 11 compares the global primary energy consumption structure with China’s primary energy consumption structure. **Though China has** strong **potential for growth** in the hydro-power, nuclear, wind, and natural gas sectors, in the short run **it may consider making full use of its coal resources in order to alleviate oil dependence or oil conflicts. In the** medium run or **long run, China should build a low-carbon economy by conducting R&D in clean coal technology** and developing renewable energy.

# Ext—Energy Insecurty

**Herberg 12** – Research Director, Asian Energy Security Program (Mikkal E., Hearing on “China’s Global Quest for Resources and Implications for the United States” The National Bureau of Asian Research, 26 January 2012, <http://www.uscc.gov/hearings/2012hearings/written_testimonies/12_01_26/12_1_26_herberg_testimony.pdf>)//MR

**The enormous rise in oil demand in China** which has roughly doubled in each of the past two decades **has meant that China increasingly must rely on imported oil to meet the majority of its needs.** China now imports over 50% of its total oil consumption of nearly 10 million barrels per day and consensus **forecasts suggest this dependence will rise to 75-80%** over the next two decades. Those **oil imports will inevitably have to come** largely **from the Persian Gulf** but also from **Africa, Russia and Central Asia, and even Latin America. China will also become increasingly dependent on imported natural gas from** many of **these same regions. This is a leadership for whom self-sufficiency and national control of resources and energy remain important ideological underpinnings.** The specter of **heavy and growing dependence on imported oil and gas** resources **from a wide range of unstable regions of the world transported through lengthy sea lanes controlled by the U.S. Navy and other regional powers is deeply unsettling** to the leadership in Beijing. **Beijing’s** instinctive **impulse for national control over key resources and energy** in the face of chronically growing dependence on imported oil is what **has driven its push for control over overseas oil and natural gas** resources embodied in its “Go Out” strategy adopted after 2000. The go out strategy reflects the growing politicization of energy security in China but is symptomatic of the reaction to growing energy security anxieties across the region in Asia among the big oil importers. My own **term for this is “energy nationalism” which can be thought of as an energy version of economic nationalism and mercantilism prevalent in Asia.** This is different than what is commonly termed “resource nationalism” which generally refers to host governments of large oil and gas reserve and producing countries maintaining tight political control over access to their resources by international oil companies (IOCs). **The energy nationalism of China** and Asia **is a reflection of the angst of big importers over access to future oil and gas supplies and the increasingly national competitive character and energy rivalries of Asia’s scramble for control over and access to oil and gas resources abroad.**

**Herberg 12** – Research Director, Asian Energy Security Program (Mikkal E., Hearing on “China’s Global Quest for Resources and Implications for the United States” The National Bureau of Asian Research, 26 January 2012, <http://www.uscc.gov/hearings/2012hearings/written_testimonies/12_01_26/12_1_26_herberg_testimony.pdf>)//MR

**China’s energy security drive and anxieties** are not the root cause but **contribute significantly to growing tensions over maritime territorial disputes in the South and East China Seas and** also **to tensions over control of the major sea lines of communications** (SLOCs) **through Southeast Asia** and the Indian Ocean. **As regional anxieties over future** oil and **energy supplies grow, the potential for large resources in and around the South China Sea has a “multiplier” effect by raising the already high stakes in sorting out** extremely **sensitive maritime sovereignty issues. China’s** recent more **assertive posture on sovereignty disputes** towards Vietnam and the Philippines **and its bellicose pronouncements about the South China Sea** being a “core interest” vis-à-vis U.S. involvement in the region, in part, **have roots in China’s view that the potential oil and gas resources in the region would be extremely valuable** as nearby and, therefore, extremely secure sources of energy. **China’s growing dependence on oil and LNG** flowing through the Indian Ocean, Malacca Straits, and South China Sea **is** also **a key driver of its naval modernization and move towards “Blue Water” power projection capabilities by the PLA Navy, which**, in turn **is setting off alarm bells across the region and contributing to a regional naval arms race. For China, the security of energy flows** is not the fundamental driver of their effort to extend their naval and strategic power in the region but **has become an** increasingly **important factor among others driving these developments.**

# Ext—US-China War

**US-China war collapses the global economy and American hegemony—leads to extinction**

**Lieven 6/12**/12 – professor in the War Studies Department of King’s College London and senior fellow of the New America Foundation in Washington (Anatol, “Avoiding a U.S.-China War” The New York Times, June 12 2012, <http://www.nytimes.com/2012/06/13/opinion/avoiding-a-us-china-war.html?_r=1&ref=territorialdisputes>)//MR

But if the United States were to commit itself to a military alliance with these countries against China, Washington would risk embroiling America in their territorial disputes. **In the event of a military clash between Vietnam and China, Washington would be faced with the choice of either holding aloof and seeing its credibility** as an ally **destroyed, or fighting China. Neither the U**nited **S**tates **nor China would “win” the resulting war** outright, **but they would certainly inflict catastrophic damage on each other and on the world economy. If the conflict escalated into a nuclear exchange, modern civilization would be wrecked. Even a prolonged period of military and strategic rivalry with an economically mighty China will gravely weaken America’s global position.** Indeed, **U.S. overstretch is already apparent** — for example in Washington’s neglect of the crumbling states of Central America.

# Ext—Russia-China Alliance

#  Taiwan War

**Russia-China alliance causes cross-strait war**

**CSIS 2k**

(Yu, Bin, Associate Professor at Wittenberg University, “China-Russia Relations: Putin’s Ostpolitik and Sino-Russian Relations”, Center for Strategic and International Studies, http://csis.org/files/media/csis/pubs/0003qchina\_russia.pdf)

Before Putin’s July trip to Beijing, a widely circulated piece of news in Asia was about Putin’s offer to China of direct military assistance in a Taiwan Strait crisis. Singapore’s largest Chinese language newspaper Lianhe Zaobao (United Morning Post) broke the news by supplying great details of the alleged “Putinism.” The Russian president was quoted as instructing the Russian military that, in case the U.S. military involved itself in the Taiwan Strait situation, Russia would dispatch its Pacific Fleet to cut off the route of the U.S. fleet in order to keep the latter far away from the Taiwan Strait. The story was recycled many times by many Asian news outlets, caused major stock market tumbles in Taiwan, and was even picked up by a periodical under the official Chinese newspaper Renmin Ribao (RMRB).

**Russia-China alliance causes cross-strait war—Russia supports re-unification**

**CSIS 2k**

(Yu, Bin, Associate Professor at Wittenberg University, “China-Russia Relations: Putin’s Ostpolitik and Sino-Russian Relations”, Center for Strategic and International Studies, http://csis.org/files/media/csis/pubs/0003qchina\_russia.pdf)

From a Chinese perspective, both the joint ABM statement and “Beijing Declaration” underscored the Taiwan issue without direct reference to Chechnya. In his talks with Jiang, Putin was quoted as saying that Russia “firmly supports China’s grand course of national unification with Taiwan.” The joint statement on the ABM Treaty also reinforced China’s position on TMD, a potentially explosive factor in troubled cross-Strait relations with Taiwan as well as Beijing-Washington relations.

#  Economy

**Sino-Russian balancing tanks the economy**

**Ross 9**

(Ross, Robert S., research associate at Fairbank Center for East Asian Research at Harvard, June 2009, “The Rise of Russia, Sino-Russian Relations, and US Security Policy”, Institute for Strategy at the Royal Danish Defence College, http://www.forsvaret.dk/FAK/Publikationer/Briefs/Documents/TheRiseofRussiaSino-RussianRelationsandUSSecurityPolicy.pdf)

The re-emergence of Russia as a European great power and of potential U.S.Russian confl ict will not be matched by Sino-Russian conflict. Russia must accommodate the rise of China and ensure Sino-Russian border stability. China and Russia will thus each confront a one-front confl ict while the United States will confront a two-front confl ict. The combination of Russia’s re-emergence and the rise of China thus pose a security challenge to the United States. In order for the United States to reduce the likely high cost of Russia’s re-emergence in Europe, it must reduce the burden of its NATO treaty commitments to Russia’s immediate neighbours. Strategic accommodation between the new NATO members in the Baltic and in Eastern Europe will be critical to make the cost of NATO expansion manageable to U.S. security in Europe as the United States simultaneously contends with the rise of China in East Asia. Equally important will be securing a greater contribution from the major west European powers, including Germany and France, to balancing Russian power. They can do far more to provide for their own security. The alternative for the United States is unilateral management of a two-front heightened confl ict with two great powers. This outcome would be detrimental to U.S. security and economic health. Moreover, given China’s economic dynamism, it is not at all clear that the United States could simultaneously contend with Chinese and Russian power, so that West European security would suffer, as well. Accommodation of Russian security interests along its European borders, revision of the European status quo and the emergence of Europe’s democracies as major contributors to European security are thus necessary for both U.S. and European security.

#  China Rise

**Alliance with Russia k/t China rise—oil and arms exports**

**Lo 5**

(Lo, Bobo Dr., visiting scholar at the Carnegie Moscow Center, April 2005, “A Fine Balance—The Strange Case of Sino-Russian Relations”, http://www.ifri.org/files/Russie/bobolo\_anglais.pdf)

On the other hand, the drawbacks to expanded economic cooperation with China are by no means negligible. Oil and gas exports to China help drive the furious pace of modernization in that country, a modernization fundamental to its transformation into a global power. Similarly, the transfer of arms and weapons technology enhances Chinese military capabilities, with potential consequences not only for regional stability, but also for Russia’s own long-term security (including the possibility that such hardware and know-how could one day be used against it).

# Impact—Central Asian Involvement

#  Internal Link

**Russia-China balancing prevents US involvement in Central Asia**

**Cohen 6**

(Cohen, Ariel November 25, 2006, “US Interests and Central Asian Energy Security”, Heritage Foundation, http://www.policyarchive.org/handle/10207/bitstreams/11895.pdf)

China is steadily increasing its involvement in the energy sector, as demonstrated by the purchase of the PetroKazakhstan oil company last year, acquisition of Canada-based Nations Energy by China Interntional Trust and Investment Corporation (CITIC) in the fall of 2006, and the signing of several significant pipeline agreements. Russia and China have been cooperating to reduce U.S. influence in the region and, as they accrue more Central Asian energy assets, will have more leverage with which to prevent U.S. encroachment into their alleged spheres of influence.

**Sino-Russian alliance limits US influence in Central Asia**

**Carlson 7**

(Carlson, Brian, M.A. student at the Johns Hopkins University School of Advanced International Studies, 2007, “The Limits of Sino-Russian Strategic Partnership in Central Asia”, http://www.princeton.edu/jpia/past-issues-1/2007/8.pdf)

The SCO’s declaration on U.S. bases in Central Asia demonstrated Russia and China’s willingness to use this organization to limit U.S. influence in Central Asia (Blank 2006d). The joint military exercises showed the two countries’ increasing unity in opposition to a U.S.-dominated security order (Wishnick 2005). Although the exercises did not signify the creation of a political-military alliance, they demonstrated a deepening strategic partnership and an intensification of military-technical cooperation (Lo 2006, 10, 12).

**Russia and China will limit US influence in Central Asia**

**Blank 7**

(Blank, Stephen March 2007, “US Interests in Central Asia and The Challenges to Them”, Strategic Studies Institute, strategicstudiesinstitute.army.mil)

Military-Political Challenges to U.S. Interests: Russia and China. Today all these interests are under attack, and the U.S. policy in Central Asia is embattled and under siege. Moscow and Beijing, as well as to a lesser degree Tehran, view America’s political and strategic presence in Central Asia with unfeigned alarm. Indeed, Russia and China suspect America’s desire for bases there.12 Despite Russo-Chinese protestations of support for the U.S. war on terrorism, in fact they wish to exclude America from the area and fear that it means to stay there militarily, and in other ways, indefinitely. In this campaign, Moscow has taken the lead, with Chinese and Iranian support. Russia has sought with great consistency and success to establish a gas cartel under its leadership. Russian President Vladimir Putin started calling for this in 2002 and has moved steadily since then to achieve this goal, under the guise of an energy club, which he reiterated at the most recent summit of the Shanghai Cooperation Organization (SCO).13 Russia may actually be in sight of this goal.

**Empirically, Russia-China balancing drives US out of Central Asia**

**Blank 7**

(Blank, Stephen March 2007, “US Interests in Central Asia and The Challenges to Them”, Strategic Studies Institute, strategicstudiesinstitute.army.mil)

Simultaneously, Moscow and Beijing also have waged an unrelenting campaign since 2002 to impose limits on the duration and scope of America’s presence on Central Asian bases and more generally in the region.31 They succeeded in Uzbekistan, thanks to Washington’s misconceived policies there. For example, Washington failed to counter effectively Russo-Chinese propaganda, at both the presidential and public levels, that the United States was behind the revolutions of 2003-04 in Georgia, Ukraine, and Kyrygyzstan and also behind the Andizhan uprising of 2005.32 Moscow and Beijing also constantly are bringing enormous pressure on Kyrgyzstan to force the United States out of the base at Manas and submit to being part of a Russian and Chinese sphere.33 Under domestic and foreign pressure, President Kurmanbek Bakiyev of Kyrgyzstan demanded a 100-fold increase in the 12 earlier rent for Manas of $2 million annually. Probably only the combination of deep U.S. pockets, high-level intervention by Secretary of State Condoleezza Rice and former Secretary of Defense Donald Rumsfeld, and renewed fighting in Afghanistan has allowed America to stay at Manas by providing $150 million in assistance to Kyrgyzstan.34 The recent upsurge of fighting in Afghanistan ironically worked to U.S. advantage here, since Bakiyev openly and formally had tied the extension of the base to the level of fighting in Afghanistan.35

#  Impacts

**US influence in Central Asia k/t fight terrorism, spread democracy, and it’s k/t security interests in Asia**

**Blank 7**

(Blank, Stephen March 2007, “US Interests in Central Asia and The Challenges to Them”, Strategic Studies Institute, strategicstudiesinstitute.army.mil)

U.S. interests in Central Asia primarily are strategic. They derive first from the proximity of this area to Russia, Iran, and China.3 Indeed, The United States and the West in general find themselves increasingly dependent on the continued stability and development of the Central Eurasian region. The United States is heavily invested in Afghanistan, and its engagement there and in Central Asian states is a long-term endeavor. The future of this region has a considerable bearing on the development of the Global War on Terrorism and in general on U.S. security interests in Eurasia; the maintenance of access to airspace and territory in the heart of Asia; the development of alternative sources of energy; and the furthering of freedom and democratic development

**US involvement in Central Asia k/t energy security and democracy**

**Cohen 6**

(Cohen, Ariel November 25, 2006, “US Interests and Central Asian Energy Security”, Heritage Foundation, http://www.policyarchive.org/handle/10207/bitstreams/11895.pdf)

What is needed in Central Asia is a policy that allows the United States to continue to diversify its energy supplies, station its military forces close to the most immediate threats, and create a lasting and deep impact by promoting democratic and free-market values in an area that is still undergoing political and economic development.

**US engagement in Central Asia k/t fight terrorism, prevent spread of WMDs, and maintain energy security**

**Cohen 6**

(Cohen, Ariel November 25, 2006, “US Interests and Central Asian Energy Security”, Heritage Foundation, http://www.policyarchive.org/handle/10207/bitstreams/11895.pdf)

The U.S. is unlikely to become a single dominant power in Central Asia, nor is there any reason why it should attempt to achieve such a status. Realistic goals—energy security; proximity to the main theaters of operation in the war on terrorism, Afghanistan and Pakistan; combating the traffic in drugs, weapons, and weapons of mass destruction technology; and encouraging participatory and transparent social and economic development—require a sustainable engagement. This is especially the case as the U.S. focuses its resources and attention elsewhere, primarily in the Middle East.

**US influence in Central Asia k/t fight terrorism, spread democracy, and maintain energy security**

**Blank 7**

(Blank, Stephen March 2007, “US Interests in Central Asia and The Challenges to Them”, Strategic Studies Institute, strategicstudiesinstitute.army.mil)

For the United States, Central Asia is a region of both growing importance and of growing challenge. Its proximity to Russia, China, Iran, India, and Pakistan;, location as the center of the Global War on Terrorism; and its large energy holdings make it a strategic region where the United States has important, some might even say vital, interests. Those interests pertain, first of all, to geostrategic realities of security, particularly in the war on terrorism. But they also pertain to energy and to the effort to support liberalizing and democratizing reforms.

# Impact—Iran Prolif

#  Internal Link

**Sino-Russian policies make Iran the most imminent threat**

**Simpson 10**

(Simpson, George L., Spring 2010, “Russian and Chinese Support for Tehran”, The Middle East Quarterly, http://www.meforum.org/2690/russian-chinese-support-for-iran)

The most imminent threat to the global order comes from the radical Islamic regime in Iran bent on developing nuclear weapons. Both Russia and China have consistently supported Tehran by their aggressive, opportunist—and shortsighted—policies, and both are in large measure responsible for the threat that the Iranian government poses to the world today.

**Sino-Russian balancing causes Iran nuclearization—they’ll oppose sanctions**

**Simpson 10**

(Simpson, George L., Spring 2010, “Russian and Chinese Support for Tehran”, The Middle East Quarterly, http://www.meforum.org/2690/russian-chinese-support-for-iran)

More significant, however, is Moscow's role in the Islamic Republic's nuclear program. The Russian government has assisted in Iran's construction of the $800 million Bushehr nuclear power plant and has helped the mullahs obtain nuclear knowledge.[18] As a result, Moscow, as well as Beijing, is at odds with Washington over how to deal with Tehran's efforts to gain a nuclear capability. China and Russia, both of which wield veto power on the United Nations Security Council, have consistently obstructed efforts in the U.N. to halt Tehran's drive to obtain nuclear weapons. While it is true that from time to time, both countries have called on Iran's regime (which is a signatory to the Nuclear Non-proliferation Treaty) to cooperate with the International Atomic Energy Agency (IAEA), neither has supported effective sanctions or forceful measures to deal with the problem. Gennady Yevstafyev, a senior adviser at the Center for Policy Studies in Russia, has gone so far as to contend that "Washington closed its eyes to the creation of nuclear weapons by its strategic partner, Pakistan. But now it is threatening a war on its ex-strategic partner Iran for the same crime."

**Sino-Russian arms sales k/t Iranian chemical and bio weapon development and transfer to terrorists**

**Simpson 10**

(Simpson, George L., Spring 2010, “Russian and Chinese Support for Tehran”, The Middle East Quarterly, http://www.meforum.org/2690/russian-chinese-support-for-iran)

Arms sales to Iran by China and Russia, which the three countries insist are lawful, is another source of contention between the latter two and Washington.[22] Russia is Iran's biggest weapons supplier by a wide margin, though China is also an important source. Russia reportedly supports the Islamic Republic's development of ballistic missiles, which former Secretary of State Colin Powell warns have been redesigned to enable them to carry nuclear warheads.[23] Currently, the Iranian military is trying to develop the Shahab-6 missile, a variant of the North Korean Taep'o-dong-2C/3, which will have a range of 3,500 miles, putting Europe within its sights. There are unverified reports that the Russians have transferred rocket engine technology for this program and even some speculation that Moscow is helping Tehran with a missile that will have a 6,300-mile range, enabling it to reach the eastern seaboard of the United States.[24] For its part, although the Chinese government denies as "groundless allegation[s]" reports about its role in supplying Iran with weaponry,[25] it is clear that it has transferred missile components and technology to Iran since the 1980s.[26] For example, Tehran has obtained Chinese-made anti-ship surface-to-surface C-801 and C-802 missiles, which pose a potential threat to Persian Gulf shipping and U.S. naval vessels in the region.[27]. According to the CIA and experts in the field, Iran is also trying to develop sophisticated biological and chemical weapons.[28] These efforts go back to the Iran-Iraq war when the Iranians were on the receiving end of Iraqi chemical attacks. Although Iran has ratified the Biological Weapons Convention, specialists believe that with the help of Russian experts, it is "in the advanced research and development phase" of weaponizing chemical toxins and living organisms.[29] For its part, China has helped in Iran's acquisition of weapons of mass destruction by selling precursor and dual-use chemicals, as well as the technology and equipment needed to use them. Thus there is good reason to conclude that "the Iranian leadership intends to maintain a robust CW [chemical weapons] capability."[30] Washington is concerned not just with Iranian possession of sophisticated weapons but with the prospect of Tehran transferring them to terrorist proxies, such as Lebanese-based Hezbollah. In fact, the group launched an Iranian C-802 missile during the 2006 Israel-Hezbollah war, which hit the Israeli missile frigate Hanit.[31] According to Israeli press reports, the mullahs are currently supplying Iranian-made Zelzal and upgraded Fateh-110 surface-to-surface missiles to the radical Shi'i group.[32] In August 2009, Israeli president Shimon Peres claimed that Hezbollah currently had 80,000 Iranian-supplied missiles.[33] While neither Moscow nor Beijing is directly responsible for these developments, neither appears particularly concerned when the weapons or technologies they transfer to Iran find their way into the hands of terrorist organizations.

**China-Russia-Iran balancing causes prolif and instability**

**Simpson 10**

(Simpson, George L., Spring 2010, “Russian and Chinese Support for Tehran”, The Middle East Quarterly, http://www.meforum.org/2690/russian-chinese-support-for-iran)

Unless they change their course immediately, it is they who will carry the onus for a U.S. or Israeli recourse to military intervention in order to prevent a nuclear-armed Iran. It may seem hard to imagine the present administration in Washington taking such action, but it is also unclear what Jerusalem will do. An Israeli strike against Iran would likely result in a serious setback to Tehran's nuclear program, but its certainty of success is by no means guaranteed. Moreover, Israel would pay a heavy diplomatic price for what would no doubt be termed its "reckless adventurism." Thus, it hesitates, and if it does so for too long, one should not be at all surprised if Israel or some other country ends up being the innocent victim of a nuclear power that the Russians and Chinese will have helped to create. While there may not be a new axis in a formal sense, the combination of Moscow, Beijing, and Tehran on a range of issues has undermined the security of the Persian Gulf region and worked against the interests of the United States and its allies. Its potential continuation represents a broader and more fundamental threat to global stability, would likely destroy decades of diplomacy, and sound the death knell of the nonproliferation regime.

**Sino-Russian alliance k/t strengthen Iran’s military**

**Cohen 1**

(Cohen, Ariel, PhD, Research Fellow for Russian and Eurasian Studies at Heritage Foundation, “The Russia-China Friendship and Cooperation Treaty: A Strategic Shift in Eurasia?”, http://www.heritage.org/research/reports/2001/07/the-russia-china-friendship-and-cooperation-treaty)

Chairman Jiang has repeatedly declared that "hegemonism and power politics" are the "main source of threat to world peace and stability" as well as China's interests.7 Beijing is clearly interested in curtailing the U.S.-led condemnations and sanctions of China for human rights, as in the aftermath of the 1989 Tiananmen Square massacre. Furthermore, Russia and China are both seeking to safeguard their status as two of the five permanent members of the U.N. Security Council. Finally, they are working to boost each other's military potential as well as that of other countries that pursue anti-American foreign policies, such as Iran and Iraq.8

# \*\*\*Add Ons

# 2AC South China Sea

**China’s growing demand for natural gas exacerbates tensions in the South China Sea**

**Watkins 9** – Oil Diplomacy Editor (Eric, “Oil, gas demand drive Asian boundary disputes” Oil & Gas Journal, Vol. 107, Iss. 28; pg. 29, 2 pgs, July 27 2009, http://proquest.umi.com.proxy.lib.umich.edu/pqdlink?vinst=PROD&fmt=3&startpage=-1&vname=PQD&RQT=309&did=1827570051&scaling=FULL&vtype=PQD&rqt=309&cfc=1&TS=1341171567&clientId=17822)//MR

A subcommittee of the US Senate Foreign Relations Committee was told that **growing demand for oil and gas is one of the main drivers of increasing "friction and tension" over maritime boundaries in waters of East and Southeast Asia.** "In recent years, **we have observed an increase in** friction and **tension over these disputes," said US Deputy Assistant Secretary of Defense** Robert **Scher, referring to** what he called a series of "**persistent territorial disputes" over maritime territories in Southeast Asia and the South China Sea.** While Scher said the sources of the rising friction are varied, he told members of the Subcommittee on East Asian and Pacific Affairs that "**increased demand for oil and natural gas** naturally **increases the perceived stakes among claimants in securing resource rights."** Scher also said that **China**, while intent on securing its own interests in the region, "**actively opposes any activity by other claimants to assert their own sovereignty claims**" and that "**China** has increased and **will continue to increase its force posture in the South China Sea."** Peter Dutton, associate professor at the US Naval War College, said **China was** more **likely to use its position of strength as the means to achieve its goals**, either now or **in the future**. "If it is not in a strong enough position today to gain acceptance of its sovereignty over the islands [of the South China Sea] , **rather than negotiate a partial result China will** likely **wait until** such future time as **its position is** suitably **strengthened to finalize all of its claims,**" Dutton said.

**Escalates flashpoints between China and Vietnam**

**Watkins 9** – Oil Diplomacy Editor (Eric, “Oil, gas demand drive Asian boundary disputes” Oil & Gas Journal, Vol. 107, Iss. 28; pg. 29, 2 pgs, July 27 2009, http://proquest.umi.com.proxy.lib.umich.edu/pqdlink?vinst=PROD&fmt=3&startpage=-1&vname=PQD&RQT=309&did=1827570051&scaling=FULL&vtype=PQD&rqt=309&cfc=1&TS=1341171567&clientId=17822)//MR

Meanwhile, US Deputy Assistant Secretary of State Scot Marcie! said **Washington remains concerned "about tension between China and Vietnam, as both countries seek to tap potential oil and gas deposits that lie beneath the South China Sea**." Dan Blumenthal, resident fellow of the American Enterprise Institute, said that **of all the regional territorial disputes, "the Sino-Japanese quarrel in the East China Sea is the** most vexing, and perhaps **most dangerous**." Blumenthal said **the dispute is grounded in great power competition, historical animosity, the desire to exploit potential energy resources beneath the sea, and concerns over the ultimate disposition of Taiwan. "This combination of issues is particularly volatile,"** said Blumenthal, who noted that both countries claim sovereignty over the Senkaku/Diaoyu and both include the islands in their EEZ /continental shelf claims. Referring to energy security, **Blumenthal noted that both countries make claims to the Chunxiao gas field**, which China claims is 5 km away from the Japanese median line in the East China Sea. "Currently, the Chinese energy company CNOOC is the operator of the field, and energy experts estimate that the Chunxiao could have as much as 250 tcf of natural gas and between 70160 billion bbl of oil," he said. "**Since both Japan and China are committed to diversifying their sources of their energy supplies, the natural gas and oil in the East China Sea is of utmost importance to both**," Blumenthal said.

**China-Taiwan war goes nuclear—MAD doesn’t apply**

**Solomone, 06**

Stacey, Ph.D. in Futures Studies at the University of Hawaii, “China's Space Program: the great leap upward,” Journal of Contemporary China

First, the PLA is suspected of making great strides in counterspace weapons systems. The PLA is believed to have made efforts in ASAT weapons such as groundbased lasers and other directed energy weapons, small-sized missiles designed to target foreign satellites, parasite satellites, micro- and nano-satellites, nuclear and non-nuclear EMP weapons, EMP satellite shielding, and stealthy satellites. As long as the PLA is successfully making progress in developing these weapons, it will continue to do so. A Taiwan crisis, the foremost threatening issue toward destabilizing peace in the region, could spark a terrible event. During the Cold War, the United States and the former Soviet Union used mutually assured destruction as a deterrent to dissuade the use of nuclear weapons in space which would destroy all satellites and, with them, all satellite command, control, and communications. 41 However, should the United States become engaged in a struggle over Taiwan independence, it is regrettably feasible that China could use such a horrible means to prevent Taiwan from gaining independence. In the case of China, nuclear weapons in space are not just a means of deterrence or a means of merely producing fear; it simply is a last-effort strategy that is at China’s disposal. 42

# Ext—South China Sea

**Hostility is mounting over gas reserves in the South China Sea—escalation is imminent**

**AP 7/1**/12 (Associated Press, “Tensions flare over South China Sea claims, Vietnamese demand China backs off in rare protest” The Washington Post, July 1 2012, <http://www.washingtonpost.com/world/asia_pacific/tensions-flare-over-south-china-sea-claims-vietnamese-demand-china-backs-off-in-rare-protest/2012/07/01/gJQAAJlAFW_story.html>)//MR

The **protest follows China’s** recent **announcement that it will open nine oil and gas lots for development to international bidders, even though the area overlaps with Vietnam’s** current **exploration contracts.** “**We are very angry with China’s** recent **offer to look for oil inside Vietnam’s territory**,” said Phuong Bich, 53, who was arrested three times last year during similar demonstrations that were broken up. “We urge the government to take action.” Hanoi says **the area where the China National Offshore Oil Corp.,** or CNOOC, **has identified lies within Vietnam’s 200-nautical mile exclusive economic zone.** State-owned PetroVietnam has encouraged foreign companies to ignore China’s offer and says it will continue working on contracts signed with ExxonMobil, Russia’s Gazprom, India’s ONGC and PetroVietnam affiliate PVEP. **Rhetoric between the two communist neighbors has become increasingly hostile** in recent weeks. **Beijing’s Defense Ministry** said it **has “battle-ready” patrols protecting its interests in the South China Sea and warned Vietnam to back off its** reported **aerial patrols of the disputed Spratly Islands. Contested areas of the South China Sea are a long-standing source of animosity among** claimants from **Vietnam, China, the Philippines, Taiwan, Malaysia and Brunei. Disputed territory straddles important international shipping lanes and is believed to be** teeming with fish and **rich in oil and gas reserves.** Some fear **the brewing tensions could result in violence.**

**Natural gas deposits provoke Asian war**

**Glaser 12** – senior fellow with the Freeman Chair in China Studies and a senior associate with the Pacific Forum, Center for Strategic and International Studies (Bonnie S., “Armed Clash in the South China Sea” Council on Foreign Relations Press, April 2012, http://www.cfr.org/east-asia/armed-clash-south-china-sea/p27883)//MR

**A** second **contingency involves conflict between China and the Philippines over natural gas deposits, especially in the disputed area of Reed Bank**, located eighty nautical miles from Palawan. **Oil survey ships** operating **in Reed Bank** under contract **have increasingly been harassed by Chinese vessels**. Reportedly, **the U**nited **K**ingdom-based Forum Energy **plans to start drilling for gas in Reed Bank this year, which could provoke an aggressive Chinese response.** Forum Energy is only one of fifteen exploration contracts that Manila intends to offer over the next few years for offshore exploration near Palawan Island. **Reed Bank is a red line for the Philippines, so this contingency could quickly escalate to violence if China intervened to halt the drilling.**

**China is modernizing its military to secure South China Sea resources**

**Ruscheinski 2** – B.S., University of Illinois (Stephen J., “CHINA’S ENERGY SECURITY AND THE SOUTH CHINA SEA” A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree Master of Military Art and Science General Studies, [2002, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA407062](file:///C%3A%5CUsers%5C14mryshawy.CARROLLTON%5CDesktop%5C2012-2013%20Infrastructure%20Topic%5CResearch%5CWave%202%5C2002%2C%20http%3A%5Cwww.dtic.mil%5Ccgi-bin%5CGetTRDoc%3FAD%3DADA407062))//MR

**To find** the **greater deposits of natural resources necessary for its current and reserve needs, Chinese investment in offshore oil exploration has become paramount**. Specifically, **the Chinese have embarked upon numerous ventures throughout the South China Sea**, much of the time **in contested territory.** At present, **China claims the majority of the South China Sea as sovereign territory** based upon historical grounds, despite the assertions of other claimants to the contrary (Valencia et al. 1999, 20-22). **China** also **proclaims that potential oil reserves within the region could run in the billions of gallons**, though this has not been substantiated by outside sources (Valencia et al. 1999, 9-11). In addition to its potential reserves, the sea lines of communication (SLOCs) running through the South China Sea have taken on an equal importance to China as more and more of its imported crude, not to mention the majority of Chinese import and export goods, travel these lines to and from China. It would appear that greater Chinese expansion and development within the South China Sea, coupled with provisions for the security of the flow of resources and goods through this sea, could potentially solve some of China’s difficulties in mitigating its strategic oil vulnerability. **As China focuses more attention on the South China Sea, the Chinese military is in transition. Not only are its air and land forces rapidly modernizing, China is also realizing** the very beginnings of **a** blue-water **maritime force. The U**nited **S**tates **and its allies have noted China’s increased presence within the South China Sea, its growing defense expenditures, and the** relative **modernization of its military** forces. The current U.S. policy toward China is one of comprehensive engagement, in the hopes that China will continue to act as a responsible member of the world community (NSS 2000, 2). **If China determines that sovereign control over the South China Sea is vital to its national interests due to its strategic oil vulnerability, there could be significant potential for future conflict within the South China Sea.**

**Threats to China’s claims over energy reserves South China Sea will escalate**

**Lin 12** – Researcher for Project 2049 Institute (Jenny, “China’s Energy Security Dilemma” Project 2049, 2012 (last date referenced) <http://project2049.net/documents/china_energy_dilemma_lin.pdf>)//MR

**If China continues to lack capacity to balance growth and energy consumption, contentions in the East and the South China Seas will** likely **increase**. More than ever, **Beijing will view this “Maritime Silk Road” as China’s closest, most secure source of energy** in the long-run. Therefore, **activities that threaten Chinese energy interests** in these areas **will** likely **be viewed as infringing on China’s national security.**

**Tensions mount over vast natural gas reserves in the South China Sea**

**Fabi and Mogato 2/28**/12 (Randy and Manuel, “Insight: Conflict looms in South China Sea oil rush” Reuters, February 28 2012, <http://www.reuters.com/article/2012/02/28/us-china-spratlys-philippines-idUSTRE81R03420120228>)//MR

"As Southeast Asian nations run to the U.S. for assistance, **Beijing increasingly fears that America aims to encircle China militarily and diplomatically**," said Stephanie Kleine-Ahlbrandt, Northeast Asia Director for the International Crisis Group. "**Underlying** all of **these concerns is the potential that** **discoveries of** oil and **natural gas beneath the disputed sections of the South China Sea could fuel conflict.**" **The area is thought to hold vast untapped reserves of** oil and **natural gas that could** potentially **place China, the Philippines, Vietnam and other claimant nations alongside the likes of Saudi Arabia, Russia and Qatar. Manila is beefing up its tiny and outdated naval fleet and military bases**, adding at least two Hamilton-class cutters this year and earmarking millions of dollars to expand its Ulugan Bay naval base in Palawan. **It's no match for China's fleet, the largest in Asia, which boasts 62 submarines, 13 destroyers and 65 frigate**s, according to the International Institute for Strategic Studies. **China last month launched the fourth of its new 071 amphibious landing ships** that are designed to quickly insert troops to trouble spots, disputed islands, for example. **The U.S. Navy** has **announced it will deploy its own new amphibious assault vessels**, the Littoral Combat Ships, **to the "maritime crossroads" of the Asia-Pacific theater**, stationing them in Singapore and perhaps the Philippines.

**Tensions are escalating over drilling rights in South China Sea**

**Fabi and Mogato 2/28**/12 (Randy and Manuel, “Insight: Conflict looms in South China Sea oil rush” Reuters, February 28 2012, <http://www.reuters.com/article/2012/02/28/us-china-spratlys-philippines-idUSTRE81R03420120228>)//MR

**China has warned oil companies not to explore in the disputed South China Sea, over which Beijing says it has "indisputable sovereignty." Chinese ships have repeatedly harassed vessels that have tried.** After ExxonMobil discovered hydrocarbons off the coast of Danang in central Vietnam, an area also claimed by China, one of **China**'s most popular newspapers **warned** in October **that nations involved in territorial disputes should "mentally prepare for the sounds of cannons" if they remain at loggerheads with Beijing.** Despite the threats, **the Philippines and Vietnam have continued to explore for oil and natural gas further offshore in the South China waters**, driven by persistently high oil prices and more advanced deep-sea technology. **The Philippines has reported as many as 12 incidents of Chinese vessels intruding into its sovereign waters in the past year**, an unusually high number, Sabban said. In one of the most serious incidents **last October, a Philippine navy ship seized Chinese fishing boats after colliding with one of them, prompting protests from China for their return.** At least 12 Chinese fishermen have been arrested over the past year. Half of them remain in detention in Palawan. "China has no right to tell us that we should first ask for permission from them to explore the area," Sabban said. "We have explored that area back in the 1970s, so why can't we explore it now? We knew that there is a substantial deposit of natural gas even before all of these things started." **Manila says Reed Bank**, about 80 nautical miles west of Palawan island at the southwestern end of the Philippine archipelago, **is within the country's** 200-nautical mile **exclusive economic zone. Beijing, however, believes it is part of the Spratlys**, a group of 250 uninhabitable islets spread over 165,000 square miles, claimed entirely by China, Taiwan and Vietnam and in part by Malaysia, Brunei and the Philippines. While China prefers to solve the disputes one-on-one with its smaller Southeast Asian neighbor, Washington has sought to internationalize the issue, given that half the world's merchant fleet tonnage sails across the sea and around these islets each year, carrying $5 trillion worth of trade. "If we don't develop our positions in our exclusive economic zone, then we will only be giving it away and will be at the losing end," Eugenio Bito-Onon, the mayor of Kalayaan islands in the Spratlys, told Reuters at a coffee shop in Puerto Princesa. China's oil exploration has been limited in the South China Sea with less than 15 deep sea wells drilled so far. Chinese offshore oil and gas specialist CNOOC Ltd, along with international partners Canada's Husky Energy and U.S. company Chevron Corp., plan to step up exploration in the area but focus mainly in the north, staying away from the politically sensitive waters to the south. Estimates for proven and undiscovered oil reserves in the South China Sea range from 28 billion to as high as 213 billion barrels of oil, the U.S. Energy Information Administration said in a March 2008 report. That would be equivalent to more than 60 years of current Chinese demand, under the most optimistic outlook, and surpass every country's proven oil reserves except Saudi Arabia and Venezuela, according to the BP Statistical Review. OIL MANDATE General Sabban said the necessary patrol ships and surveillance planes will be provided to protect Forum Energy's exploration vessels in Reed Bank. "We have a mandate to protect all oil companies exploring in our territory," he said. "We don't exactly escort them, but we are in the area to deter any outside force from harassing them." **Forum Energy**, whose majority shareholder is the Philippines' top miner Philex Mining Corp., **plans to spend around $80 million through 2013 to explore the Sampaguita gas field in Reed Bank**, covered by Service Contract 72. **The field is estimated to hold at least 3.4 trillion cubic feet of natural gas, with the potential for five times that amount.** That is at least 25 percent bigger than the nearby Malampaya gas field, operated by Royal Dutch Shell, which fuels half of the power needs for the country's main island of Luzon. **The Philippines is eager to further increase its natural gas production to meet growing domestic demand for gas-fired power, which is estimated to surge to 5,000 megawatts per day in 2016**, from the current 2,700 megawatts."**There is no question that there is gas there. We already know** one or two **locations we would like to drill on," said** Apostol, **Forum Energy's president**, in an interview. "If the first drill is a bonanza, there might be a need to drill back to back." **The company** said it **is closely coordinating its Reed Bank plans with the military and the energy department**, hoping to send drill ships by the fourth quarter.

#  South China Sea—Brink

**Tensions in the South China Sea are at a breaking point**

**Valencia 11** – Research Associate with the National Asia Research Program (Dr. Mark, “The South China Sea: Back To Future? By Mark J. Valencia” South China Sea Studies, July 15 2011, <http://southchinaseastudies.org/en/conferences-and-seminars-/second-international-workshop/582-the-south-china-sea-back-to-future-by-mark-j-valencia>)//MR

Unfortunately, **there has been little** positive **progress regarding the disputes.** To the contrary, **over the past two years there has been a sequence of developments regarding the South China Sea that has significant implications for regional security. These include the Impeccable incident, China’s unilateral banning of fishing in the Gulf of Tonkin and its arrests of Vietnamese fishing boats**,[3] **China’s declaration of the South China Sea as a “core interest,”**[4] the Vietnam/Malaysia joint extended continental shelf submission, China’s official objection thereto, t**he US statement of ‘national interest’ in the outcome of the disputes, its offer to mediate them, China’s strong rejection thereof, and the ‘softened’ US-ASEAN statement on the South China Sea.** These **developments have occurred in the context of deteriorating US/China relations and a regional debate regarding the** nature and **very desirability of a US security role in the region**. Moreover, **these developments have become conflated and are reinforcing, raising fundamental questions for Southeast Asia concerning its regional security.** This paper analyzes these threads and their reinforcing nature, identifies some of the fundamental questions they raise, and concludes that **a dramatic compromise may be necessary to avert a worst scenario.**

**Chinese nationalism fuels war**

**Lieven 6/12**/12 – professor in the War Studies Department of King’s College London and senior fellow of the New America Foundation in Washington (Anatol, “Avoiding a U.S.-China War” The New York Times, June 12 2012, <http://www.nytimes.com/2012/06/13/opinion/avoiding-a-us-china-war.html?_r=1&ref=territorialdisputes>)//MR

**In East Asia, things are very different**. For most of its history, China has dominated the region. When it becomes the largest economy on earth, it will certainly seek to do so. **While China cannot build up naval forces to challenge the U**nited **S**tates **in distant oceans, it would be very surprising if** in future **it will not be able to generate missile and air forces sufficient to deny the U.S. Navy access to the seas around China.** Moreover, **China is engaged in territorial disputes with other states** in the region **over island groups — disputes in which Chinese popular nationalist sentiments have become heavily engaged.** With communism dead, **the Chinese administration has relied very heavily** — and successfully — **on nationalism as an ideological support for its rule.** The problem is that **if clashes erupt over these islands, Beijing may find itself in a position where it cannot compromise without severe damage to its domestic legitimacy** — very much the position of the European great powers in 1914. In these disputes, **Chinese nationalism collides with other nationalisms — particularly that of Vietnam, which embodies strong historical resentments. The hostility to China of Vietnam and most of the other regional states is** at once **America’s greatest asset and greatest danger.** It means that **most of China’s neighbors want the U**nited **S**tates **to remain militarily present in the region.** As White argues, even if the United States were to withdraw, it is highly unlikely that these countries would submit meekly to Chinese hegemony.

#  Ext—China/Taiwan War

**China-Taiwan war draws in the U.S.**

Lieberthal 5, Director of the John L. Thornton China Center and senior fellow in Foreign Policy and Global Economy and Development, **05**

(84 Foreign Affairs 53, “Preventing a War over Taiwan.” 2005. <http://heinonline.org/HOL/Page?handle=hein.journals/fora84&div=31&g_sent=1&collection=journals>. [JUNEJA])

One of the greatest dangers to international security today is the possibility of a military confrontation between China and Taiwan that leads to a war between China and the United States. Such a war would be not only tragic but also unnecessary, since it would result from a failure of imagination and diplomacy-fought because a place that has long declared itself independent was attacked for doing so again. Neither Beijing nor Taipei wants awar, but both sides have adopted policies that nm an unacceptably high risk of bloodshed over the next several years. The Bush administration should therefore take steps now to reduce the prospect of conflict across the Taiwan Strait. Understanding what those steps should be, however, requires getting past the rhetorical constructs that have dominated discussion to date. China says that it wants stability across the Taiwan Strait, that it can postpone final resolution of the cross-strait issue for a long time, that it is developing its regional military capabilities solely to deter Taiwanese independence, and that it will use force if necessary to prevent or reverse a declaration of independence. But these positions have not served China's interests well, because it has failed to make clear exactly what "declaring independence” involves. By not doing so, Beijing has risked miscalculation by a Taiwanese leadership that does not want to provoke a military response but continues to push the envelope just short of one. The fact that for more than a decade Taiwan's leaders have declared Taiwan to be "an independent, sovereign country” without dramatic consequences adds to the confusion. Beijing's stance now runs the risk that Taiwanese President Chen Shui-bian will consider China's threats a bluff (Chen's pro-independence predecessor Lee Teng-hui, for example, has said that Beijing is nothing more than a "paper tiger.") Ironically, Beijing's position also enhances the stature and leverage of the pro-independence elements in Taiwan. Since China says war and peace will be determined by what these individuals say and do, they attract enormous domestic and international attention. China may be able to continue on its current course, expanding trade and investment ties with Taiwan while insisting that the is1and's leaders accept the "one-China principle"as a precondition for any political talks and threatening the use of force in response to a declaration of independence. But if it does, it will be tying both its credibility and the chances of a confrontation to forces beyond its control.

**War over Taiwan causes extinction**

**Ching, 2k**

Ching Cheong, senior journalist at *The Straits Times* and author of two books on Taiwan,“No One Gains in War Over Taiwan”, June 25, Lexis Nexis.

THE high-intensity scenario postulates a cross-strait war escalating into a full-scale war between the US and China. If Washington were to conclude that splitting China would better serve its national interests, then a full-scale war becomes unavoidable. Conflict on such a scale would embroil other countries far and near and -horror of horrors -raise the possibility of a nuclear war. Beijing has already told the US and Japan privately that it considers any country providing bases and logistics support to any US forces attacking China as belligerent parties open to its retaliation. In the region, this means South Korea, Japan, the Philippines and, to a lesser extent, Singapore. If China were to retaliate, east Asia will be set on fire. And the conflagration may not end there as opportunistic powers elsewhere may try to overturn the existing world order. With the US distracted, Russia may seek to redefine Europe's political landscape. The balance of power in the Middle East may be similarly upset by the likes of Iraq. In south Asia, hostilities between India and Pakistan, each armed with its own nuclear arsenal, could enter a new and dangerous phase. Will a full-scale Sino-US war lead to a nuclear war? According to General Matthew Ridgeway, commander of the US Eighth Army which fought against the Chinese in the Korean War, the US had at the time thought of using nuclear weapons against China to save the US from military defeat. In his book The Korean War, a personal account of the military and political aspects of the conflict and its implications on future US foreign policy, Gen Ridgeway said that US was confronted with two choices in Korea -truce or a broadened war, which could have led to the use of nuclear weapons. If the US had to resort to nuclear weaponry to defeat China long before the latter acquired a similar capability, there is little hope of winning a war against China 50 years later, short of using nuclear weapons. The US estimates that China possesses about 20 nuclear warheads that can destroy major American cities. Beijing also seems prepared to go for the nuclear option. A Chinese military officer disclosed recently that Beijing was considering a review of its "non first use" principle regarding nuclear weapons. Major-General Pan Zhangqiang, president of the military-funded Institute for Strategic Studies, told a gathering at the Woodrow Wilson International Centre for Scholars in Washington that although the government still abided by that principle, there were strong pressures from the military to drop it. He said military leaders considered the use of nuclear weapons mandatory if the country risked dismemberment as a result of foreign intervention. Gen Ridgeway said that should that come to pass, we would see the destruction of civilisation. There would be no victors in such a war. While the prospect of a nuclear Armaggedon over Taiwan might seem inconceivable, it cannot be ruled out entirely, for China puts sovereignty above everything else.

# 2AC East China Sea

**Competition over natural gas in the East China Sea collapses Sino-Japan relations**

**Valencia 7** – internationally known maritime policy analyst, political commentator and consultant focused on Asia, formerly a Senior Fellow with the East-West Center, a Fulbright Fellow, an Abe Fellow, a DAAD Fellow, an International Institute for Asian Studies Visiting Fellow , an Ocean Policy Research Foundation Visiting Scholar and a U.S. State Department sponsored international speaker (Mark J., “THE EAST CHINA SEA DISPUTE: CONTEXT, CLAIMS, ISSUES, AND POSSIBLE SOLUTIONS” ASIAN PERSPECTIVE, Vol. 31, 127-167, November 1 2007, <http://www.asianperspective.org/articles/v31n1-f.pdf>)//MR

**The East China Sea is one of the last unexplored high-potential resource areas** located **near large markets. But the development of oil and gas in** much **of the area has been prevented** for decades **by conflicting claims to** boundaries and islets in **the area by China, Taiwan, and Japan. Competition between China and Japan for gas resources in the East China Sea is intensifying and hampering improved relations.** However, conflict is not inevitable. A compromise—joint development— is motivated by the realization that a positive ChinaJapan relationship is simply too important to be destroyed by these disputes. Although both agree in principle on joint development, the two sides have different interpretations of what joint development means or implies, and what area should be jointly developed. The article spells out three basic agreements in principle that are necessary before details of any solution can be negotiated. **The alternative to a solution is continued mutual suspicion, unstable relations, unmanaged and undeveloped resources, and an increasing frequency and intensity of incidents, fueling nationalist sentiments and** resultant **political conflict.**

**Asia Key to Survival**

**Mead 10**

Mead, senior fellow @ the Council on Foreign Relations, 2010 Walter, American Interest, “Obama in Asia”, http://blogs.the-american-interest.com/wrm/2010/11/09/obama-in-asia/

The decision to go to Asia is one that all thinking Americans can and should support regardless of either party or ideological affiliation.  East and South Asia are the places where the 21st century, for better or for worse, will most likely be shaped; economic growth, environmental progress, the destiny of democracy and success against terror are all at stake here.  American objectives in this region are clear.  While convincing China that its best interests are not served by a rash, [Kaiser Wilhelm-like](http://blogs.the-american-interest.com/wrm/2010/09/26/in-the-footsteps-of-the-kaiser-china-boosts-us-power-in-asia/) dash for supremacy in the region, the US does not want either to isolate or contain China.  We want a strong, rich, open and free China in an Asia that is also strong, rich, open and free.  Our destiny is inextricably linked with Asia’s; Asian success will make America stronger, richer and more secure.  Asia’s failures will reverberate over here, threatening our prosperity, our security and perhaps even our survival. The world’s two most mutually hostile nuclear states, India and Pakistan, are in Asia.  The two states most likely to threaten others with nukes, North Korea and aspiring rogue nuclear power Iran, are there.  The two superpowers with a billion plus people are in Asia as well.  This is where the world’s fastest growing economies are.  It is where the worst environmental problems exist.  It is the home of the world’s largest democracy, the world’s most populous Islamic country (Indonesia — which is also among the most democratic and pluralistic of Islamic countries), and the world’s most rapidly rising non-democratic power as well.  Asia holds more oil resources than any other continent; the world’s most important and most threatened trade routes lie off its shores.  East Asia, South Asia, Central Asia (where American and NATO forces are fighting the Taliban) and West Asia (home among others to Saudi Arabia, Israel, Turkey and Iraq) are the theaters in the world today that most directly engage America’s vital interests and where our armed forces are most directly involved.  The world’s most explosive territorial disputes are in Asia as well, with islands (and the surrounding mineral and fishery resources) bitterly disputed between countries like Russia, the two Koreas, Japan, China (both from Beijing and Taipei), and Vietnam.  From the streets of Jerusalem to the beaches of Taiwan the world’s most intractable political problems are found on the Asian landmass and its surrounding seas. Whether you view the world in terms of geopolitical security, environmental sustainability, economic growth or the march of democracy, Asia is at the center of your concerns.  That is the overwhelming reality of world politics today, and that reality is what President Obama’s trip is intended to address.

# Ext—East China Sea

**East China Sea natural gas deposits are a major flashpoint for escalation—negotiations don’t solve**

**Minoura 11** – B.A. in International Relations, The University of Tokyo (Haruna, “Energy Security and Japan-China Relations: Competition or Cooperation?” A Thesis submitted to The Faculty of The Elliott School of International Affairs of The George Washington University in partial fulfillment of the requirements for the degree of Master of Arts in International Affairs, January 31 2011, http://gradworks.umi.com/1496651.pdf)//MR

**The East China Sea case is** an **interesting** comparison to the Russian oil case, because **competition is still ongoing, despite numerous bilateral government consultations to resolve the issue. The dispute over gas deposits in the East China Sea is closely linked to the unsettled border of the exclusive economic zones** (EEZs) **between the two countries and the sovereignty claims to the Senkaku/Diaoyu islands** located in the disputed area. **The dispute also has military implications because of the area’s strategic location and** thus **both China and Japan emphasize their claims by deploying naval vessels and patrol aircrafts**. Because **the East China Sea dispute is** considered to be **one of the flashpoints of conflict between China and Japan**, an understanding of what drives competitive behavior is useful. **Japan and China have managed the dispute by holding consultations and have agreed to jointly develop resources in a new area in the East China Sea.** China especially showed flexibility when it agreed to allow Japanese investment in one of the gas fields it operates. Howev**er, the two sides have not implemented any joint measures yet, and** they **remain unwilling to compromise their respective claims.** Furthermore, th**e Chinese Navy’s expansion of activities near** the **disputed areas in the East China Sea has increased friction between the two sides. Underlying these sovereignty claims**, of course, **are China and Japan’s nationalism and historically rooted mistrust, which make settlement of the dispute** more **difficult**.

**Energy cooperation between China and Japan is likely—leads to war**

**Minoura 11** – B.A. in International Relations, The University of Tokyo (Haruna, “Energy Security and Japan-China Relations: Competition or Cooperation?” A Thesis submitted to The Faculty of The Elliott School of International Affairs of The George Washington University in partial fulfillment of the requirements for the degree of Master of Arts in International Affairs, January 31 2011, http://gradworks.umi.com/1496651.pdf)//MR

Three hypotheses are drawn from the dependent and independent variables described above. First, **Sino-Japanese competition for energy resources increases if the contested resources** highly **contribute to their national energy security, are profitable, and have strategic value for both sides.** In addition, **bad bilateral relationship and public opinion that is hostile to each other would create a competitive atmosphere. A third party could** also **pit the two sides against each other.** Furthermore, **if the energy dispute includes high** strategic **stakes** such as territorial sovereignty and maritime rights, **these strategic calculations matter more than energy security or economic calculations in each side’s strategy. Japanese and Chinese public opinion is** also **highly sensitive about sovereignty and territorial issues. As a result, China and Japan are more likely to be competitive or uncompromising**. If the two sides are not careful, **there is a possibility that energy competition could escalate, raise tensions, and even trigger** accidental **clashes.**

**Japan-China clash over natural gas would escalate and draw in the US**

**Valencia 7** – internationally known maritime policy analyst, political commentator and consultant focused on Asia, formerly a Senior Fellow with the East-West Center, a Fulbright Fellow, an Abe Fellow, a DAAD Fellow, an International Institute for Asian Studies Visiting Fellow , an Ocean Policy Research Foundation Visiting Scholar and a U.S. State Department sponsored international speaker (Mark J., “THE EAST CHINA SEA DISPUTE: CONTEXT, CLAIMS, ISSUES, AND POSSIBLE SOLUTIONS” ASIAN PERSPECTIVE, Vol. 31, 127-167, November 1 2007, <http://www.asianperspective.org/articles/v31n1-f.pdf>)//MR

The East China Sea is a strategic area for China, Japan, and the United States.1 In the north it guards the entrance to the Tsushima Strait which leads to the Sea of Japan. On its south sits Taiwan, a main bone of contention between China and the United States. Moreover, **China sees Japan as part of a U.S. attempt to contain China** and is particularly incensed with Japan’s pledged logistical and intelligence support of the United States in the event of a clash with China over Taiwan. **It also is concerned with Japan’s growing nationalism and assertiveness and fears it may culminate in a revival of Japanese militarism.**2 **China’s naval buildup**, including the purchase of state-of-the-art weapons from Russia, such as super-quiet Kilo subs, **is designed to exert military control over Taiwan**, if necessary. China hopes to extend its sea defense perimeter into the Western Pacific. But to do that it must be able to move its submarines and other naval vessels through the Ryukyu island chain. Not only does this Japanese-patrolled territory extend almost to Taiwan; vessels and aircraft from the major American base at Okinawa guard against such maneuvers. Thus **China is trying to** carefully **map the seafloor and is testing the reaction times and capabilities of Japanese and U.S. forces in the area.** **In response, Japan is establishing an advanced facility on Miyakojima to collect electronic intelligence on foreign aircraft flying over the East China Sea**.3 As an indication of the danger in these waters, in November 2006 Admiral William J. Fallon, commander of U.S. Pacific forces, stated that a Chinese submarine had surprised a U.S. aircraft carrier battle group and risked setting off a military confrontation by closely shadowing it in the East China Sea near Okinawa.4 **Military communication between China and the U**nited **S**tates **and China and Japan is poor to nonexistent** regarding intent and deployment of naval and air military assets. **The possibility of a Japan-China clash in the East China Sea cannot be** totally **discounted. Such a clash would clearly have implications for the U**nited **S**tates **as an ally of Japan.** In one scenario, 5 China stations its submarines and other naval vessels in the East China Sea to protect its drilling activities there. Japan responds by sending P-3 patrol planes, Aegis war ships, and F-15 fighters. Miscommunication exacerbates tension and a nighttime clash erupts between Chinese submarines and Japanese destroyers. Reinforcements are dispatched and Japan requests assistance from the United States. The United States would likely delay intervention to allow time for diplomacy to work. But **if the situation spiraled out of control the U**nited **S**tates **would** likely **defeat the Chinese naval force, precipitating a wider and longer-term conflict.**

**China is growing dependent on natural gas—drive for energy security escalates flashpoints in East China Sea**

**Richardson 4** – visiting senior research fellow at the Institute of Southeast Asian Studies in Singapore (Michael “Quest for oil that knows no bounds” South China Morning Post, November 19 2004, <http://search.proquest.com.proxy.lib.umich.edu/docview/266372852>)//MR

Underlying the furious response of Japan to the recent intrusion of a Chinese submarine into its waters is the **growing competition between two energy-hungry Asian giants as they seek oil and gas supplies** that are much closer to home and will help ease their dependence on the volatile Middle East. The incursion took place not far from the Chunxiao gas field in the East China Sea that is the centre of a bitter dispute between Tokyo and Beijing. This month, the largest of the Chinese state-owned oil companies, China National Petroleum Corp, formed an offshore oil engineering subsidiary in the latest move to develop energy fields in these waters. Last July, one of its units, PetroChina, applied for official oil and gas exploration and development licences in the southern area of the South China Sea, where sovereignty is disputed with Southeast Asian countries. **In the East China Sea, Tokyo is strongly resisting Beijing's energy claims. Japan, which is** even more **heavily dependent on imported oil and gas, puts the boundary of its Exclusive Economic Zone midway between the shores of the two countries.** However, **China maintains that the border is where its continental shelf ends - much closer to Japan than China**. The Xihu Trough gas project being developed by China, which includes the Chunxiao gas field, lies entirely within the EEZ claimed by Beijing. But if Tokyo's median-line principle applied, most of the prospective gas would go to Japan. As it is, the Chunxiao field, which is due to start piping gas to China next year, is within 4km of the boundary claimed by Japan. Tokyo says that the field could extend across the frontier and that gas from its side might be taken by China. The two nations are also vying for access to gas from fields on Russia's Sakhalin Island, and access to a planned export pipeline that will tap large oil reserves in eastern Siberia. Many analysts believe that **Beijing's offshore petroleum push is driven** more **by the politics of Chinese energy security** than commercial considerations. In September, the Royal Dutch/Shell Group and Unocal Corp pulled out of the Xihu Trough project, reportedly because it would not be a sufficiently profitable venture. Each held a 20 per cent stake. The two Chinese stakeholders, China National Offshore Oil Corp and China Petrochemical Corp, say they will proceed alone. **China's largest onshore oil fields are in decline, while onshore gas fields cannot meet demand in the major urban** and industrial **centres** on the east coast. **If rapid economic growth is to continue, China must have enough oil to fuel the rising number of vehicles. It needs gas to generate electricity** to reduce reliance on polluting coal. **Chinese oil imports are rising fast, coming mainly from politically unstable countries in the Middle East and Africa**. The Xinhua news agency reported this week that oil imports could reach 120 million tonnes for the year. This would be about 40 per cent of China's total oil consumption. On numerous occasions this year, **the** official **Chinese media has reported the results of offshore geological surveys, pointing to huge amounts of crude oil and natural gas beneath the seabed off China's coast.** The People's Daily online edition said on November 4 that offshore oil reserves amounted to nearly 28 billion tonnes. Such **estimates are highly questionable, but if reserves of anywhere near this magnitude exist** and can be exploited, **they would equate to more than 200 years' supply** at the current rate of oil imports.

**Fear of energy disruptions drive China to upgrade their navy to protect oil sites—spills over to conflict with Japan**

**Ding 5** – Research Fellow at the Institute of International Relations (IIR) at National Chengchi University, Taiwan (Arthur S., “China’s Energy Security Demands and the East China Sea: A Growing Likelihood of Conflict in East Asia?” The China and Eurasia Forum Quarterly, November 2005,

**Seeking a secure long-term energy supply has become part of China’s strategic policy.** In addition to securing energy imports and improving energy efficiency, **China has** also **taken to modernizing its naval fleet, as a means to protect its energy interests.** It has been reported that in recent years, **every Chinese shipyard has been operating in full capacity, and** that **new naval warships are** among those **being built.** There is no doubt that the Taiwan issue presents a strong call for the increase in the production of military hardware. However, **China’s military goal is beyond the Taiwan issue. The rising oil demand is likely to bring the protection of maritime oil sites into consideration**. Having recognized that energy supplies is the grease for its economic engine, **China cannot afford to have its energy supply disrupted for fear of a stalled economy leading to social unrest**. Under this circumstance, building sufficient warships to protect oil sites (and shipping lanes) against potential disruptions is one of the strategies the Chinese government has pursued.3 The concern is that **as China rushes to secure its own energy security, friction between Japan and China over energy resources in disputed territories, which is** presently framed as **a zero-sum game, may spillover into** the other areas of **tension between the two countries.**

**China’s growing demand for energy builds tensions over natural gas fields in the East China Sea**

**Ding 5** – Research Fellow at the Institute of International Relations (IIR) at National Chengchi University, Taiwan (Arthur S., “China’s Energy Security Demands and the East China Sea: A Growing Likelihood of Conflict in East Asia?” The China and Eurasia Forum Quarterly, November 2005,

**The East China Sea is a place of territorial disputes between China and Japan. Under the** U.N. Convention on the **Law of the Sea, a coastal country can claim an Exclusive Economic Zone** (EEZ) extending **200 nautical miles from its shore.** In this case, **Chinese and Japanese offshore territorial claims overlap in the East China Sea**. China claims the disputed ocean territory as its own EEZ since it is part of China’s natural extension of its continental shelf. Japan on the other hand claims the disputed ocean territory as its own EEZ on the basis that it is within 200 nautical miles (370km) from Japan’s coast. In the case of **Chunxiao** which is located about five kilometers away from the median line, the **gas field** which is 22,000 square km in size **is said to straddle the Chinese EEZ, into the disputed** EEZ **area**.1 **This on-going dispute adds to the list of issues the two East Asian powers have locked horns over**. The current Sino-Japanese relations have been marked by historical nationalist animosity, rival power relations in the context of China’s rise as a regional power, disputed maritime territories and the Taiwan issue. **The significance of the two’s** latest **rivalry over energy resources, especially** those **in the East China seabed is** to be **understood in the context of China’s growing thirst for energy supplies.** According to the International Energy Agency’s statistics, **China’s oil demand has grown from 2.3 million barrels per day** (mb/d) in 1989 **to 5.5 mb/d** in 2003. The **demand is expected to** continue to grow to 7.15 mb/d in 2006 and is estimated to **reach about 13.5 mb/d in 2030**. In 1989, domestic Chinese supply was 2.8 mb/d and China was able to export its extra oil to Japan. Yet beginning in 1993, China became a net oil importer. Despite further domestic exploration, supply has leveled off at 3.4 mb/d in 2003 and around 3.6 mb/d as of August 2005. In the context of rising oil price in the world, the short supply has caused rationing problem in some areas in China in August 2005.

#  East China Sea—Brink

**East China Sea tensions are on the brink**

**Valencia 7** – internationally known maritime policy analyst, political commentator and consultant focused on Asia, formerly a Senior Fellow with the East-West Center, a Fulbright Fellow, an Abe Fellow, a DAAD Fellow, an International Institute for Asian Studies Visiting Fellow , an Ocean Policy Research Foundation Visiting Scholar and a U.S. State Department sponsored international speaker (Mark J., “THE EAST CHINA SEA DISPUTE: CONTEXT, CLAIMS, ISSUES, AND POSSIBLE SOLUTIONS” ASIAN PERSPECTIVE, Vol. 31, 127-167, November 1 2007, <http://www.asianperspective.org/articles/v31n1-f.pdf>)//MR

Disputes over small islands and ocean space are usually ancillary at most to more fundamental geopolitical dialectics. However, **in** certain **situations of big-power rivalry and competition for scarce petroleum resources**, such **issues** may **become the tail that wags the dog of international relations.** The **intensifying competition between China and Japan for gas resources in the East China Sea could become just such a situation. The East China Sea** is thought to contain up to 100 billion barrels of oil equivalent. It **is one of the last unexplored high-potential resource areas** located near large markets. **The development of oil and gas in much of the area has been prevented for decades by conflicting** and overlapping **claims to boundaries** in the area **by China, Taiwan, and Japan**. Indeed, the Japanese government has until now refused to let companies explore and develop the resources in the area because it feared that these acts would adversely affect its relations and negotiations with China on boundaries. But **China has been drilling ever closer to the “median” line** between undisputed territory of both countries that has been unilaterally declared as the boundary by Japan, and **is now producing gas from the Chunxiao field** situated **just on its side** of that line. **Tokyo has officially protested the drilling** because it fears China will siphon off gas from its side of the “boundary” and is now considering allowing Teikoku Oil Company to drill on Japan’s side of it. Just the possibility of such drilling by Teikoku has been fiercely protested by Beijing, which claims most of the East China Sea continental shelf.

#  Ext—East Asian War

**East Asian instability on the brink—no factors preventing escalation.**

**Yee 11** “Maritime Territorial Disputes in East Asia: A Comparative Analysis of the South China Sea and the East China Sea” Yee, Andy (He graduated from Cambridge University and has three and a half years of investment banking experience in Asia. He specializes in China and the international politics of East Asia, but other general interests include global governance, conflict resolution and human rights. More recently he conducted research for the Political Section of the European Commission Delegation to China in Beijing. He is currently a graduate student in Pacific Asian Studies at the School of Oriental and African Studies in London). Journal of Current Chinese Affairs - China Aktuell40. 2 (2011): 165-193.

http://search.proquest.com.proxy.lib.umich.edu/pais/docview/1018340260/137BAF3CB04509448C3/1?accountid=14667

**Maritime issues are rising to the forefront of international security concerns.** Since the end of the Second World War, **the ocean has become a source of instability in the international system**. Barry Buzan (1978) cites the dramatic rise in the realisable economic value of oceans and the rapid spread of sovereign states to cover virtually all land areas as reasons to explain why **oceans have become areas of intense competition for scarce goods**. This trend has accelerated with the end of the Cold War, with international relations having shifted from divisions along ideological lines to economic competition over access to vital resources, especially oil and natural gas. **This is producing a new geography of conflict in which resource flows rather than political divisions constitute the major fault lines** (Klare 2001). While an international legal framework – namely, the United Nations (UN**) Law of the Sea Convention** – has been developed to resolve disputes, Buzan (1978) predicts that it “**will not create order out of chaos, but rather define the terms of disorder**”, as “political acceptability will have to be brought at a cost of legal clarity”. He is of the view that some intermediate mixture of conflict and cooperation is the most likely future, as political considerations and natural conflict of interests would somehow be balanced by functional considerations of trade, development and the cost of disputes. Buzan’s observation provides an ideal starting point for us to critically examine the situation in the Asia-Pacific region, where economic motives and nationalism have stimulated a “sea enclosure” movement by littoral states. At the same time**, international legal regimes have been shown to be inadequate in addressing national maritime interests and resolving conflicting claims**. As a result, **maritime issues are becoming a key concern among countries in Northeast and Southeast Asia. These issues are all the more important due to the rise of China as an economic and military power**. **China is currently involved in territorial disputes with Southeast Asian nations and Japan** over maritime delimitations and the sovereignty of offshore islands, namely the Spratly and Paracel Islands in the South China Sea, and the Diaoyu/ Senkaku Islands in the East China Sea. Control of these islands and seas is key to securing the rights of resource exploitation, the safety of sea channels of communication and regional naval power projection. The latest escalation of tensions in the East and South China Seas has drawn renewed attention to the possibility of there being conflict in the region. On 20 July 2010, US Secretary of State Hillary Clinton said at the Association of Southeast Asian Nations (ASEAN) foreign ministers’ meeting in Hanoi that the US had “a national interest in freedom of navigation, open access to Asia’s maritime commons and respect for international law in the South China Sea”. She also expressed support for a “collaborative diplomatic process” regarding territorial disputes in the South China Sea. This, though, clashes directly with **China’s recent assertion that the South China Sea is a core interest. Adding to the tension were the joint naval and air drills conducted by the US and South Korea in the Yellow Sea** in July and August 2010, the prominent surfacing of three Ohio-class submarines armed with Tomahawk long-range cruise missiles in Subic Bay, Busan and Diego Garcia and the visit of the nuclear carrier USS George Washington to waters off central Vietnam (Asia Times 2010; East Asia Forum 2010). In response, the Chinese People’s Liberation Army Navy (PLAN) carried out manoeuvres in the South China Sea and the Yellow Sea. At the same time**, there have been renewed tensions in the East China Sea.** On 7 September 2010, two Japanese Coast Guard patrol ships collided with a Chinese fishing boat while they carried out “law enforcement activities” in the waters off the Diaoyu/ Senkaku Islands. Chinese captain Zhan Qixiong was detained on the order of an Okinawa local court, sparking demonstrations in Beijing and diplomatic protests from China. On the day of the collision, China’s Foreign Ministry spokeswoman, Jiang Yu, demanded that “Japanese patrol boats refrain from so-called law enforcement activities in waters off the Diaoyu Islands”. The Japanese ambassador to China was summoned six times over the incident, once by Chinese State Councillor Dai Bingguo. The event was not resolved until China suspended diplomatic and civilian exchanges with Japan and threatened to stop rare earth exports (The New York Times 2010c). Recent events may ultimately prove to be little more than passing chills in diplomatic relations. Whatever their ultimate significance, however**, these developments raise fundamental questions about the future directionality of territorial disputes in China’s near seas.** Of particular importance are those disputes between China, Japan, and the ASEAN nations. This article tackles a crucial, but under-theorised, comparison: What are the similarities and differences in the fundamental characteristics of maritime disputes in the East and South China Seas? Given their close geographical proximity, disputes in these regions have very different dynamics. In In both cases, China, as a dominant power, is an important claimant state. In the East China Sea, on the opposite side of the 168 Andy Yee ocean from China, is Japan, another major regional power in East Asia. Their mutual relationship is strained due to such factors as their competition for regional leadership and the historical memories of animosity between them. **So far, there has been no military conflict between them per se as a result of the territorial dispute, but political tensions have been intense**. In the South China Sea, China faces a group of ASEAN nations – including Brunei, Indonesia, Malaysia, the Philippines and Vietnam – that represent a more asymmetric balance of power when compared with the East China Sea. China engaged in military combat with Vietnam and the Philippines during the 1970s and 1980s, but a multilateral maritime regime has been developing since then.

**Asymmetric East Asian Hegemony leads to instability**

**Yee 11** “Maritime Territorial Disputes in East Asia: A Comparative Analysis of the South China Sea and the East China Sea” Yee, Andy (He graduated from Cambridge University and has three and a half years of investment banking experience in Asia. He specializes in China and the international politics of East Asia, but other general interests include global governance, conflict resolution and human rights. More recently he conducted research for the Political Section of the European Commission Delegation to China in Beijing. He is currently a graduate student in Pacific Asian Studies at the School of Oriental and African Studies in London). Journal of Current Chinese Affairs - China Aktuell40. 2 (2011): 165-193.

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The essence of the difference lies in the realist theory of international regimes, which is employed in Lee and Kim (2008) to compare the East China Sea case with the partially successful regime formed in the Caspian Sea. **The hegemonic stability theory states that imbalances in power contribute to cooperation** (Gilpin 1987: 72-80). **In asymmetric power relations, states are more likely to reach a compromise. This is because stronger states are focused on maintaining their hegemony and are prepared to make concessions to the weaker states in order to gain their support**. This fits in well with the ambitions of the weaker states, who are more interested in maximising pragmatic benefits than in gaining hegemonic power. In this situation**, states are more likely to engage in “give and take” bargaining, resulting in the creation of regimes**. There are reasons to believe that **China follows this rationalist calculation**. Randall Schweller (1999) laid out the different categories of rising powers. Some do have truly revolutionary objectives and seek to overthrow the existing international system. Others have more limited, modest aims, seeking marginal adjustments rather than fundamental changes. Nathan and Ross (1998) note that China is neither a fully satisfied power nor a revolutionary threat. If China’s maritime claims could be peacefully resolved, China would have little reason to behave in an overly aggressive or assertive fashion. **In the case of symmetric power relations**, though, **states have less chance of creating cooperative regimes. As both states are pursuing hegemonic power, they are more likely to prevent each other from the attainment of that goal.** It is evident that **asymmetric power relations in the South China Sea facilitated regime-building,** whereas symmetric power relations in the East China Sea, coupled with historical animosity and the lack of mutual trust, obstructed that effort. In Southeast Asia, regional maritime cooperation is at a more advanced stage of development than it is in Northeast Asia (Valencia 2000: 238-240). Within the ASEAN itself, there exist a multitude of committees that encompass maritime issues – including fisheries, marine sciences and resources management. The 1976 ASEAN Treaty of Amity and Cooperation, the 1992 ASEAN Declaration on the South China Sea and various Indonesian South China Sea Workshop Statements also signalled the claimants’ intention to resolve maritime disputes through peaceful means. Following the Mischief Reef incident in 1994, ASEAN thinking converged on the idea of a Code of Conduct as a way to manage their relations with China (Buszynski 2003). The expectation was that dialogue and negotiations would make the relationship more predictable and ordered. The Declaration on the Conduct of Parties in the South China Sea was eventually signed with China in November 2002. Although it fell short of a conduct with legal status, due to China’s power advantage, its desire to maintain freedom of action over the area and suspicions about ASEAN’s links with external powers, it is a successful attempt by the ASEAN to obtain China’s endorsement of international norms of behaviou.

**East Asian War is on the brink**

**Kaplan 11** “THE SOUTH CHINA SEA IS THE FUTURE OF CONFLICT”. Kaplan, Robert D. (Chief Geopolitical Analyst for STRATFOR, a private global intelligence firm, and a non-resident senior fellow at the Center for a New American Security in Washington. He has been a foreign correspondent for The Atlantic for over a quarter century. He is the author of 14 books on foreign affairs and travel translated into many languages.) Foreign Policy 188 (Sep/Oct 2011): 76-80,82-85,8.

http://search.proquest.com.proxy.lib.umich.edu/pais/docview/888030576/abstract?accountid=14667

Whatever moral drama does occur in East Asia will thus take the form of austere power politics of the sort that leaves many intellectuals and journalists numb. As Thucydides put it so memorably in his telling of the ancient Athenians’ subjugation of the island of Melos, “**The strong do what they can and the weak suffer what they must**.” in the 21stcentury retelling, with China in Athens’s role as the pre eminent regional sea power the weak will still submit—but that’s it. This will be China’s undeclared strategy, and the smaller countries of Southeast Asia may well bandwagon with the United States to avoid the Melians’ fate. But slaughter there will be not. **The South China Sea presages a different form of conflict than the ones co which we have become accustomed.** Since the beginning of the 20th century, we have been traumatized by massive, conventional land engagements on the one hand, and dirty, irregular small wars on the other. Because both kinds of war produced massive civilian casuastics. war has been a subject for humanists as well as generals. **But in the future we just might see a purer form of conflict, limited ro the naval realm.** This is a positive scenario. **Conflict can not be eliminated from the human condition altogether.** A theme in Machiavelli’s Discourses on Levy La that conflict, properly controlled, is more likely than rigid stability to lead ro human progressive. **A sea crowded with warships does not contradict an era of great promise for Asia, Insecurity often breeds dynamism.** But can conflict in the South China Sea be properly con trolled? My argument thus far presupposes that major war fare will mot break out in the area and that instead countries will be content to jockey for position with their warships on the high seas, while making competing claims for natural resources and perhaps even agreeing ro a fair distribution of them. But what if China were, against all evidential trends, ro invade Taiwan? What if China and Vietnam. whose in. tense rivalry reaches far back into history, go to war as they did in 1979, with more lethal weaponry this rime? For it isn’t just China that is dramatically building its military**; Southeast Asian countries** are as well. Their **defense budgets have increased by about a third in the past decade even as European defense budgets have declined. Arms imports ro Indonesia, Singapore, and Malaysia have gone up 84 percent, 146 percent, and 722 percent**, respectively, since 2000. The spending is on naval and air platforms: surface warships, submarines with advanced missile systems, and long-range fgbter bers. Vietnam recently spent $2 billion on six stare-of-heart Kilo-class Russian submarines and Si billion on Russian fighter jets. Malaysia just opened a sub marine base on Borneo. **While the United States has been distracted by land wars in the greater Middle East, military power has been quietly shifting from Europe to Asia.**

# \*\*\*Aff Answers

# AT Modernization DA

**-China has no reason to fight if it’s not over energy**

**-Aff solves Asian war**

**Not unique and impact inevitable—China is accelerating its military modernization**

**Cushman 5/18**/12 (John H. Jr., “Pentagon Study Says China Military Getting Stronger” The New York Times, May 18 2012, http://www.nytimes.com/2012/05/19/world/asia/pentagon-study-says-china-military-getting-stronger.html?ref=territorialdisputes)//MR

**China is pressing a long-range modernization of its military, part of a strategy aimed at maximizing its leverage over Taiwan, extending its influence farther abroad, but avoiding conflict** around its borders or **with the U**nited **S**tates, the Pentagon said on Friday in an annual report to Congress. **Chinese leaders**, the report asserted, **view this as a time to “focus on internal development while** avoiding direct confrontation,” **although they expect tension, competition, and territorial flare-ups** from time to time, **and** they **do not expect the status quo**, however satisfactory they find it, **to last** indefinitely. The United States, decades ahead technologically, spends much more, and in pivoting its strategy toward Asia and the Pacific, “seeks to build a military-to-military relationship with China that is healthy, stable, reliable, and continuous,” the annual report said. Two months ago, **Beijing announced an 11.2 percent increase in its annual military budget to roughly $106 billion.** While economic comparisons and analysis have always been difficult, there is no doubt that **the past few decades have seen steady expansion in China’s military spending**, and **the Pentagon’s estimate is that China is investing more than it says**, but still only about a fourth of what the United States spends each year on the military. **For its money, China is getting more weapons, and better ones. Its air force is “transforming into a force capable of offshore offensive and defensive operations,**” the report said. Other areas of investment include defenses against ballistic missiles, early warning and air-defense missiles, and their land and naval equivalents. But the developments cited in the report unfold only over decades. For example, China’s first aircraft carrier, purchased from Ukraine in 1998, set out on its shakedown cruise last summer, but China still has no planes equipped to land on its deck, and its naval pilots are still training ashore. “We expect it’ll take several additional years for an air group to achieve a minimal operational capability aboard the aircraft carrier,” said David Helvey, a Pentagon official handling regional issues, at a briefing on the report. In many ways, **the modernization shows a Chinese military that has watched** what **the U**nited **S**tates has done in the past generation or two, **and is exploring the same avenues of growth.** From the restructuring of its army to the new ascendancy of information technologies in warfare, there are parallels.

**Chinese modernization doesn’t pose a threat**

**Chapman 2/19**/12 – author of a syndicated column on international affairs, member of the Chicago Tribune editorial board, writes about legal issues, economics, and foreign relations (Steve, “China as the Enemy: The Dangers of Exaggerating the Threat” Chicago Tribune, February 19 2012, http://articles.chicagotribune.com/2012-02-19/news/ct-oped-0219-chapman-20120219\_1\_south-china-sea-beijing-current-trade-surrender)//MR

**Martial metaphors** like that **give the impression we are locked in a deadly struggle with Beijing**. For that reason**, it's no surprise that** in January of last year, **China ranked first in a Pew Research Center poll as the country representing the greatest danger to the U**nited **S**tates. In the latest one, it finished second only to Iran. The perception of Iran is understandable, given that our leaders seem bent on taking us to war there. But **China? If we're going to have adversaries, China is the best kind to have.** For one thing, **it's no match for us militarily. The U**nited **S**tates **spends between two and nine times as much on defense as China. We have 11 aircraft carriers; they have one — which they bought, used, from Ukraine. We have nearly 3,700 modern combat aircraft to their 307. "We don't view China as a direct threat," Vice Adm**. Scott Van **Buskirk**, then the **commander of the U.S. 7th Fleet, said** last year. "**To look at China through the lens of an adversary would be counterproductive.**" It's true that **China has been upgrading** its defense forces**. But that's what you would expect of a country that has gotten much richer in the past few decades.** It's also what you would expect of a country surrounded by neighbors with which it has had military conflicts — including Russia, Japan, India and Vietnam. Not to mention that it has 9,000 miles of coastline on the Pacific Ocean, which is effectively owned and operated by the U.S. Navy. Like any normal regional power, China aspires to have some capacity to dictate to others rather than be dictated to. That **ambition could bring it to blows with the U**nited **S**tates **over Taiwan or** over free passage in **the South China Sea.** Rising powers often collide with established powers, which means there is certainly potential for China to clash with the United States. **But the two sides have proved able to peacefully manage their chief disagreement, Taiwan, decade after decade.**

**Chinese modernization doesn’t extend past internal developments**

**Chapman 2/19**/12 – author of a syndicated column on international affairs, member of the Chicago Tribune editorial board, writes about legal issues, economics, and foreign relations (Steve, “China as the Enemy: The Dangers of Exaggerating the Threat” Chicago Tribune, February 19 2012, http://articles.chicagotribune.com/2012-02-19/news/ct-oped-0219-chapman-20120219\_1\_south-china-sea-beijing-current-trade-surrender)//MR

**China bears little resemblance to Nazi Germany or the Soviet Union in its approach to the world. The post-Mao government has shown no interest in grabbing territory from neighbors, enforcing obedience or promoting revolution. It has no dangerous ideology to spread. It has exhibited a consistent desire to focus on internal development. It has done little to make trouble beyond its borders. China has repeatedly shown itself to be, writes Princeton scholar** Aaron **Friedberg, "a cautious power with limited aims."**

# \*\*\*NATURAL GAS BAD—US

# 1AC

**Uncertainty in coal is causing a shift to natural gas—the two are zero-sum**

**Weiss 10** - Senior Fellow and the Director of Climate Strategy at American Progress (Daniel, “Efforts to Save Coal Could End Up Destroying It,” Center for American Progress, <http://www.americanprogress.org/issues/2010/09/coal_senators.html>)

But even without global warming pollution reductions the U. S. Energy Information Administration found that coal’s share of electricity generation has slipped while natural gas and renewable electricity are on the rise over the last three years. Coal’s future could be even bleaker. A recent analysis by the The Wall Street Journal found that: Power companies are increasingly switching to natural gas to fuel their electricity plants, driven by low prices and forecasts of vast supplies for years to come. While the trend started in the late 1990s, the momentum is accelerating and comes at the **expense of coal**. Some utilities are closing coal-fired plants; others are converting them to run on gas. The switch is occurring globally and is getting a push from regulators who want to limit emissions that contribute to climate change, haze and health problems such as respiratory illness. Though efforts in Congress to pass legislation attaching a price to carbon emissions appear stalled for now, utilities still anticipate eventual carbon restrictions. The Tennessee Valley Authority, for example, recently announced a 20-year development plan that emphasizes nuclear and gas, and includes fewer coal units. Coal-burning facilities are expected to slip to 10% of total new capacity in the U.S. in 2013, down from 18% in 2009, the U.S. Energy Information Administration reports. Gas, meanwhile, is expected to soar to 82% of new capacity in 2013 from 42% last year. Big coal companies should be most concerned with the projection that there will be a nearly 10 percent decline “in coal-fired generation, 2015 versus 2009.” Much of this decline will be due to the retirement of old, inefficient coal-fired power plants that will be too expensive to adapt to new public health standards for sulfur and mercury air pollution. It is also due to **uncertainty** about future global warming reductions—investors are reluctant to bet on new coal plants until it is clear whether and how many reductions in global warming pollution are required. Delaying EPA health standards on global warming pollution would only prolong uncertainty and further delay investments in new coal plants.

**THREE INTERNAL LINKS—**

**First—CCS collapses the demand for natural gas**

**Frank et al 09** - research associate in the CSIS Energy and National Security Program

Matthew, “Crossing the Natural Gas Bridge,” CSIS, <http://csis.org/files/attachments/090624_Crossing_Bridge.pdf>

These conclusions are supported by a model of economy-wide emissions developed by the Department of Energy’s Pacific Northwest National Laboratory (PNNL). The model’s scenarios depict several different combinations of technologies and fuels that could meet energy demand while also emitting less CO2, thereby stabilizing atmospheric CO2 concentrations at 450 ppm. 64 In all scenarios, natural gas continues to make up a portion of the energy mix out to the end of the century, mainly due to its feedstock and non-electricity uses (ranging from 7 to 17 percent in 2100 compared to 22 percent currently). In scenarios where carbon capture and storage (CCS) technology becomes widely available at reasonable cost, natural gas with CCS provides a share of low-emissions electricity out to 2095 (between **2 and 13 percent** of the electricity mix depending on other technology assumptions). 65 Under scenarios without deployment of CCS, the electricity sector’s use of gas would peak around 2035, and then provide a decreasing share of the nation’s electricity, disappearing from the sector between 2050 and 2065. These scenarios also show a much greater reliance on other sources of energy (nuclear and renewables) and significant demand reduction. While emissions modeling through the end of the century is always imprecise, these results suggest that to meet emissions goals, use of natural gas without CCS will need to start declining in the next 25 years. This implies that policymakers should look beyond the short term, and provide a long-term price signal that is stringent enough to encourage alternatives to natural gas without CCS, while finding ways to manage the costs of the transition.

**Second—CCS is key to the coal industry**

**Katzer 07** – PhD in Chemical Engineering, member of the National Academy of Engineering, Professor @ MIT

James, “The Future of Coal,” http://web.mit.edu/coal/The\_Future\_of\_Coal.pdf

A central conclusion to be drawn from our examination of alternative futures for coal is that if carbon capture and sequestration is successfully adopted, utilization of coal likely will **expand** even with stabilization of CO2 emissions. Though not shown here, extension of these emissions control scenarios further into the future shows continuing **growth in coal use** provided CCS is available. Also to be emphasized is that market adoption of CCS requires the incentive of a significant and widely applied charge for CO2 emissions.

**Third—The mere perception of the plan triggers a shift**

**Parfomak et al 9** – Specialist in Energy and Infrastructure @ CRS

Paul, “Carbon Dioxide (CO2) Pipelines for Carbon Sequestration: Emerging Policy Issues,” Scholar

In addition to these issues, Congress may examine how CO2 pipelines fit into the nation’s overall strategies for energy supply and environmental protection. The need for CO2 pipelines ultimately derives from the nation’s consumption of fossil fuels. Policies affecting the latter, such as energy conservation, and the development of new renewable, nuclear, or hydrogen energy resources, could substantially affect the need for and configuration of CO2 pipelines. If policy makers encourage continued consumption of fossil fuels under CCS, then the need to foster the other energy options may be diminished—and vice versa. Thus decisions about CO2 **pipeline infrastructure** could have consequences for a **broader array** of energy and environmental policies.

# 1AC Impact—Warming

**Warming is real, on the brink, and will have negative effects—CO2 emissions cuts vital—multiple warrants**

**Chen et al 10** Chen, Qian, Peridas, Qiu, Ho: Natural Resources Defense Council, Friedmann: Lawrence Livermore National Laboratory, Li, Wei: Institute of Rock and Soil Mechanics, Chinese Academy of Sciences, Sung, Fowler: Clean Air Task Force, Seligsohn, Liu, Forbes: World Resources Institute, Zhang: China Tsinghua University, Zhao: Institute of Engineering Thermophysics, Chinese Academy of Sciences (Jason Chen, Jingjing Qian, George Peridas, Yueming Qiu, Bruce Ho, Julio Friedmann, Xiaochun Li, Ning Wei, S. Ming Sung, Mike Fowler, Deborah Seligsohn, Yue Liu, Sarah Forbes, Dongjie Zhang, Lifeng Zhao, December 2010, “Identifying Near-Term Opportunities For Carbon Capture and Sequestration (CCS) in China,” [http://docs.nrdc.org/international/files/int\_10121001a.pdf)//DR](http://docs.nrdc.org/international/files/int_10121001a.pdf%29//DR). H

Scientific evidence has **established** that warming of the Earth’s climate system is unequivocal.2 The average atmospheric temperature near the surface has risen much faster over the past 150 years than during the thousands of years before, and over the last 50 years this warming trend has accelerated. During the last decade, the world experienced some of the highest average global temperatures in recorded history (see Table 1.1).3 **[table omitted]** Without a clean energy transformation away from coal and other fossil fuels, the detrimental effects of global warming will only intensify over the coming decades. These negative trends will include rising sea levels, more extreme weather patterns, rapidly-melting glaciers, damage to ecosystems, and the resurgence and spread of diseases. Scientific models warn that a 2°C to 4°C increase in global average temperatures would likely trigger sudden and irreversible effects, including the submersion of large areas of coastline due to significant sea level rises, abrupt shifts in global ocean circulation patterns causing large-scale climate change, and the potential extinction of 40 to 70 percent of species worldwide.4 Without significant **global** action, we may soon reach a **tipping point** upon which global warming begins to reinforce itself in hard-to-stop positive feedback cycles. For example, melting permafrost could unlock previously frozen greenhouse gases, which would accelerate and fuel the warming trend.5 To avoid the worst effects of this warming, the world must reduce emissions of CO2 and other greenhouse gases by drastically reducing its reliance on fossil fuels. To this end, governments around the world are moving toward a consensus that we must not allow global average temperatures to rise by more than 2°C above pre-industrial levels. This limit implies that the world as a whole must cut CO2 emissions in half by 2050 compared to 1990 levels.6

**Natural gas speeds up warming—twice as fast as coal**

**Mims 11** Environmental News and Commentary Reporter(Christopher, April 21, 2011, “Natural gas from fracking is worse for climate than coal, says new study,” [http://grist.org/list/2011-04-11-natural-gas-from-fracking-is-worse-for-climate-than-coal-says-ne/)//DR](http://grist.org/list/2011-04-11-natural-gas-from-fracking-is-worse-for-climate-than-coal-says-ne/%29//DR). H

Natural gas obtained through "fracking" — the increasingly common process of splitting open underground deposits with high pressure chemicals — now has an even bigger strike against it than its potential to contaminate regional water supplies. Fracking, it turns out**, yields more global warming per unit of energy than** coal — at least 20 percent more, and possibly up to **twice** as much.

Those are the bombshell findings of a new study [PDF] released by a trio of scientists at Cornell University. It turns out that after the fracking process, when the high-pressure drilling fluid is flowing back up the well, large quantities of methane gas travel with it. These and other “fugitive” emissions amount to approximately 2 percent of the natural gas released by a fracked well, which is a thousand times more than similar emissions of methane from conventional wells.

Methane is an extremely potent greenhouse gas — it's 100 times as powerful a heat-trapping gas as CO2 over a 20-year time frame — which means that fracking could provide a significant kick to global warming in the near term. Over longer periods, methane is less harmful, because it breaks down faster (into CO2, ironically). But even over 100 years, natural gas from fracked wells is significantly worse for the climate than coal.

Does this mean we should return to the 19th century model of industrialization? No, say the study’s authors, who emphasize that this study is not the last word on this subject.

These results suggest, however, that the Obama administration-supported "clean energy" standard, which includes natural gas, might be in that aspect actually worse for the climate than plain old business-as-usual coal-fired power.

**CO2 independently leads to ocean acidification causing extinction**

**Sify 10** Cites Ove Hoegh-Gulberg: Professor at the University of Queensland and Director of the Global Climate Change Institute, John Bruno: Professor of Marine Science at the University of North Carolina (Sify News, June 19, 2010, “Could unbridled climate changes lead to human extinction?” <http://www.sify.com/news/could-unbridled-climate-changes-lead-to-human-extinction-news-international-kgtrOhdaahc.html>)

Sydney: Scientists have sounded alarm bells about how growing concentrations of greenhouse gases are driving irreversible and dramatic changes in the way the oceans function, providing evidence that humankind could well be on the way to the next great extinction. The findings of the comprehensive report: 'The impact of climate change on the world's marine ecosystems' emerged from a synthesis of recent research on the world's oceans, carried out by two of the world's leading marine scientists. One of the authors of the report is Ove Hoegh-Guldberg, professor at The University of Queensland and the director of its Global Change Institute (GCI). 'We may see sudden, unexpected changes that have serious ramifications for the overall well-being of humans, including the capacity of the planet to support people. This is further evidence that we are well on the way to the next great extinction event,' says Hoegh-Guldberg. 'The findings have enormous implications for mankind, particularly if the trend continues. The earth's ocean, which produces half of the oxygen we breathe and absorbs 30 per cent of human-generated carbon dioxide, is equivalent to its heart and lungs. This study shows worrying signs of ill-health. It's as if the earth has been smoking two packs of cigarettes a day!,' he added. 'We are entering a period in which the ocean services upon which humanity depends are undergoing massive change and in some cases beginning to fail', he added.

**Warming causes extinction—we’re at the tipping point**

**Archer et al 08** – Archer lead the study and is a Professor of Geophysical Sciences @ U Chicago, Dozens of other participants, including NASA scientists, professors of Biology, etc. “Anthropogenic Climate Destabilization: A Worst-case Scenario,” Foundation for the Future, September, <http://www.futurefoundation.org/documents/HUM_ExecSum_ClimateDestabilization.pdf>.

This summary intends – rather than to duplicate the existing assessments of the Intergovernmental Panel on Climate Change (IPCC), the Centre for Strategic & International Studies (CSIS), or other worthy studies and reports – to look beyond the time frames with which those efforts were, in general, concerned. Typically the Foundation, in its ongoing programs, attempts to consider the thousand-year future of humanity. The worst case in climate destabilization for the long term will result from either a “business as usual” mode of operation or from superficial mitigation efforts that do not radically address the problems. It encompasses both a series of catastrophic impacts to humanity and Planet Earth, and runaway behavior in a dynamic system. Though the catastrophic impacts occur in a number of specific arenas, they must be understood to interact with each other, often resulting in acceleration of effects. Replicable climate models indicate that the concentration of carbon dioxide in the Earth atmosphere may reach approximately 1,000 parts per million (ppm) by the end of the present century and remain above this level for thousands of years. At present, 400 to 600 ppm is considered a “red zone” of danger, and current levels are already approaching 400 ppm; in fact, one participant proposed that adding in CO2 equivalents puts current levels already at 445 to 450 ppm. Scientists believe that once the red zone has been entered, the planet will likely remain within or above the red zone range long enough that both the Greenland and Antarctic ice sheets will melt completely. Unlike the popular literature that suggests that CO2 in the atmosphere is a century-timescale issue, in fact, CO2 recovers on a timescale of 100,000 years. After an equilibration with the oceans, which itself requires a few centuries, there is still a remaining percentage that is neutralized only in reaction with rocks in a process requiring hundreds of thousands of years. Climate modeler Dr. Andrey Ganopolski said, “It should be borne in mind that present-day climate models do not tend to overestimate or exaggerate the magnitude of climate changes in the past. Instead, there is reason to consider climate model simulations as conservative.” Accordingly, it is doubtful that the model projection of 1,000 ppm should be dismissed as unlikely or lacking credence, even though it is understood that past climate changes are not a direct analog for the future. NASA risk assessment expert Dr. Feng Hsu pointed out that an implication of 1,000-ppm concentration of CO2 in the atmosphere, which is approximately two times **or more over** the tipping point, is clearly an unacceptable level of catastrophic risk that will likely lead to the extinction of humanity. This catastrophic end would be the consequence of either no global strategic adaptation measures for risk averting or ineffective mitigations in today’s human activities that affect CO2 levels in the atmosphere. The direct consequence of the increase of CO2 concentration in the atmosphere is rising temperatures on the globe. By the end of this century, global average temperatures will rise by more than 5 degrees Celsius, with regional rises of more than 10 degrees Celsius, and will continue to rise for centuries. In coming decades typical summer temperatures in Southern Europe and the United States can be expected to rise from 30 degrees to 40 degrees Celsius (105 degrees Fahrenheit). An early taste of this elevation of heat was the 40 degrees Celsius that was considered anomalous in the 2003 heat wave in Europe, when 15,000 deaths in France alone were directly attributable to the heat. Some natural cooling that might be expected from the natural progression of the Earth orbital cycles is not going to ameliorate the warming from fossil fuel CO2. Indirect effects of the increasing heat are also already evident on the globe. A recent study found that the maximum speed of the strongest hurricanes of the last 25 years increased by 5 meters per second per 1 degree of ocean warming. Since the power and destructive potential of hurricanes are proportional to the cube of velocity, a 50 percent increase in speed would imply a tripling increase of destructive potential. Presently a Category 3 hurricane has a maximum speed of 50 meters per second; a 50 percent increase to 75 meters per second raises the level to a Category 5 hurricane – the most severe category. It is likely that new categories for measuring hurricanes must be introduced, as well as new language, since Category 5 is now considered “catastrophic.” Sea levels will also be affected by rising temperatures as ice masses gradually disappear from the planet, melting into ocean and other water bodies. Scientifically based estimates suggest that sea level could rise by up to two meters during the present century, and increases will be measured in meters, not inches, over the next few centuries. Even a one-meter rise, which many scientists anticipate by 2100, will affect at least 150 million people, most of them in Asia, though North America will also experience significant flooding. If a large percentage of the population of Bangladesh is forced to move, where will those people go? A sea-level rise of 10 meters in coming centuries will affect about 500 million people and submerge 5 million kilometers of land, including loss of most of the Netherlands, to mention just one impacted region. When both the Greenland and Antarctic ice sheets have melted completely, sea levels will have increased by 70 meters. Even 3 degrees C of warming that persists for thousands of years will ultimately result in tens of meters of sea-level change. As mentioned, effects will vary from region to region; in fact, it is possible that some regions will experience rapid cooling at the same time as others record rapid heating. The Atlantic thermohaline circulation is a dangerous component of the climate system because it is capable of rapid reorganization resulting in abrupt climate change, with temperature shifts either up or down by as much as 10 degrees Celsius in a matter of decades. The melting of the ice sheets has an indirect impact on thermohaline circulation; however, it is not possible to say from modeling what the probability of a meridional overturn in circulation is, either in this century or subsequently. Water-related effects will also vary from region to region, with some areas experiencing extraordinary flooding while others see deep, longlasting droughts. David Wasdell, who uses a systems dynamics approach based not on modeling but on tracking complex feedback dynamics, said that climate stabilization is not about stopping catastrophic impacts but about stopping runaway behavior in a dynamic system, and he believes that the early stages of runaway climate changes have already commenced, with no naturally occurring negative feedback process able to contain the effect. Most of the systems are already in net amplifying feedback, so “the hotter the Earth gets, the faster it gets hotter,” he said. In order to deal with the worst case, humankind will have to generate a negative feedback intervention of sufficient power to overcome and reverse not just what has already occurred, but what continues to occur. The participants were generally in agreement that in the global heating now under way, the gap between energy received by the Earth from the Sun and energy radiated back out is running at approximately two watts per square meter, and the amount is increasing by about 25 percent per decade, under “business as usual.” There was, however, some disagreement about whether climate destabilization is already being accelerated by the feedbacks to a runaway status. However, three tipping points already passed, apparently irreversibly, were identified: (1) the pine bark beetles in northern United States and Canada. The winters are no longer cold enough to kill off the larvae of the beetle, which is killing vast areas of pine trees, adding yet more carbon to the atmosphere; (2) the acidification of the oceans, leading to massive changes in the lower part of the ocean food chain, and (3) the disappearance of the coral reefs in the Caribbean Sea due to increasing temperatures. Other indicators that climate change is already affecting ecosystems were also cited, including changes in hardiness zones for plants. Climate change has begun to affect human health worldwide, with the extent of impacts expected to increase with increasing climate change. Dr. Kristie Ebi, an independent consultant and a lead author for the IPCC Fourth Assessment Report on human health, has conducted research on the impacts of climate change for more than a dozen years. She stated: “I am more concerned about health impacts in the next few decades than later this century because the lack of current preparedness suggests that impacts may be larger in the short term, until programs and activities are implemented to increase resilience to extreme weather events and other changes projected to occur with climate change.” There are not enough people trained to cope with current climate variability, and funding for training and capacity-building is inadequate. Changing temperatures and precipitation patterns will alter ecosystems, as well as change the geographic range and intensity of transmission of a range of infectious diseases. At present approximately 150,000 people die every year due to climate change impacts; most of these deaths are in children under the age of five living in Africa and Asia. Worldwide, the major climate-sensitive health outcomes of concern are malnutrition, diarrheal disease, and malaria. Other health impacts to expect are increasing illnesses and deaths due to increases in the frequency and intensity of heat waves, flooding events, and other extreme weather events, increases in adverse health outcomes due to air pollution, and increases in the geographic range and incidence of a wide range of food-, water-, and vectorborne diseases. Sudden and severe declines in crop yields could lead to large numbers of refugees. In some areas, there is the possibility that climate change could affect the national security. In his inaugural speech, Sir Crispin Tickell emphasized that the real problems today are the speed of the change in climate and where the tipping points are, rather than the size of the change itself, and the wider perspective of global catastrophic risks in which climate change is only one of the problems.

# 1AC Impact—Pollution

**Natural gas destroys the environment—air pollution and water contamination**

**Brune 3/25** Executive Director of the Sierra Club, the nation's largest environmental group (Michael, March 25, 2012, “Sierra Club: Natural gas isn't a 'kinder, gentler' energy,” [http://www.usatoday.com/news/opinion/editorials/story/2012-03-25/natural-gas-Sierra-Club/53775746/1)//DR](http://www.usatoday.com/news/opinion/editorials/story/2012-03-25/natural-gas-Sierra-Club/53775746/1%29//DR). H

The natural gas industry that we know today is dirty, dangerous and putting American families at risk. While so many are focused on the quick profits to be made off this resource, natural gas drillers remain exempt from aspects of landmark health and environmental protections such as the Clean Air Act, the Clean Water Act and the Safe Drinking Water Act.

Let's start with hydraulic fracturing or "fracking," the violent process the natural gas industry uses to break up shale formations and release gas. Fracking involves drilling thousands of feet into the ground and injecting millions of gallons of water, sand and an unknown, toxic chemical cocktail into the shale and through drinking water aquifers.

While the industry claims this process is safe, there are hundreds of water contamination cases across the country as a result of unchecked and unregulated fracking.

The health problems associated with natural gas don't stop at your kitchen sink. The exemption for the natural gas industry in the Clean Air Act allows drillers to dump an unknown amount of toxic pollution into our air, sometimes just a football field away from your house. Because of this, we're seeing worse air quality and dirty air in the Wyoming plains than what we find in Los Angeles.

USATODAY OPINION

Given the lack of effective oversight for this industry run amok, federal and state agencies need to take a hard look at the risks natural gas fracking poses to our health and communities. It's time for everyone to stop thinking of natural gas as a "kinder, gentler" energy source and renew our focus on reaching a clean energy future as soon as possible.

**Air Pollution causes extinction**

**Driesen 03** [David, Associate Prof. Law – Syracuse U., Buffalo Environmental Law Journal, “"LEARING SUSTAINABILITY": SYMPOSIUM ARTICLES: SYMPOSIUM HELD AT THE UNIVERSITY AT BUFFALO LAW SCHOOL, OCTOBER 13, 2001: Sustainable Development and Air Quality: The Need to Replace Basic Technologies with Cleaner Alternatives”, Fall 02-Spring 03, 10 Buff. Envt'l. L.J. 25, L/]

Air pollution can make life unsustainable by harming the ecosystem upon which all life depends and harming the health of both future and present generations. The Rio Declaration articulates six key principles that are relevant to air pollution. These principles can also be understood as goals, because they describe a state of affairs [\*27] that is worth achieving. Agenda 21, in turn, states a program of action for realizing those goals. Between them, they aid understanding of sustainable development's meaning for air quality. The first principle is that "human beings. . . are entitled to a healthy and productive life in harmony with nature", because they are "at the center of concerns for sustainable development." n3 While the Rio Declaration refers to human health, its reference to life "in harmony with nature" also reflects a concern about the natural environment. n4 Since air pollution damages both human health and the environment, air quality implicates both of these concerns. n5

**Fracking causes water contamination—Clean water prevents extinction—contamination increases cancer rates**

**Robinson 2/23** Author, Writer for Boston Articles (Roxana, February 23, 2012, “The deadly consequences of fracking,” [http://articles.boston.com/2012-02-23/opinion/31087640\_1\_fracking-water-contamination-clean-water)//DR](http://articles.boston.com/2012-02-23/opinion/31087640_1_fracking-water-contamination-clean-water%29//DR). H

Nature has always provided us with clean water; we have to have it. Our bodies are more than 70 percent water, and we need it more than light for life. All living organisms need clean water: our grainfields, our forests, our farms, our herds, our gardens. Our children.

Clean groundwater is our most valuable resource. We’ve survived for thousands of years without oil and gas, but we couldn’t live a year without potable water. There is no substitute, no synthetic way to produce enough for our needs. We’re dependent on water and the system that produces it: natural hydrology, with which fracking plays merry hell.

Hydraulic fracturing involves the high-pressure injection of a mixture of water, sand, and chemicals deep underground. There drilling companies shatter the rock, making the natural gases available for retrieval. The companies have refused to disclose the substances that they use, but assure us the process is safe. Last December, however, the EPA announced a documented link between fracking and chemical water contamination. It’s official, though not news.

In 2008, the EPA’s test well in Wyoming showed levels of the carcinogen benzene (used in fracking) at 1,500 times the level safe for human consumption. More than 1,000 cases of water contamination near fracking operations have been documented in Colorado, New Mexico, Alabama, Ohio, and Pennsylvania. In Ohio, a house exploded from the buildup of methane in the water supply. In Louisiana, 16 cattle dropped dead after drinking from a pool of fracking fluids. In one house, tap water contained so much flammable gas it could be set on fire. Cancer rates and neurological damage have risen among nearby residents. Sterility and stillbirths in livestock herds have increased. Benzene, methane, phenols, acetone, toluene, and napthalene - all lethal fracking-related substances - have seeped and leached through the landscape.

**Cancer kills millions—every attempt to reduce the risk helps**

**Hardin and Gaudin 03** Hardin: Communications Officer, World Health Organization, Gaudin: Chief, IARC Communications, International Agency for Research on Cancer (Rebecca, Nicolas, “Global cancer rates could increase by 50% to 15 million by 2020,” [http://www.who.int/mediacentre/news/releases/2003/pr27/en/)//DR](http://www.who.int/mediacentre/news/releases/2003/pr27/en/%29//DR). H

Cancer rates could further increase by 50% to 15 million new cases in the year 2020, according to the World Cancer Report, the most comprehensive global examination of the disease to date. However, the report also provides clear evidence that healthy lifestyles and public health action by governments and health practitioners could stem this trend, and prevent as many as one third of cancers worldwide.

In the year 2000, malignant tumours were responsible for 12 per cent of the nearly 56 million deaths worldwide from all causes. In many countries, more than a quarter of deaths are attributable to cancer. In 2000, 5.3 million men and 4.7 million women developed a malignant tumour and altogether 6.2 million died from the disease. The report also reveals that cancer has emerged as a major public health problem in developing countries, matching its effect in industrialized nations.

“The World Cancer Report tells us that cancer rates are set to increase at an alarming rate globally. We can make a difference by taking action today. We have the opportunity to stem this increase. This report calls on Governments, health practitioners and the general public to take urgent action. Action now can prevent one third of cancers, cure another third, and provide good, palliative care to the remaining third who need it, "said Dr. Paul Kleihues, Director of the International Agency for Research on Cancer (IARC) and co-editor of the World Cancer Report.

The World Cancer Report is a concise manual describing the global burden, the causes of cancer, major types of malignancies, early detection and treatment. The 351-page global report is issued by IARC, which is part of the World Health Organization (WHO).

Dr Gro Harlem Brundtland, Director-General of WHO, states: “The report provides a basis for public health action and assists us in our goal to reduce the morbidity and mortality from cancer, and to improve the quality of life of cancer patients and their families, everywhere in the world,”

**Cancer is dehumanizing**

**Bieber 99** Husband of a Cancer Patient, Producer at WETA-TV (Jeff, January 24, 1999, “CANCER IN FILMS; Hitting Home,” [http://www.nytimes.com/1999/01/24/movies/l-cancer-in-films-hitting-home-969494.html)//DR](http://www.nytimes.com/1999/01/24/movies/l-cancer-in-films-hitting-home-969494.html%29//DR). H

Last August my wife was diagnosed with breast cancer. She is now undergoing chemotherapy. During this experience, I had to come up with a topic for a public television series I produce, ''Straight Talk,'' a program that allows for a taped ''package'' and studio discussion. With a ready-made vehicle at my disposal, I decided to tackle a topic I had become intimately familiar with. Yet producing a television program and packaging cancer into a neat segment, followed by talking heads, became hard to do.

This task wasn't like any of my other programs, like a series on health care in which I documented a struggle to save the life of a premature baby. Although I could not help but get caught up in the emotion of that moment, I tried to maintain my distance, to follow the ''characters'' -- to tell the story.

In the editing room, everything becomes surreal. We watch a child die over and over; we watch a mother cry one, two, three, four times before we get the edit right. The same was true for the AIDS patient who wanted to kill himself, or for the 15-year-old boy in a hospital bed with a bullet in his head. All became great subjects for television. But great subjects, like fictional characters in the movies, sometimes cease to be real people when we in the media are caught up in the ''story.'' The people in the screen become sound bites and L-cuts in addition to powerful stories that need to be brought to the public's attention.

But film, whether made for movies or for television, is a great buffer, distancing even the producers and directors charged with showing the real deal. When I was faced with the task of illuminating an issue that had become all too personal and had overwhelmed my own family, the video buffer ceased to exist.

Mr. Lidz is absolutely right. Cancer is debilitating, dehumanizing and degrading. Cancer is not noble. One can learn from this experience. I will never look through a lens at a person suffering in the same way again. One can never understand cancer or any other life threatening disease until he lives with it. It is not like the movies or a good documentary. You don't know what it's like until you touch it every day.

# 1AC Impact—LNG

**Exporter’s security fails—the higher the rate of LNG imports the higher the risk of an attack**

**Hurst 08** Political-military Research Analyst with the Foreign Military Studies Office,Lieutenant Commander in the United States Navy (LCDR Cindy, February 2008, “The Terrorist Threat to Liquefied Natural Gas: Fact or Fiction?” Institute for the Analysis of Global Security, [http://www.iags.org/hurstlng0208.pdf)//DR](http://www.iags.org/hurstlng0208.pdf%29//DR). H

Inadequate vetting of crews: LNG shipments often originate from politically unstable and unfriendly countries and regions. Some of the locations in which LNG originates include Qatar, Nigeria, Algeria and Egypt. “It’s the location of the ports and where the LNG is loaded and who gets on the vessel” that is important, said William Doyle, Deputy General Counsel of the Marine Engineers’ Beneficial Association (MEBA). 14 Many ships operate under grossly unregulated “open registry” or “flags of convenience” registries and often originate from ports with poor security systems in place. Due to a lack of any meaningful international regulatory oversight, it would be possible for someone to work under a different identity on board one of these tankers and avoid detection. Under the current system, no uniform, completely trustworthy system is in place for vetting foreign mariners. 15 Background checks are conducted on Americans by the Coast Guard and the Transportation Security Administration (TSA). However, these same background checks are not performed on foreign crews. The Coast Guard does, on the other hand, require crew lists from all vessels entering U.S. ports. Unfortunately, no method is in place to ensure these crews are who they claim to be. Although this is an issue of security for all cargo ships, it is even more critical for ships carrying potentially dangerous cargo, such as LNG.

In a testimony to Congress, Ron Davis, President of MEBA, listed a number of differences between U.S. and foreign mariners, saying, “U.S. merchant marines receive their credentials to work from the Coast Guard. Foreign mariners do not. U.S. mariners undergo extensive background checks through the FBI. Foreign mariners do not. U.S. mariners are vetted through the national driver record database. Foreign seafarers are not. U.S. mariners will be subject to terrorism background checks through the TSA. Foreign Seafarers are not. Finally, U.S. merchant mariners are U.S. citizens or persons lawfully admitted for permanent residency. The mariners who crew these ships are not.”16 As a result, it is impossible to be certain that a mariner is who he claims to be or that he is not a security risk. Davis said that there were practically no Americans employed on LNG ships today. At the top of MEBA’s list of threats to an LNG tanker is the possibility that a knowledgeable crewmember could deliberately sabotage the vessel. According to Davis, “The most vulnerable (thing) that you have on the ship is the crew. It is the crew that controls the ship… One or two engineers down in the engine room can take control of the ship, can control the steering of the ship, can control the speed of the ship, can have the ship going 20 knots up the Houston ship channel or in the New York Harbor or in places of confined areas. They can ram the ship anywhere they want.” Davis stated that terrorists might one day intentionally ram an LNG ship into a strategic target such as one fully loaded with a highly flammable, explosive material onboard.17 Or, as William Doyle said, two or three terrorists infiltrating an LNG tanker could cause serious damage by one taking control of the ship and the other(s) detonating an onboard explosion as the tanker enters a busy harbor.18

Terrorists could attack an LNG tanker as well as they could any cargo ship. In a 2004 edition of Jane’s Terrorism and Security Monitor, Jane’s reported that the type of attack widely envisaged, based on analyses of compromised terrorist preparations, would include “an explosion onboard a cargo ship laden with fuel oil and ammonium nitrate fertilizer, in effect turning the vessel into a waterborne fireball.” 19 Should a terrorist somehow manage to get onboard a LNG tanker and cause an explosion, it might be possible to cause a boiling-liquidexpandingvapor-explosion (BLEVE). A BLEVE might be possible in some instances if the LNG is heated to above its boiling point while still contained within the tank. This rapid heating could cause a percentage of the LNG within the tank to “flash” into a vapor state almost instantaneously. This would cause pressure in the tank to rapidly build up. While LNG tanks do have massive pressure relief valves in place, if these valves were to fail in their ability to release the gas quickly enough or altogether, the pressure in the tank might create a type of explosion that would send dangerous debris flying. Most experts agree that LNG tankers are built to prevent such an event from occurring. One expert polled during the GAO study, Dr. Robin Pitblado from Det Norske Veritas, however, pointed out that a BLEVE might be possible on a Moss spherical tank because these tanks are constructed such that pressure could build up within them.20 Skepticism exists within the within the industry regarding Pitblado’s claim. Captain Scott Conway who has served eight years onboard LNG tankers and who is intimately familiar with the construction of the Moss spherical tanker, views Pitblado’s scenario as unrealistic, questioning his conclusions by asking, “Where is the BLEVE going to occur in this tank? Where are you going to direct the flames back at this tank to heat up the liquid? How are you going to build up the pressure so that it overcomes the safety release? When you can explain this all logically as per the ship’s construction, then we’ll talk seriously.”

Inadequate security measures for U.S. facilities: During a hearing in the United States House of Representatives on 21 March 2007, Jim Wells of the GAO raised doubt that the Coast Guard can marshal the resources needed to meet its responsibilities21 While it took 40 years to build the fleet of LNG carriers to 200 tankers worldwide, it will take less than four more years for that number to grow to 300. This rapid growth rate coupled with the anticipated growth rate of LNG imports into the U.S. presents a real security challenge. The U.S. faces today potential lack of security measures and resources to protect these new assets. Shortage of qualified mariners & U.S. officers: The rapid growth of LNG does not affect only the ability to safeguard each ship; it also affects the quality of mariners working onboard these vessels. Due to the nature of LNG, highly skilled and trustworthy individuals are required to ensure its safe transport. Currently, LNG tankers have crews consisting of mostly foreigners. Yea Byeon-Deok, professor and LNG initiative coordinator of the International Association of Maritime Universities said, during a conference in Australia, “Many substandard vessels have begun to appear as demand for LNG increases, while there is a chronic shortage of experienced crew.”22 Because of sudden rapid growth in the industry, many experts question whether or not there will be enough qualified mariners to crew these vessels. Nearly 1,500 senior officers and 750 senior engineers will be required to man the 100 new LNG ships. Approximately 80 percent of these ships will be fitted with steam turbines, which require engineers with steam experience, which, according to one report, is a “vanishing resource.” 23 The fact that many senior LNG officers are due to retire soon, and new, highly skilled mariners will be required to replace them exacerbates the situation. It will be tough enough just to replace crew and officers who are retiring, making these shortages of crew members and officers reach crisis proportions.24

**Terrorists will attack LNG—this tanks the economy**

**Jaubert 5/18** Former French Navy officer and marine engineer, who operated as a secret agent for the DGSE until 1993, CEO of a Submarine Company(Hervé, May 18, 2012, “Boston: Catastrophic Next Terrorist Attack in the US?” [http://compasspaper.com/boston-catastrophic-next-terrorist-attack-in-the-us-p6057-116.htm)//DR](http://compasspaper.com/boston-catastrophic-next-terrorist-attack-in-the-us-p6057-116.htm%29//DR). H

Ten years have passed since the terrorist attack on the World Trade Center. There are still a lot of fundamentalists out there who want to bring Americans to their knees and force the United States to change its foreign policy. To impose their demands, terrorists are willing to blow themselves up and kill as many people as possible.

More fanatics are getting caught red-handed by the police before they can kill anyone, but their small scale attempted terror attacks are nothing compared to the doomsday terror attack that may be coming to the US soon.

This time, the attack may not come from the air with passenger airplanes, or from the land with cars stuffed with nitrate fuel, or even from the water with boats rigged with explosives, but rather from under the water with suicide submarines in a major urban waterway such as Boston harbor. Five factors make such an attack possible:

• Mini-submarines were used successfully during WWII by the Japanese, the British, and the Italians to attack warships in harbors. With today’s technological developments and clever design, what used to be available only to the world's major fleets is now attainable to the average terrorist. Our harbors are more vulnerable now than during World War II. More than a third of the cocaine smuggled into the United States from Colombia travels underwater. If drug smugglers can smuggle tons of cocaine in a tiny submarine, terrorists can also load a suicide mini-submarine with tons of explosives. Underwater terrorists who target assets on the water pose the greatest danger because there are currently no measures available to stop them.

• Terrorists can destroy an entire city without the need of an atomic weapon. They know they could never detonate a nuclear device on US soil because it is too difficult to build and extremely expensive. And due to the highest scrutiny there can be on nuclear material, it would be almost impossible for terrorists to acquire the components to build an atomic bomb or get a military warhead in complete secrecy. But there is something else that can be turned into a weapon of mass destruction: a Liquid Natural Gas tanker, and there are many coming to the US already. A single LNG tanker carries billions of cubic feet of volatile cargo that can be effectively used as a WMD with apocalyptic consequences. The vulnerability of LNG tankers has already fueled the controversy over the danger posed by these huge floating gas bombs. A suicide mini-submarine blowing up an LNG tanker could release and ignite astronomical amounts of natural gas and cause widespread death, destruction, and chaos similar to a nuclear explosion.

• Boston is particularly vulnerable because it is a major city on the East coast and much easier to hit than over-vigilant New York City. Boston is the only city in the US where LNG tankers pass through populated areas and within few hundred yards from residences and buildings, before they offload their cargo at the gas terminal. Passing LNG tankers through Boston Harbor pose an inherent colossal risk to the city. The explosion of a large bomb underneath a tanker would disintegrate its hull, the liquid gas would pour out of the holds, evaporate into a deadly gigantic cloud of gas and ignite in a doomsday firestorm. In just a few minutes, unstoppable fires would spread miles from the ship with hurricane forces, radiating heat from the inferno would set further fires to thousands of homes and unprotected people.

• Terrorists can operate in the US in complete secrecy. They are constantly probing the gaping holes in the post 9-11 security architecture, and wherever there are resources and opportunity, they will strike; it is just a matter of time. During the preparation of their attack, they would not attract attention because they don’t need to smuggle anything in the US. They can use what is already in the country: LNG tankers, untraceable unexploded military explosives from abandoned military bombing ranges, and US made recreational mini submarines. Terrorists don’t need to enter illegally in the US and use forged papers because we have many home-grown terrorists who are here already. Other foreign terrorists can enter the country and establish themselves perfectly legally, using student waiver programs or circumventing immigration laws with sham marriages. Terrorists can operate autonomously and without any ties or chain of command which prevent from leaks and information getting out of the clandestine cells. As a result, it is possible for terrorists to plot the destruction of a major city without being detected, using clandestine methods involving only a few personnel and limited funds. Not only it is easier to blow up an LNG ship than to build a nuclear weapon, it is easier to keep the operation secret. Al Qaeda terrorists knew how to fly airplanes; other operatives are capable of carrying out mini-submarine attacks and underwater sabotage. A well armed and vigilant US Navy warship like the USS Cole did not stop the suicide boat which rammed into it, so how could anyone in Boston harbor stop a suicide submarine lurking under the water?

• Because there is no plan to respond to such attack, the consequences would be catastrophic. It would wreak havoc in the country and cripple our economy. Boston is not prepared for a LNG disaster; the US is not prepared for such widespread destruction. There exists no relevant experience with fires of this scale from which to project measures for securing public safety. The Coast Guard, Boston fire department and other agencies do not have the equipment if a LNG tanker blows up. They would have no time to evacuate people and would not be able to put out the fire.

The premise for a terrorist attack on Boston is possible; it looms almost inevitable if changes are not made to security.

**Decline causes Global War**

**Royal 10** Director of Cooperative Threat Reduction at the U.S. Department of Defense (Jedediah Royal, “Economic Integration, Economic Signaling and the Problem of Economic Crises,” Economics of War and Peace: Economic, Legal and Political Perspectives, ed. Goldsmith and Brauer, p. 213-215)

Less intuitive is how periods of economic decline may increase the likelihood of external conflict. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defense behavior of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson's (1996) work on leadership cycle theory, finding that rhythms in the global economy are associated with the rise and fall of a pre-eminent power and the often bloody transition from one pre-eminent leader to the next. As such, exogenous shocks such as economic crises could usher in a redistribution of relative power (see also Gilpin. 1981) that leads to uncertainty about power balances, increasing the risk of miscalculation (Feaver, 1995). Alternatively, even a relatively certain redistribution of power could lead to a permissive environment for conflict as a rising power may seek to challenge a declining power (Werner. 1999). Separately, Pollins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland's (1996, 2000) theory of trade expectations suggests that 'future expectation of trade' is a significant variable in understanding economic conditions and security behavior of states. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However, if the expectations of future trade decline, particularly for difficult to replace items such as energy resources, the likelihood for conflict increases, as states will be inclined to use force to gain access to those resources. Crises could potentially be the trigger for decreased trade expectations either on its own or because it triggers protectionist moves by interdependent states.4 Third, others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess (2002) find a strong correlation between internal conflict and external conflict, particularly during periods of economic downturn. They write: The linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favor. Moreover, the presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other. (Blomberg & Hess, 2002. p. 89) Economic decline has also been linked with an increase in the likelihood of terrorism (Blomberg, Hess, & Weerapana, 2004), which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a sitting government. “Diversionary theory" suggests that, when facing unpopularity arising from economic decline, sitting governments have increased incentives to fabricate external military conflicts to create a 'rally around the flag' effect. Wang (1996), DeRouen (1995). and Blomberg, Hess, and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997), Miller (1999), and Kisangani and Pickering (2009) suggest that the tendency towards diversionary tactics are greater for democratic states than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that periods of weak economic performance in the United States, and thus weak Presidential popularity, are statistically linked to an increase in the use of force. In summary, recent economic scholarship positively correlates economic integration with an increase in the frequency of economic crises, whereas political science scholarship links economic decline with external conflict at systemic, dyadic and national levels.5 This implied connection between integration, crises and armed conflict has not featured prominently in the economic-security debate and deserves more attention. This observation is not contradictory to other perspectives that link economic interdependence with a decrease in the likelihood of external conflict, such as those mentioned in the first paragraph of this chapter. Those studies tend to focus on dyadic interdependence instead of global interdependence and do not specifically consider the occurrence of and conditions created by economic crises. As such, the view presented here should be considered ancillary to those views.

**LNG attacks outweigh nuclear explosions—55 times the strength of Hiroshima Bombs**

**Lovins and Lovins 01** A. Lovins: Co-Founder of Rocky Mountain Institute and Six honorary doctorates and numerous major awards, including a 1997 Heinz Award, a 1993 MacArthur Fellowship, and the Onassis Foundation’s first Delphi Prize in 1989, H. Lovins: 1999 Lindbergh Award, a 1993 Nissan Prize, a 1983 Right Livelihood Award, former co-CEO of Rocky Mountain Institute, a Colorado-based nonprofit resource policy think tank, BA from Pitzer College, JD from Loyola University School of Law with the Alumni Award for Outstanding Service to the School, Honorary LHD from the University of Maine (Amory, Hunter, “Brittle Power,” Pg 87-88)//DR. H

LNG is less than half as dense as water, so a cubic meter of LNG (the usual unit of measure) weighs just over half a ton.1 LNG contains about thirty per- cent less energy per cubic meter than oil, but is potentially far more hazardous.2 Burning oil cannot spread very far on land or water, but a cubic meter of spilled LNG rapidly boils into about six hundred twenty cubic meters of pure natural gas, which in turn mixes with surrounding air. Mixtures of between about five and fourteen percent natural gas in air are flammable. Thus a single cubic meter of spilled LNG can make up to twelve thousand four hundred cubic meters of flammable gas-air mixture. A single modern LNG tanker typically holds one hundred twenty-five thousand cubic meters of LNG, equivalent to twenty-seven hundred million cubic feet of natural gas. That gas can form between about twenty and fifty billion cubic feet of flammable gas-air mixture—several hundred times the volume of the Great Pyramid of Cheops. About nine percent of such a tankerload of LNG will probably, if spilled onto water, boil to gas in about five minutes.3 (It does not matter how cold the water is; it will be at least two hundred twenty-eight Fahrenheit degrees hotter than the LNG, which it will therefore cause to boil violently.) The resulting gas, however, will be so cold that it will still be denser than air. It will therefore flow in a cloud or plume along the surface until it reaches an ignition source. Such a plume might extend at least three miles downwind from a large tanker spill within ten to twenty minutes.4 It might ultimately reach much farther—perhaps six to twelve miles.5 If not ignited, the gas is asphyxiating. If ignited, it will burn to completion with a turbulent diffusion flame reminiscent of the 1937 Hindenberg disaster but about a hundred times as big. Such a fireball would burn everything within it, and by its radiant heat would cause third-degree burns and start fires a mile or two away.6 An LNG fireball can blow through a city, creating “a very large number of ignitions and explosions across a wide area. No present or foreseeable equipment can put out a very large [LNG]... fire.”7 The energy content of a single standard LNG tanker (one hundred twenty-five thousand cubic meters) is equivalent to seven-tenths of a megaton of TNT, or about fifty-five Hiroshima bombs.

# Ext—Warming

**Natural gas is net worse for warming—their authors aren’t qualified**

**Zeller 11** New York Times Reporter (Tom, April 15, 2011, “Studies Say Natural Gas Has Its Own Environmental Problems,” <http://www.nytimes.com/2011/04/12/business/energy-environment/12gas.html?pagewanted=all)//DR>. H

Natural gas, with its reputation as a linchpin in the effort to wean the nation off dirtier fossil fuels and reduce global warming, may not be as clean over all as its proponents say.

Even as natural gas production in the United States increases and Washington gives it a warm embrace as a crucial component of America’s energy future, two coming studies try to poke holes in the clean-and-green reputation of natural gas. They suggest that the rush to develop the nation’s vast, unconventional sources of natural gas is logistically impractical and likely to do more to heat up the planet than mining and burning coal.

The problem, the studies suggest, is that planet-warming methane, the chief component of natural gas, is escaping into the atmosphere in far larger quantities than previously thought, with as much as 7.9 percent of it puffing out from shale gas wells, intentionally vented or flared, or seeping from loose pipe fittings along gas distribution lines. This offsets natural gas’s most important advantage as an energy source: it burns cleaner than other fossil fuels and releases lower carbon dioxide emissions.

“The old dogma of natural gas being better than coal in terms of greenhouse gas emissions gets stated over and over without qualification,” said Robert Howarth, a professor of ecology and environmental biology at Cornell University and the lead author of one of the studies. Mr. Howarth said his analysis, which looked specifically at methane leakage rates in unconventional shale gas development, was among the first of its kind and that much more research was needed.

**Fracking emits twice as much as coal**

**McDermott 11** Masters from NYU in environment and energy policy Editor for the Business and Energy sections of TreeHugger (Mat, 11/11/11, “Fracking Has "Real Risk Of Serious Environmental Consequences", Federal Subcommittee Reports,” [http://www.treehugger.com/fossil-fuels/fracking-has-real-risk-serious-environmental-consequences-federal-subcommittee-reports.html)//DR](http://www.treehugger.com/fossil-fuels/fracking-has-real-risk-serious-environmental-consequences-federal-subcommittee-reports.html%29//DR). H

A day after the EPA told residents of Pavillion, Wyoming that they shouldn't drink their water due to chemical contamination, likely from fracking, **the Federal report on shale gas production paints a grim picture — at least without some serious change in the way hydraulic fracturing is done.**

I'll just quote from Energy.gov's statement on it:

**It is the Subcommittee’s judgment that if action is not taken to reduce the environmental impact accompanying the very considerable expansion of shale gas production expected across the country** – perhaps as many as 100,000 wells over the next several decades – **there is a real risk of serious environmental consequences and a loss of public confidence that could delay or stop this activity.** Thus, the Subcommittee’s interest in assessing and reporting on the progress that is being made on implementing its recommendations, or some sensible variations of the recommendations.

And this comes from an advisory panel that, when it was set up, was heavily criticized from having too many participants with cozy fossil fuel industry ties.

The panel went on to say, though there's been progress made in reducing the environmental impact of fracking, "the progress made to date is less than the Subcommittee hoped."

**Natural gas obtained by fracking now amounts to 30% of the US natural gas supply**, a figure **which, if the industry has its way, is only likely to increase in coming years.**

Natural Gas Better Than Coal, But Fracking Closes The Gap

Regardless of source, recent reports have shown that while natural gas does result in lower carbon emissions than other fossil fuels, due to a variety of production and distribution factors, it is not as low as once was claimed—perhaps 47% of the emissions of coal, under the new analysis.

That said, where fracking is concerned, using current technology **the emissions of fracked natural gas are higher still, with some estimates saying it results in double the emissions of coal, or even more.**

# Ext—Pollution

**Clean tech solves air pollution**

**Fadtke 11** (Kristal, September 4, 2011, “Using Clean Coal Technologies to Reduce Air Pollution,” [http://www.oppapers.com/essays/Using-Clean-Coal-Technologies-To-Reduce/1018609)//DR](http://www.oppapers.com/essays/Using-Clean-Coal-Technologies-To-Reduce/1018609%29//DR). H

Air pollution is of pronounced concern in the media lately. **Some of the effects of air pollution include the increase of carbon in the atmosphere which contributes to the global warming effect.** The effects have been felt with record temperatures on the east coast and in the Midwestern United States this summer. **One major contribution to the pollution is the use of coal to generate electricity. Approximately 50% of the power in the United States comes from coal fired electrical generation plants** (UCSUSA, 2009). A typical 500 megawatt generation plant burns 1.4 million tons of coal per year (UCSUSA, 2009). Not only is the pollution evident from the exhaust stacks of the generation plant, there is the pollution created from the mining and transportation to the power-plant (UCSUSA, 2009). **Because of the amount of air pollution generated, there needs to be a concentrated effort to use the newer clean technologies to reduce the impact on the environment.** Air pollution is of great concern because of the widespread damage it can cause. **The damage caused just from electricity generation from coal does not just affect the area where the power-plants are at.**  The effects are usually felt in other areas. This could be as simple as the next town downwind of the power-plant, or in some cases it can be other nations as pollution knows no boundaries (Berg & Hagar, 2007). Stories have shown that there is an increase in the ozone levels on the three states on the west coast, California, Oregon, and Washington. It has been shown that the ozone is carried over from Asia, as the countries there start to industrialize (CBSNews, 2010).

# Ext—LNG

**Al-Qaeda has targeted LNG in the US**

**Hurst 08** Political-military Research Analyst with the Foreign Military Studies Office,Lieutenant Commander in the United States Navy (LCDR Cindy, February 2008, “The Terrorist Threat to Liquefied Natural Gas: Fact or Fiction?” Institute for the Analysis of Global Security, [http://www.iags.org/hurstlng0208.pdf)//DR](http://www.iags.org/hurstlng0208.pdf%29//DR). H

On 14 February 2007, the Saudi Arabian arm of al-Qaeda put out a call to all religious militants to attack oil and natural gas sources around the world.Through such attacks, according to the call, al-Qaeda hopes to “strangle” the U.S. economy**.** 1 Such proclamations give fodder to those who highlight the possibilities that liquefied natural gas (LNG) could be used as a lethal weapon of mass destruction. Industry officials on the other hand point out the improved security measures in place as a result of 9/11. While the U.S. continues to pursue LNG as a way to diversify its natural gas resources in order to meet anticipated future shortfalls and increase energy security, opponents and proponents of LNG have been locked in a bitter debate with no solid conclusion. Proponents are correct in that both safety and security measures currently in place make LNG terminals and ships extremely hard targets for terrorists. However, it would be imprudent to believe that terrorists are either incapable or unwilling to attack such targets. It would be equally imprudent to assume that these targets are impenetrable**.** If anything, in today’s environment, insiders will always remain a potential threat.

**Al Qaeda will strike**

**Hurst 08** Political-military Research Analyst with the Foreign Military Studies Office,Lieutenant Commander in the United States Navy (LCDR Cindy, February 2008, “The Terrorist Threat to Liquefied Natural Gas: Fact or Fiction?” Institute for the Analysis of Global Security, [http://www.iags.org/hurstlng0208.pdf)//DR](http://www.iags.org/hurstlng0208.pdf%29//DR). H

Rally: **al-Qaeda’s desire is to rally support in the Muslim world.** Under the rally hypothesis, **hard targets symbolize U.S. strength and are the most difficult targets to penetrate.** Three of the 14 terrorist attacks analyzed by Rand were hard targets. **“By striking and destroying them, al-Qaeda has been able to underscore its credentials as a meaningful force, establishing a benchmark of power that it has then used to build morale among existing members and attract new recruits.”** 9 Indeed, **alQaeda** tends to hit soft targets more frequently than hard targets. However, it **has already proven it is willing to hit hard targets.** With the numerous security measures implemented in every LNG shipment, LNG terminals and tankers are extremely hard targets. **The added publicity surrounding LNG terminals in the U.S. could potentially draw increased appeal to them as targets for terrorist groups hoping to send out a strong message on their strength and potential, which could lure more support.**

# Natural Gas—Crisis Coming

**Natural Gas crisis coming—takes out any risk of offense**

**Anthony 6/8** IT professional, Reporter who Cites Richter and Halliburton(Mark, June 8, 2012, “The Impact Of A Looming Natural Gas Supply Problem,” [http://seekingalpha.com/article/647401-the-impact-of-a-looming-natural-gas-supply-problem)//DR](http://seekingalpha.com/article/647401-the-impact-of-a-looming-natural-gas-supply-problem%29//DR). H

Few people have noticed that there is a looming North America natural gas supply crisis that could come within 6 months. A shortage in NG (natural gas) will occur due to a production collapse in Canada, and inability of US shale gas producers to sustain drillings.

Capital Destruction in Natural Gas

US natural gas was over-supplied due to a shale gas production boom that will turn bust. The hydraulic fracturing (fracking) in shale gas production injects a toxic liquid with undisclosed chemical ingredients. But shale well drilling also requires another liquid very harmful to a corporation's health: cash liquidity from debts.

Cash liquidity is the lifeblood of all businesses. Shale gas wells are expensive to drill. NG producers took huge loans from banks to drill shale wells, hoping to recoup the costs from product revenues to pay back the loans and to use the money to drill more wells.

All conventional and shale gas wells are in continuous production declines. Another SA article discussed such declines. Read how Halliburton (HAL) explained (on page 22) "Why do we need to keep drilling". The NG industry must keep drilling to fight against the continuous declines of existing gas wells.

However, as current NG prices are deeply unprofitable, producers cannot recover their costs from gas sales. This results in capital destruction at an astonishing rate. With heavy debts, it's difficult for NG producers to borrow more. So they may not continue to burn cash and drill new wells. Soon the production decline will catch up, leading to a collapse of NG supply. Wolf Richter suggested that scenery. He stated:

The plight of natural gas driller Chesapeake Energy could almost make you feel sorry for the board of directors and CEO Aubrey McClendon. He lost his chairmanship after his conflicted entanglements and an in-house hedge fund seeped to the surface. The company announced it might run out of cash to fund its drilling operations next year. Fitch, in downgrading Chesapeake's Issuer Default Rating and senior unsecured ratings to BB-, estimated that the shortfall this year alone would reach $10 billion-in the first quarter, the company bled $3 billion in cash-and that it would be forced to dump up to $20 billion in assets to get through this...(read more)

# Natural Gas Bad—Price Volatility

**Natural gas prices are extremely volatile**

**Lam 6/21**/12 (Eric, “Predicting natural gas prices is like predicting the weather” Financial Post, June 21 2012, <http://business.financialpost.com/2012/06/20/predicting-natural-gas-prices-is-like-predicting-the-weather/>)//MR

However, **if you think weather forecasters have it bad, be prepared to sympathize with those trying to predict the pricing of natural gas — a rather odd commodity that, on top of the usual concerns about supply, production and processing, is at the mercy of climatic vagaries.** “When I was working at Enron Corp., I would take groups on tours of the trading floor and they would laugh because we had the weather channel on,” said John Stephenson, a portfolio manager and commodities expert at First Asset Management. “It just goes to show you, at least going back 20 years, how ignorant people were, even in the industry, about what drives it.” ‘**It’s a** much more **difficult commodity to handle** as we’re not very good at forecasting the weather’ Natural gas, a naturally occurring mixture of combustible gases extracted from the ground, is largely used for either heating or electricity generation in North America. **Since it gets quite cold in the winter and hot in the summer**, North **Americans use their heaters and air conditioners a lot and end up** *i*ndirectly **being major consumers of natural gas. “Natural gas is more than twice as volatile than oil**,” Mr. Stephenson said. “**From a trading and investing perspective, it’s a much more difficult commodity to handle** as we’re not very good at forecasting the weather**.” At the moment, the natural gas industry is driven** more **by an overabundance of supply** than other factors, **which has pushed down prices**. The **oversupply is** largely **due to innovations in gas extraction** during the past few years, **including horizontal drilling and fracking** technology, as well as a lack of infrastructure to transport the gas to the west coast where it could be liquidized for export to hungry overseas markets in the Asia-Pacific region. Related Alberta looking at ways to expand natural gas use, including in vehicles As a result, **natural gas prices have dipped to a 10-year low** of less than US$2 per million British thermal units (roughly equal to a thousand cubic feet or MCF in Canada) in April. **But in a testament to the fickle nature of the commodity, prices have perked up to their highest levels in a month this week thanks to a heat wave spreading across** parts of **North America.**

**Natural gas prices are highly unstable**

**Harack 11** – leader of Vision of Earth, a volunteer group committed to life-long learning and information sharing (Ben, “Opportunities and perils of natural gas usage on the road to renewables” Vision of Earth, August 10 2011, <http://www.visionofearth.org/industry/renewable-energy/renewable-energy-review/opportunities-and-perils-of-natural-gas-usage-on-the-road-to-renewables/>)//MR

Before dealing with some of the other effects of our increased natural gas usage, we will first discuss the volatility of natural gas prices. **A variety of factors contribute to the instability of natural gas prices. One** of the more obvious ones **is weather. A cold snap across North America could increase demand immensely in only a few days. Pipelines are another** important **concern. If a region begins to demand more than the capacity of the pipelines** into that region, then **the price can skyrocket. A** rather **telling example is** that **of California** in the last dozen years or so. In 1999, California produced about 50% of its electricity using natural gas. In 2009, it produced 60%! 4 Now, take a glance at these natural gas prices in California **over the last couple decades**. You can see **the cost of a standard unit of natural gas** (1000 cubic feet) **go from between $2 and $3** in the late 1990’s **to $6 to $8** in 2004-2008. **This is a** rather **spectacular change in price for a major commodity. Demand was going up and the pipelines did not have the capacity to match.** It is important to note that **the California example is not a small incident.** California has a population of about 37 million people and is the 8th largest economy in the world. 5 **What happened** to California **can also certainly happen to other regions with** limited local resources and **a constrained ability to import.**

# \*\*\*RAILROADS

# 1AC

**Railroads will be hurt in the short term if coal use decreases – only slow transition preserves the industry**

**Great Speculations 12**

[Financial Investment Advisory site, “EPA’s New Regulations Hit King Coal Railroad Companies,” 4/20/12, http://www.forbes.com/sites/greatspeculations/2012/04/03/epas-new-regulations-hit-king-coal-railroad-companies]//SH

Last Tuesday, **the** U.S. **E**nvironmental **P**rotection **A**gency **announced its** first **carbon pollution standard for new power plants**. [1] **The** EPA **move will discourage new coal fired power plants from being built, which will substantially dampen domestic coal demand. This will** eventually **hurt railroad companies in near term as coal is predominantly shipped by rail.** The news has sent ripples to stocks of coal companies as well as railroad companies, which carry about 70% of the U.S. coal. CSX Corporation, Norfolk Southern Corporation, and Union Pacific Corporation were down by 2-3% following the announcement. **The railroad companies**, however, **are confident about their earnings outlook as coal’s importance to these companies is gradually declining. Governments** around the globe **are calling for stricter environmental regulations** to fight against the greenhouse gas emissions responsible for global warming. The EPA has taken an initiative and announced a set of standards for new power plants to reduce greenhouse gas emissions. The EPA’s contention that the health benefits will outweigh the costs substantially echoes with many. However, the new regulation don’t affect already existing power plants. But, the EPA could be planning separate regulation for these plants. **Cheap natural gas is also driving utilities away from coal as more coal fired plants shift to natural gas.** We expect **the drop in demand for coal** to **hurt railroads in the short term**, which transport coal to these utilities. **This**, however, **could prompt coal companies to boost coal exports to Asia**, where demand is still growing at a healthy pace. **Railroads companies can mitigate the shipment losses by riding increase in exports.** But, **necessary infrastructure such as a west coal terminal will need to be in place for the U.S. coal to be competitive with Australian coal**. [2] **For years coal has been the most transported commodity** by railroads. Railroad companies have seen a decline in utility coal cargoes in recent quarters. Lower coal demand for electricity generation is the major reason. However, **the trend is changing and coal is gradually becoming a smaller fraction of their overall business. In the long term, other commodities such as agricultural, industrial and consumer products will likely drive the volumes and profits of railroads in the future**, especially if gas prices continue remain high.

**Coal is key to the Railroad industry**

**AAR 12**

[Association of American Railroads, “Railroads and Coal,” June 2012, http://www.aar.org/~/media/aar/Background-Papers/Railroads-and-Coal.ashx]//SH

 **No** single **commodity is more important to America’s railroads** **than coal. Coal accounted for 43.3 percent of rail tonnage and 24.7 percent of rail** gross **revenue in 2011. Most coal** in the United States **is consumed at coal-fueled power plants. Historically, coal has dominated U.S. electricity generation because it is such a cost-effective fuel choice**, and freight rail is a big reason for that. **More than 70 percent of the coal delivered to coal-fueled power plants is delivered by rail. Electricity is also generated using other fuels, including nuclear power, wind, solar power, hydroelectric** **power, and natural gas.** Recently, the price of natural gas has fallen sharply, increasing the competitiveness of electricity generated from natural gas vis-à-vis electricity generated from coal. In addition, increasingly stringent environmental regulations have targeted coal-fueled generation. Consequently, electricity generated from coal — and associated rail coal volumes — have fallen. Whether this is a short- or a long-term phenomenon remains to be seen.

**Railroads key to military readiness and deployment**

**Pike 12**

[John, one of the world's leading experts on defense, space and intelligence policy, directed the Space Policy, Cyberstrategy, Military Analysis, Nuclear Resource and Intelligence Resource projects, He is a member of the Council on Foreign Relations " Strategic Rail Corridor Network (STRACNET)," 10/1/12, http://www.globalsecurity.org/military/facility/stracnet.htm]

**The military places heavy** and direct **reliance on railroads to integrate bases and connect** installations to predominantly **maritime ports** of embarkation. **Mainlines, connectors, and clearance lines must all combine to support movement of heavy and/or oversized equipment**. To ensure that military needs are factored into railroad industry decisions that may impact on national defense, the Department of Defense relies on the **Military Traffic Management Command** (MTMC). In this capacity, MTMC **identifies facilities of the railroad infrastructure important to national defense, informs the commercial and civil sectors of Defense needs, and encourages the retention and upkeep of railroad assets vital to support military movements**. To ensure this continuity and coordination, MTMC has created the Strategic Rail Corridor Network (STRACNET). STRACNET has identified **32,500 miles of rail line critical for movement of essential military equipment to ports located around the country as well as another 5,000 miles of track essential to connect one facility to another.** To ensure this continuity and coordination, MTMC has created the Strategic Rail Corridor Network (STRACNET). STRACNET has identified 32,500 miles of rail line critical for movement of essential military equipment to ports located around the country as well as another 5,000 miles of track essential to connect one facility to another. In addition to identifying key lines and facilities, MTMC also conducts analysis of potential railroad industry construction, mergers, bankruptcies, and abandonments to determine how any of these actions may affect DOD mobility capabilities. Since 1976, MTMC has reviewed more than 2,100 abandonments affecting 33,000 miles of track, as well as eight bankruptcies affecting more 1/3 of the nation's railroad network. MTMC analysis and reviews are the main source of DOD input to the railroad industry in attempts to preclude the loss of a critical section of track or facility that is essential to effective movement of heavy military lift requirements. The **Railroads** for National Defense Program (RND) **ensures the readiness capability of the national** railroad network to support **defense deployment and peacetime needs**. The Program works to integrate defense rail needs into civil sector planning affecting the Nation's railroad system. **Rail transportation is extremely important to DOD since the predominance of our heavy and tracked vehicles will deploy by rail to seaports of embarkation**. The RND Program in conjunction with the US Federal Railroad Administration (FRA), established the Strategic Rail Corridor Network (STRACNET) to ensure DOD's minimum rail needs are identified and coordinated with appropriate transportation authorities. **STRACNET is an interconnected and continuous rail line network consisting of over 38,000 miles of track serving over 170 defense installations**.

**Readiness solves conflict**

**CNAS 8**

[Center for a New American Security, “Strengthening the Readiness of the U.S. Military”, 2/14/8 Prepared Statement of Michèle A. Flournoy, http://www.cnas.org/files/documents/publications/CNASTestimony\_FlournoyHASCFeb1408.pdf]

At the same time, **the United States must prepare for a broad range of future contingencies, from sustained, small-unit irregular warfare missions to military-to-military training and advising missions to high-end warfare against regional powers armed with weapons of mass destruction and other asymmetric means**. Yet compressed training times between deployments mean that many of our enlisted personnel and officers have the time to train only for the missions immediately before them—in Iraq and Afghanistan—and not for the missions over the horizon. These just-in-time training conditions have created a degree of strategic risk, which the Chairman of the Joint Chiefs of Staff noted in his recent posture statement. As we at the Center for a New American Security wrote in our June, 2007 report on the ground forces**, the United States is a global power with global interests, and we need our armed forces to be ready to respond whenever and wherever our strategic interests might be threatened. The absence of an adequate strategic reserve of ready ground forces must be addressed** on an urgent basis. **Readiness is the winning combination of personnel, equipment, and training in adequate quantity and quality for each unit.** Each of these components of readiness has been under sustained and increasing stress over the past several years. For the ground forces, the readiness picture is largely—although not solely—centered on personnel while the Navy and the Air Force’s readiness challenges derive primarily from aging equipment. The Army continues to experience the greatest strain and the greatest recruitment challenges.

# Ext—Coal K/ Railroads

**Coal is critical to railroads**

**AAR 12**

[Association of American Railroads, “Railroads and Coal,” June 2012, http://www.aar.org/~/media/aar/Background-Papers/Railroads-and-Coal.ashx]//SH

**Coal is the most important** single **commodity carried by U.S. freight railroads. In 2011, it accounted for 43.3 percent of tonnage, 23.5 percent of carloads, and 24.7 percent of gross revenue** for U.S. Class I railroads. Coal is also an important commodity for many non-Class I railroads. **Coal accounts for approximately one in five railroad jobs.**

**Railroads depend on coal shipments - revenue**

**E&E Publishing 9**

[Environment & Energy Publishing (E&E) is the leading source for comprehensive, daily coverage of environmental and energy policy and markets, 9/16/9, “Big coal carriers navigate a risky climate track,” http://www.eenews.net/public/climatewire/2009/09/16/2]//SH

**Freight haulers with a presence on Capitol Hill, including the** powerful Association of American Railroads (**AAR), are lobbying for and against major aspects of climate legislation that splits along regional and ideological lines. The nation’s** dominant **railroads**, Norfolk Southern, Burlington Northern Santa Fe Railway (BNSF), CSX Corp. and Union Pacific, **rely on coal for** roughly 15 to **20 percent of their revenue. The industry has an interest in preserving coal's position as the dominant source of electricity**, and sources said that means joining utilities and coal companies in their fight for free carbon emissions permits and for long lead times for emissions reductions.

**Even if railroads aren't dependent on coal, stockholders perception will kill the railroads**

**Omaha Daily Herald 12**

[Major daily newspaper in Nebraska, " Railroads face a coal challenge," 4/20/2012, http://www.omaha.com/article/20120420/MONEY/704209950]

**There are fewer coal cars rumbling along the country's railroad tracks** these days — and it's not just because we hardly had to fire up our furnaces this winter. **Thanks to the combination of unusually warm weather, cheap natural gas and** worries about tighter environmental **regulations, there's a lot of coal sitting around, and not a lot of interest in moving it**. The amount of coal on U.S. railways has dropped in eight of the last 12 months. In the first quarter of 2012, the number hit the lowest level in 18 years: about 1.5 million carloads. **It's a concern for every railroad that hauls coal — even a highly profitable one like Union Pacific, which just reported a ninth straight quarter of record earnings.** On Thursday, **the** Omaha-based **railroad said its per-share earnings were up 39 percent from the first quarter of 2011**, from $1.29 to $1.79**. Net income was $863 million, up from $639 million. The railroad also set records in operating revenue, operating income, operating ratio and in customer satisfaction. Revenues were up in all six freight divisions, with gains of 25 percent or more in automotive and industrial products. But the part of the report that seemed to attract the most attention from investors was a spot of less-than-positive news about coal. While revenues** for energy-related freight, which is primarily coal, **were up, volumes were down**: by 8 percent for coal from the Southern Powder River Basin in Wyoming and by 3 percent for the smaller amount produced in the Uinta Basin area of Colorado and Utah. While U.P. executives told investors that they expect the market to pick back up as the summer brings warmer weather — and that they expect to offset losses with increased volumes in other types of freight — **industry watchers are being cautious.** After U.P. issued its quarterly report, the company's stock dropped through the course of the day, closing at $105.70. That was down 3.6 percent from Wednesday. "We're seeing a weird weather cyclical thing going on at the same time as long-term secular decline," said Anthony Hatch, an independent transportation analyst. "That's why everyone is panicked about it right now. **That's why Union Pacific can have a spectacular quarter, not change its long-term goals, and still see its stock drop by 3 percent." Coal is a major commodity for railroads across the country, making up 24 percent of last year's overall carloads and 25 percent of gross revenue**, according to the Association of American Railroads. About **70 percent of the coal moved on the rails goes to coal-fired power plants.**

# \*\*\*Renewables Updates

#  Uniqueness

#  High Now

**Clean energy investments high despite challenges**

**Cuttino 5/16**/12 – Director, Pew Clean Energy Program (Phyllis, “A Bright Future for Renewable Energy” Huffington Post Green, May 16 2012, <http://www.huffingtonpost.com/phyllis-cuttino/a-bright-future-for-renewable-energy_b_1521445.html>)//MR

**The current market for the renewable energy sector in the U**nited **S**tates **and around the world is a mix of challenge and opportunity. However, the long-term future of clean energy is bright.** According to **our recent report**, "Who's Winning the Clean Energy Race? 2011 Edition," **last year saw record private investments globally**. And **the U**nited **S**tates **received more investments for clean energy than any other nation. These** investments **resulted in** record deployment levels -- **83.5 gig watts of clean generating capacity overall**, including an unprecedented 30 gig watts of solar.

**Clean energy is on the rise**

**Cuttino 5/16**/12 – Director, Pew Clean Energy Program (Phyllis, “A Bright Future for Renewable Energy” Huffington Post Green, May 16 2012, <http://www.huffingtonpost.com/phyllis-cuttino/a-bright-future-for-renewable-energy_b_1521445.html>)//MR

But these **challenges will pass, and clean energy will continue its inexorable march forward** -- pushing innovation into an energy sector that has not seen much in the way of new technologies for more than 100 years. **Renewable power will soon be cost-competitive.** Indeed, **a range of financial and technical experts expect solar and wind to compete** favorably **without subsidies of any kind within this decade and perhaps in the next five years.** Similarly, **U.S. policy uncertainty will not deter other markets from flourishing. China, India, Brazil, and other emerging economies have strong and consistent clean energy policies** to encourage private investment in and deployment of clean energy. **These are the markets where** most of the 2 billion people without modern energy services live and where **demand growth will be greatest in the next 20 to 30 years. Clean energy offers African countries**, for example, **the opportunity to provide electricity to households and communities without transmission wires**, just as cell phones allowed that continent to leapfrog landline phones. **Residential solar already is the cheapest energy option in many parts of the world.** For American policymakers, **the question is not whether clean energy will be part of the world's energy future. It is and will be. The question is whether the U**nited **S**tates **will capitalize on** its advantages in **clean energy innovation and position itself to use, produce, and sell them to consumers** looking for safe, clean, affordable energy options in the future. The hearing this week on the proposed Clean Energy Standard (CES) is an important step. Although the legislation is unlikely to move to the Senate floor for debate, a CES is the type of long-term policy needed in this country.

#  Low Now

**Clean energy low now—price declines and expiring tax credits**

**Cuttino 5/16**/12 – Director, Pew Clean Energy Program (Phyllis, “A Bright Future for Renewable Energy” Huffington Post Green, May 16 2012, <http://www.huffingtonpost.com/phyllis-cuttino/a-bright-future-for-renewable-energy_b_1521445.html>)//MR

But like other emerging high-technology industries before it, **the clean-energy sector is going through a** period of profound **transition. The industry faces** powerful **financial and policy cross currents.** The most important long-term dynamic in this sector is falling prices. **Both wind and solar have experienced sustained and dramatic price declines**. Solar module prices dropped 50 percent in 2011. Wind prices were down 10 percent. Lithium-ion batteries used in electric vehicles are down 30 percent over the past three years and fell 14 percent just last year. **These price declines are good news for consumers and** help **explain last year's record deployments. Yet falling prices are putting manufacturers through a period of turmoil** in the United States and elsewhere. **Many are hard-pressed to make a profit and scrambling to remain viable. A number will fail**, just as the more than 100 automakers in the early 20th century were whittled down to only a few American auto producers. **This turmoil facing clean energy manufacturers is exacerbated by policy uncertainty** in the most established and mature markets. **Financial incentives in Europe are being curtailed in the push for budget austerity. In the U**nited **S**tates, a variety of **initiatives, passed as part of the stimulus package, expired at the end of 2011, and the production tax credit that has guided investors in wind** projects **is set to conclude at the end of this year.**

#  Link

**CCS doesn’t solve and trades off with renewables**

**Risbey 8** – research climatologist (Dr. James, “\'Clean\' coal fraud — renewables now!” Green Left, April 26 2008, <http://www.greenleft.org.au/node/39431>)//MR

The problem with **CCS**, in a nutshell, is that it **is too little, too late, too expensive, too risky, and** it **displaces other solutions** that can do the job. As our views of the science of climate change have advanced, they have provided sobering news that **we are approaching tipping points in the climate system**. If our continued emissions fuel warming of more than a couple of degrees, that is likely to commit us to irreversible melting of the Greenland and West Antarctic ice sheets. That, in turn, locks us in to sea level rises of tens of metres at rates, foreseeably, in the range of several metres per century. Because of the inertia in the energy and climate systems, **we must begin to reduce carbon emissions now if we are to avoid crossing a tipping point. We don't have the luxury of waiting another decade** or two to start doing this. Because emissions reductions must start now, **the basis of solutions is in** those **technologies** and processes **that** can **deliver immediate reductions and offer** the potential for **permanent replacement of coal** as an energy source. **Our best prospects** in this regard **are renewable energy, efficiency measures, and emissions reduction efforts and infrastructure changes. Renewables can be implemented now and will scale up with time and become cheaper as they are widely commercialised and research and development increases their efficacy. CCS** has very few of the attributes needed to provide a solution and **moves us in the wrong direction. CCS** is still in the testing phase and **will take a decade or two before it can be implemented** in actual working power plants, **and** then **still further** decades **before it could be scaled up to operate on large numbers of coal plants around the globe. That is too late to change the course of our energy system away from carbon, and too late to prevent emissions crossing a tipping point.**

#  AT CCS k/Renewables

**Renewables alone solve—CCS delays action and trades off with real solutions**

**Risbey 8** – research climatologist (Dr. James, “\'Clean\' coal fraud — renewables now!” Green Left, April 26 2008, <http://www.greenleft.org.au/node/39431>)//MR

**Supporters of CCS argue that it is** one solution among many, and is **needed because renewables and efficiency alone will be insufficient** to meet the climate challenge. **This** argument **ignores both the real costs and opportunity costs of CCS, and the long delays, which render it impotent in the short term and redundant in the long term.** Australia has abundant and sufficient resources of solar, geothermal and wind energy to do the job, and the potential to save vast amounts of energy in real efforts at efficiency and the transformation of our cities to sustainable urban forms. **CCS delays action to reduce emissions at a time when we can no longer afford to wait, and it displaces those solutions that can work now and have a lasting impact**. WWF's notion of so-called "**clean coal" is an oxymoronic vision** of Australia's energy future **that will derail real efforts to confront climate change if we let it.**

#  AT Renewables DA

**CCS key even in a world of green energy**

**Hall 12** – editor of Energy Digital for WDM Group, the leading business news source for C-level executives worldwide (Carin, “Carbon Capture & Storage More Critical than Renewables” <http://www.energydigital.com/green_technology/carbon-capture-storage-more-critical-than-renewables>)//MR

According to Preston, **the key will be coming up with solutions that keep using existing infrastructure as** alternative **renewable sources** of energy gradually **become more economically feasible. But even if the world were to shift entirely to green energy, CCS will still be needed.** "**We still remain with CO2 from the cement, steel and petrochemical** industries,” said Michael Kuhn of Hemholtz-Centre Potsdam, a carbon capture and storage project in Ketzin, Germany at last month's convention. “**We have to deal with this CO2... and we won't get rid of it when we switch to renewable energies.**"

**Renewables development fails without CCS**

**Hall and Kirkham 7** – natural resource attorneys with Stoel Rives LLP (Richard R. and John S., “Coal: Like It or Not, It's Here to Stay” The Enterprise Newspaper, June 4 2007, <http://www.stoel.com/showarticle.aspx?Show=2484>)//MR

**Thirty years ago, coal was viewed as the fuel of the past. Nuclear power, natural gas, and renewable energy** sources **were going to take us away from coal** and place our reliance on cleaner alternatives. However, **despite these predictions, the use of coal for** generating **electricity has nearly tripled in the last 30 years, and the demand for and consumption of coal is projected to increase** for the foreseeable future. Coal has enabled America’s electric utilities to keep up with ever increasing demand, and **coal is** now **being used in record amounts. Last year, coal-fired plants contributed 50% of the electricity produced in the U**nited **S**tates, and it is anticipated that **coal will maintain this percentage through 2025**. But while coal-fired plants contribute half of the electricity produced in the United States, they also contribute four-fifths of the carbon emissions associated with electrical generation. **The challenge** facing government and industry **is reconciling rapid economic growth and energy demand with the environmental impacts and risks of climate change. Despite** the environmental concerns and promising **advances in** the development of **alternative energy** sources, **coal will** undoubtedly **continue to play a significant role in power generation for decades** to come. **Attempts to abruptly eliminate coal** from current and/or future energy options **would** be imprudent and **jeopardize the availability, reliability and security of a country’s overall energy supply**. To ensure future energy needs are affordable, **support for the development of new energy technologies should include research and development for clean coal** technologies as well as improving competitiveness of alternative energy sources.

# \*\*\*States CP Updates

# Aff

#  Perm

**Federal action key or perm solves**

**OPI 06** (Oil Pipeline Industry, July 25, 2006, “Federal/State Partnership Essential to Safety and Operation,” In The Pipe, [http://tinyurl.com/7so5vfg)//DR](http://tinyurl.com/7so5vfg%29//DR). H

**States may adopt regulations that are more stringent than their federal counterparts, but they must adopt the minimum federal regulations in order to be certified. States that are not certified may adopt portions of the federal regulations.**

**The authority to regulate interstate pipelines falls to the federal government, however it may authorize states to act on its behalf in inspecting those pipelines.** OPS has a grant program that is used to reimburse state agencies for up to 50 percent of the cost of their pipeline safety programs. **Federal and state inspectors enforce regulations through regular pipeline inspections. They also conduct targeted investigations in response to public concerns.**

**The** Transportation Safety Institute **(TSI) is responsible for instructing federal and state pipeline operators on compliance requirements**, enforcement procedures and inspection techniques. TSI’s training is done at its Oklahoma City facility, and **new federal and state inspectors are required to complete the training within a three-year period.**

Besides its regulation and training duties, **the OPS works closely with groups of government officials whose work touches pipelines.** For instance, the National Association of Pipeline Safety Representatives, whose members are OPS-certified state program managers, holds meetings year-round that allow managers to compare notes on inspection techniques, pipeline technology, and innovations **in improving pipeline safety.** Also, **the** National Association of Regulatory Utility Commissioners consists of government **agencies that work to improve utility regulation. The** association has a staff subcommittee **devoted to pipeline safety.**

**Permutation solves best—states only have inspection jurisdiction**

**Ross 2/29** Director of Energy and Environmental Policy, Former Senior Staff Member in the U.S. Senate, Master's degree in National Security and Strategic Studies(Brydon, February 29, 2012, “Trends in Pipeline Safety and State Damage Prevention Programs,” Knowledge Center, [http://knowledgecenter.csg.org/drupal/content/trends-pipeline-safety-and-state-damage-prevention-programs)//DR](http://knowledgecenter.csg.org/drupal/content/trends-pipeline-safety-and-state-damage-prevention-programs%29//DR). H

Although the U.S. Department of Transportation’s Pipeline and Hazardous Materials Safety Administration is the primary regulator of most interstate pipelines, states play an important role in maintaining the safety of these lines.

State pipeline safety personnel make up more than 75 percent of the inspection workforce and are often referred to as being on the front line of protecting the public, working in conjunction with first responders during an accident.

The DOT can designate a state to act as its agent in the inspection of interstate lines. States that adopt the minimum federal pipeline safety regulations can be certified by the DOT and act as inspectors for interstate pipelines within their borders.

The duties of state pipeline agencies cover a broad swath of activities, such as the inspection and review of safety records, physical facilities, industry personnel qualifications, construction, operations, maintenance, integrity management, compliance and enforcement, accident investigations and other safety programs.1 While a state may participate in the oversight of interstate pipelines, the DOT always retains authority for enforcement of any violations. Currently the only states that are certified as interstate inspection agents are Arizona, California, Minnesota, New York, Virginia, and Washington.

The nation’s pipeline systems can be divided into two categories: intrastate, in which the pipeline lies completely within a state’s borders, and interstate, in which the pipeline crosses one or more state boundaries for interstate commerce. States have direct safety authority over more than 99 percent of regulated intrastate natural gas and 84 percent of intrastate hazardous liquid system—including oil and other petroleum products—and carbon dioxide pipelines in the country, according to the National Association of Pipeline Safety Representatives. State inspectors also have safety authority over more than 99 percent of the 2 million miles of natural gas distribution pipelines, those that serve retail consumers, 49 percent of the 329,000 miles of natural gas transmission pipelines and 34 percent of the 187,000 miles of hazardous liquid pipelines.2

#  Fed Key

**Federal action must approve any interstate pipelines**

**Phillips 11** Bachelor's in International Relations, Reporter(Susan, August 5, 2011, “A Pipeline Primer: Who, How, Where and What The Heck?” [http://stateimpact.npr.org/pennsylvania/2011/08/05/a-pipeline-primer-who-how-where-and-what-the-heck/)//DR](http://stateimpact.npr.org/pennsylvania/2011/08/05/a-pipeline-primer-who-how-where-and-what-the-heck/%29//DR). H

So, can companies just lay pipelines wherever they want?

Not really. First, **rights of way needed to be secured from private and public landown­ers.** The companies pay for those rights of way. **Then per­mits are needed.** But **a confusing network of regulatory bodies handles the permitting process. The Federal Energy Regulatory Commission has to approve any inter­state pipeline. The Public Utilities Commission has to approve any that serve consumers directly.** But few of the new gas lines connected to Marcellus Shale drilling fall neatly into either of those categories. The proposed Marc 1 Hub pipeline that will run through Lycoming, Sullivan and Brad­ford counties continues up into New York. So it’s an inter­state line and falls within the jurisdiction of FERC.

**USFG key—states can only inspect**

**Pless 11** Energy Policy Associate at National Conference of State Legislatures (Jacquelyn, March 2011, “Federal and State Responsibilities,” [http://www.ncsl.org/issues-research/energyhome/state-gas-pipelines-federal-and-state-responsibili.aspx)//DR](http://www.ncsl.org/issues-research/energyhome/state-gas-pipelines-federal-and-state-responsibili.aspx%29//DR). H

Both federal and state agencies regulate pipelines across the United States. Interstate pipelines are managed by the Federal Energy Regulatory Commission (FERC) and the U.S. Department of Transportation (DOT). The Federal Energy Regulatory Commission regulates pipelines, storage, natural gas transportation in interstate commerce, and liquefied natural gas facility construction. It also oversees operation of pipeline facilities at U.S. points of entry for natural gas imports and exports and analyzes environmental impacts of natural gas projects.

Once natural gas pipeline projects are operating, the Department of Transportation’s Pipeline and Hazardous Material Safety Administration (PHMSA), acting through the Office of Pipeline Safety (OPS), regulates, monitors and enforces safety. The OPS collaborates with partnering agencies and departments to ensure pipeline operation safety, security, monitoring and compliance. As of June 2010, 88 full-time PHMSA pipeline inspectors were employed to conduct the comprehensive OPS inspection and enforcement program to ensure that pipeline operators comply with all safety regulations.4

Although the federal government is responsible for developing, issuing and enforcing pipeline safety regulations, most inspections are conducted by state regulatory agencies, which are responsible for regulation, inspection and enforcement of pipelines within state boundaries. The state agency regulations must be at least as stringent as the federal regulations. Many states experience more pipeline-related incidents than others, however, and may wish to consider strengthening their oversight standards.

OPS or PHMSA certifies state agencies annually to perform their regulatory duties, and OPS also can authorize states to inspect interstate pipelines, although it retains enforcement responsibilities. Arizona, Connecticut, Iowa, Michigan, Minnesota, New York, Ohio, Washington and West Virginia are authorized to act as interstate agents.

**State exemptions cause delays**

**Ross 2/29** Director of Energy and Environmental Policy, Former Senior Staff Member in the U.S. Senate, Master's degree in National Security and Strategic Studies(Brydon, February 29, 2012, “Trends in Pipeline Safety and State Damage Prevention Programs,” Knowledge Center, [http://knowledgecenter.csg.org/drupal/content/trends-pipeline-safety-and-state-damage-prevention-programs)//DR](http://knowledgecenter.csg.org/drupal/content/trends-pipeline-safety-and-state-damage-prevention-programs%29//DR). H

According to the most recent data from the National Association of Pipeline Safety Representatives, at least 41 states, territories and the District of Columbia have some type of exemptions built into their damage prevention programs (see chart). A significant portion of these exemptions include state departments of transportation, state agencies and municipalities. Even states that had well-regarded damage prevention programs often had exemptions.

The inclusion of more stringent regulations will likely cause additional delays for state DOT projects that must be marked by underground utility locaters before doing any road repair or construction work. Typically, a One-Call center will dispatch a locater within 24 to 48 hours, but sometimes this can take 72 hours or longer. Many states do not have One-Call centers that are monitored seven days a week, much less 24 hours a day. This could lead to some significant delays for construction projects. For example, if a One-Call ticket was filed on Friday afternoon, a facility locater would not likely be on a project site until Tuesday or Wednesday.

**States can only assist the DOT**

**Ross 2/29** Director of Energy and Environmental Policy, Former Senior Staff Member in the U.S. Senate, Master's degree in National Security and Strategic Studies(Brydon, February 29, 2012, “Trends in Pipeline Safety and State Damage Prevention Programs,” Knowledge Center, [http://knowledgecenter.csg.org/drupal/content/trends-pipeline-safety-and-state-damage-prevention-programs)//DR](http://knowledgecenter.csg.org/drupal/content/trends-pipeline-safety-and-state-damage-prevention-programs%29//DR). H

Unfortunately, states have no easy solution out of this conundrum. States do have opportunities in other aspects of pipeline safety policy where they can wield significant influence. Most immediately, states can start re-examining their pipeline safety programs for any aspects that DOT suggested need improvements or changes before additional federal regulation is contemplated. Policymakers can and should be more vocal with DOT and Congress to ensure that federal reimbursement rates keep pace with additional mandates for state pipeline safety inspectors.

**USFG has authority for pipelines**

**UTC 03** (Utilities and Transportation Commission, December 19, 2003, “State agrees with federal officials that natural gas pipeline needs to be shut down and replaced,” [http://www.wutc.wa.gov/webdocs.nsf/de53b07997d108ea882563b50072c5b3/10b592c014da4cfc88256e01005dc544!OpenDocument)//DR](http://www.wutc.wa.gov/webdocs.nsf/de53b07997d108ea882563b50072c5b3/10b592c014da4cfc88256e01005dc544%21OpenDocument%29//DR). H

Washington regulates pipelines that do not cross state lines**.** The federal government has regulatory authority over interstate pipelines, such as Williams’ Northwest Pipeline. In Washington, as well as in 14 other states, OPS delegates certain inspection functions to state inspectors who have the expertise and training to do it for the federal government. The WUTC conducts inspections and provides reports to OPS, which then determines whether to act on the information provided.

Since 2000, Washington state inspectors have inspected interstate pipelines as agents of the federal government, with the Office of Pipeline Safety (OPS) having the lead oversight role of the nation’s 2.2 million miles of interstate pipelines.

The Office of Pipeline Safety is within the U.S. Department of Transportation. OPS is responsible for overseeing inspections of the Williams’ pipeline operation once every two years. During those inspections, workers examine the company’s entire operation from its maintenance methods to manuals to physically checking the line. The pipeline is examined externally when the commission performs field and visual inspections. Audit inspections review the records maintained by the pipeline company to make sure that scheduled maintenance is being performed and that operator training and certification is current. If the state inspectors believe there is a concern, the WUTC tells the OPS, who take action.

**USFG is key—multiple warrants**

**INGAA 12** (Interstate Natural Gas Association of America, 2012, “How are Natural Gas Transmission Pipelines Regulated?” [http://www.ingaa.org/cms/4923.aspx)//DR](http://www.ingaa.org/cms/4923.aspx%29//DR). H

The primary federal regulatory responsibility for pipeline safety rests with the Pipeline and Hazardous Materials Safety Administration (PHMSA) within the Department of Transportation (Read more about PHMSA at www.phmsa.dot.gov) Still, activities by other federal agencies also contribute to the safety of our nation’s pipeline system. For example, the Federal Energy Regulatory Commission (FERC) is responsible for pipeline safety in connection with siting new interstate natural gas pipelines.

Pursuant to the first federal pipeline safety law enacted in 1969, pipeline safety regulation within PHMSA began with prescriptive rules based on safety engineering consensus standards. These regulations now have matured to include “risk management” concepts (allowing individual operators to identify and focus on risks unique to their pipelines) and “integrity management” philosophies that focus on life-cycle concepts. The interstate pipeline industry, working cooperatively with PHMSA, is taking affirmative steps in research and in developing consensus standards to make the pipeline infrastructure even safer.

Many of INGAA’s members have developed sophisticated concepts to manage pipeline integrity. The recently developed PHMSA Integrity Management Program embodies these concepts and applies this methodology consistently across the pipeline industry. (A more complete description of the Integrity Management Program, its implementation and the progress to date is included at the end of this section).

Natural gas pipeline professionals work closely with PHMSA in ensuring safety and reliability. The PHMSA regulations incorporate consensus engineering standards and practices and provide multiple layers of protection to the public by addressing the entire life cycle of a pipeline. The regulations address pipe and component manufacturing, shipping of manufactured pipe, construction techniques, operating procedures and operator training, emergency response, and, ultimately, abandonment at the end of the pipeline’s economic life. PHMSA enforces these regulations by utilizing various inspection and enforcement processes.

Pipeline accidents generally are reported to PHMSA when one of three things occurs: (1) a fatality, (2) an injury or (3) $50,000 or more in property damage. Recently, PHMSA has categorized most “reportable incidents” either as “significant incidents” or as “serious incidents” (incidents that involve fatalities and injuries) and placed that data on its web site. There is a downward trend of “serious incidents” on natural gas transmission pipelines from 1989-2005. Most “serious incidents” were caused by third-party excavation incidents rather than pipeline malfunction or pipeline deterioration. (Since 2002, all fatalities that occurred with respect to natural gas transmission incidents have been excavation related and fatalities were either a pipeline employee or excavation contractor).

PHMSA regulations require pipeline operators to conduct continuing public awareness programs to educate a wide variety of stakeholders on pipeline safety issues. Current regulations require pipeline operators to develop and implement public awareness programs consistent with statutory requirements and the guidance provided by the American Petroleum Institute (API) Recommended Practice (RP) 1162, “Public Awareness Programs for Pipeline Operators,” which was developed jointly by the natural gas and oil pipeline industries and others. Under the regulations, operators of gas and hazardous liquid pipeline facilities must carry out continuing programs to educate the public on:

"the use of a “One-Call” notification system prior to excavation and other damage prevention activities; the possible hazards associated with unintended releases from the pipeline facility; the physical indications that such a release may have occurred; what steps should be taken for public safety in the event of a pipeline release; and how to report such an event".

Operators must advise affected municipalities, school districts, businesses, and residents of pipeline locations. Operators must review their programs for effectiveness and enhance the programs as necessary.

PHMSA has also joined with the National Association of State Fire Marshals to form a “Partnership in Excellence in Pipeline Safety.” One of the first priorities under the partnership was the development of an education and training program for emergency responders for effective and efficient response to pipeline incidents. Natural gas pipeline companies participated in the development of this program.

The information provided here is an overview of some, but not all, of PHMSA’s activities in pipeline safety. The reader is encouraged to visit the PHMSA web site for a complete description (www.phmsa.dot.gov).

State Regulation

While INGAA represents interstate natural gas pipelines, some of its members own and operate intrastate transmission pipelines. Intrastate transmission pipelines--lines which are contained within a single state's borders-- are regulated by the state. Each state has its own rules and regulations. The National Association of Pipeline Safety Representatives (NAPSR) is an organization of state agency pipeline safety directors, managers, inspectors and technical personnel who serve to support, encourage, develop and enhance pipeline safety at the state level. To learn more about their activities, visit their website: <http://napsr.org/>

**Federal action is key—legislation overcomes stalemates**

**Reiner et al 03** Technology, Management and Policy Program and Laboratory for Energy and the Environment,

Massachusetts Institute of Technology, Judge Institute of Management, University of Cambridge, Laboratory for Energy and the Environment, Massachusetts Institute of Technology (D.M., M.A. de Figueiredo, H.J. Herzog, May 2003, “TOWARDS A LONG-TERM LIABILITY FRAMEWORK FOR GEOLOGIC CARBON SEQUESTRATION,”http://sequestration.mit.edu/pdf/defigueiredo\_et\_al\_MIT\_paper.pdf)//DR. H

Low-level radioactive waste (LLRW) storage and disposal demonstrates the case where **liability is assigned to the state.** LLRW is most easily defined by what it is not. It is neither spent nuclear fuel nor waste from nuclear weapons. **LLRW is generally all remaining radioactive waste, including machine parts from nuclear reactors, clothing worn by workers in radioactive facilities, medical waste, and waste from university research laboratories. LLRW** is governed by the Low Level Radioactive Waste Policy Act (LLRWPA), as amended in 1985, **dictates that states are responsible for the disposal of LLRW** generated within their borders. 10 **The Act allows states to enter into compacts to control disposal facility access.** The unintended effect of the LLRWPA has been that no new LLRW facilities have been built, largely because no state regulatory agency will approve a disposal facility within its borders!11 **The case is relevant to carbon sequestration in deciding whether liability should be defined by the federal government or states; federal government may be able to legislate in cases that produce a stalemate in states. The case also shows that liability regimes may discourage storage.**

**USFG key—costs**

**Reiner et al 03** Technology, Management and Policy Program and Laboratory for Energy and the Environment,

Massachusetts Institute of Technology, Judge Institute of Management, University of Cambridge, Laboratory for Energy and the Environment, Massachusetts Institute of Technology (D.M., M.A. de Figueiredo, H.J. Herzog, May 2003, “TOWARDS A LONG-TERM LIABILITY FRAMEWORK FOR GEOLOGIC CARBON SEQUESTRATION,”http://sequestration.mit.edu/pdf/defigueiredo\_et\_al\_MIT\_paper.pdf)//DR. H

Historically, **the federal government has regulated the rates charged by interstate pipelines because these pipelines have the characteristics of natural monopolies and associated cost advantages that make it difficult for other pipelines** or other transportation modes **to compete. Specifically, because pipelines are expensive to build—but** relatively **inexpensive to operate—it is more efficient to build one large pipeline to transport a given amount of a commodity rather than** two or **more smaller pipelines.** In addition, **low operating costs may enable a pipeline to reduce its rates temporarily** if faced with competition from other modes of transportation. The **regulation of pipelines has been imposed to ensure that all shippers have access to pipeline transportation services and that the rates charged by pipeline carriers for these services are reasonable and nondiscriminatory.**

#  Strikedown

**CP fails—Supreme Court will Strike it down, state regulation variations, and conservation relation**

**Troxel 37** (C. Emery, February 1937, “II. Regulation of Interstate Movements of Natural Gas,” The Journal of Land & Public Utility Economics, Vol. 13, No., JSTOR)//DR. H

CHARACTERSITIC of natural gas utilities is **the transportation of** natural **gas across one or more state border** since the nation’s natural gas fields are located largely in sparsely settled areas remote from markets for gas consumption. This movement of gas across state lines **touches the problem of governmental control of the** natural gas **industry at two points. First, it is significant principally because of its bearing upon rates within a state. When a corporate system has an interstate pipe-line company serving a number of controlled distribution companies, the pipe-line company in the absence of regulation is in a position to fix freely the wholesale rate to the retailing company. Since no federal regulation of natural gas pipelines yet exists, these wholesale rates in past years have not been subject to effective supervision. Second, there is the relation between conservation and interstate transmission of gas which was recently a vital problem, for instance, in the Texas Panhandle.**

The increasing absolute and relative amounts of natural gas moving in inter-state commerce, which has principally resulted from **recent rapid construction of long-distance gas-pipe lines, has drawn attention to this unregulated public utility business.** Because **the United States Supreme Court has generally denied states jurisdiction in this matter**, several attempts have been made to obtain federal regulation of interstate natural gas transmission lines. When the last Congressional session adjourned, a bill awaited attention of the House of Representatives that would have given the Federal Trade Commission control particularly of rates, service, and service extensions or abandonments of interstate high-pressure natural gas transmission lines. Moreover, state governments would have had some assistance from the Federal Trade Commission in their efforts to control gas waste if this measure had been enacted. As the subsequent survey will reveal, **until the Federal Government enacts measures to control natural gas companies operating across state borders, there will be no regulation of this significant link in the process of rendering natural gas service to consumers 100 to 1,200 miles distant from the sources of gas supply.**

#  AT Compacts

**Goes through Congress**

**Florestano 94** Secretary of Higher Education, PhD, State Information Technology Board, Governor's Commission on Service and Volunteerism, Public Affairs Professor and senior research fellow at the Schaefer Center for Public Policy (Patricia, 1994, “Past and Present Utilization of Interstate Compacts in the United States,” Oxford Journals, Vol. 24, No. 4, Interstate Relations, JSTOR)//DR. H

The constitutional requirement for the consent of Congress has been one of the most complex aspects of compacting. Decisions have been rendered by the courts on the purpose of congressional consent, which **compacts need consent**, how consent is given, when, and other issues. The dividing line between compacts needing consent and those that do not is imprecise. Usually, **those that affect the political balance within the federal system or affect a power delegated to the federal government require congressional approval. Among such things would be state boundary settlements, agreements over jurisdiction of waters, and compacts that might have a discriminatory effect on nonparticipating states. Compacts that do not require congressional consent are those which establish channels of interstate relations, seek uniformity of law, or pertain to issues where state action is usual** and predominant, **such as education, child welfare, criminal law, or mental health.** The U.S. Supreme Court has held that consent can be implied as well as expressly given.8 In 1962, the U.S. Court of Appeals ruled that **interstate compacts of a political nature are not effective unless approved by the Congress**, but states may enter into nonpolitical compacts without congressional consent.9 It is clear that **the consent power of the Congress is absolute; it decides if a compact is political and how and when consent will be granted.**

**Compacts focus is on narrow issues—federal action occurs often—tons of unresolved question about compact**

**Florestano 94** Secretary of Higher Education, PhD, State Information Technology Board, Governor's Commission on Service and Volunteerism, Public Affairs Professor and senior research fellow at the Schaefer Center for Public Policy (Patricia, 1994, “Past and Present Utilization of Interstate Compacts in the United States,” Oxford Journals, Vol. 24, No. 4, Interstate Relations, JSTOR)//DR. H

**The general lack of interest among scholars in compacts reflects the fact that their focus has often been on narrow issues of little public concern rather than on major policy issues. The growth of federal government activities, together with the growth of preemptions and mandates in recent years, have over-shadowed interstate actions**. Scholars should once again ponder the importance of interstate relationships. A fresh and detailed look needs to be given to why states do and do not join compacts and the search for an explanatory link between them. **Where do compacts originate** in the first place**?** **Which have been driven by the Congress? Which were initiated to preclude federal action? Why have compacts not been more effective in fending off congressional preemption? How are compacts instruments for innovation diffusion? How are they negotiated?** These are only a few questions for scholars.

# \*\*\*Deforestation Updates

# Aff

#  Inevitable

**Deforestation is inevitable**

**Roberts and Roper 06** Roberts: Senior Advisor, Forestry and Conservation Canadian International Development Agency, Roper: Forest Conservation Consultant (Ralph, John, Revised January 2006, “FORESTRY ISSUES: Deforestation: Tropical Forests in Decline,” [http://www.canadian-forests.com/Deforestation\_Tropical\_Forests\_in\_Decline.pdf)//DR](http://www.canadian-forests.com/Deforestation_Tropical_Forests_in_Decline.pdf%29//DR). H

In many cases, **political decision-makers knowingly permit deforestation to continue because it acts as a social and economic safety valve. By giving people free access to forested lands, the pressure is taken off politicians to resolve the more politically sensitive problems that face developing countries, such as land reform, rural development, power-sharing, and so on.** Nonetheless, **the problems do not go away. They persist as do the injustices associated with them.**

#  Can’t Solve

**Can’t solve deforestation**

**Roberts and Roper 06** Roberts: Senior Advisor, Forestry and Conservation Canadian International Development Agency, Roper: Forest Conservation Consultant (Ralph, John, Revised January 2006, “FORESTRY ISSUES: Deforestation: Tropical Forests in Decline,” [http://www.canadian-forests.com/Deforestation\_Tropical\_Forests\_in\_Decline.pdf)//DR](http://www.canadian-forests.com/Deforestation_Tropical_Forests_in_Decline.pdf%29//DR). H

**Is it possible to stop deforestation? It is unlikely in the foreseeable future**, but the rate of deforestation can be slowed down considerably and its negative socioeconomic and environmental impacts can be minimized. **Based on the most recent estimates of the rates of deforestation, and assuming that 75 per cent of forest losses are attributable to agricultural expansion, it is estimated that over the next 25 years the agriculture sector will require an additional 250 to 300 million hectares of new land to accommodate the demands of commercial farming, subsistence cropping, pasture and range development. Most of this increase in land area will come at the expense of tropical forests.** The agriculture sector must be challenged to find appropriate solutions.

# \*\*\*Aff Supplement

# CCS Solves

**CCS is key to solve warming—large scale up is key**

**CATF 12** (Clean Air Task Force, “Carbon Capture and Storage and the Need for Zero Carbon Fossil Fuels” Coal Transition, 2012 (last date referenced) <http://www.coaltransition.org/>)//MR

Carbon Capture and Storage (**CCS) is** one of **the most important technologies for averting the worst aspects of climate change.** That’s because **fossil fuel use is growing worldwide, not declining: In the last few years alone, China has built more new coal plants than exist across the U**nited **S**tates. **By 2015, China will have more than three times more coal plants than the U**nited **S**tates. The Energy Information Agency predicts that **world fossil use will increase 50% by 2035. Natural gas use in the U**nited **S**tates **will increase** as a result of recent development of “unconventional gas” deposits. At the same time, **the urgency of addressing climate change is growing.** Surface temperatures in 2010 tied 2005 as the highest on record. **The past decade** from 2001 to 2010 **was the warmest recorded. As a consequence** of warming, **the Earth’s climate is changing. Arctic sea ice is retreating, ice sheets and glaciers are melting, and the global sea level has risen.** These facts underscore the need for **CCS**. It’s effective because it **can capture up to 90% of the CO2 from these major coal and gas sources. The technology is scalable, and its individual components have been available for decades. Global funding for carbon capture and storage technology**, a tool for the reduction of greenhouse gas emissions, **remained unchanged** at US$23.5 billion **in 2011** in comparison to the previous year, according to a new report from the Worldwatch Institute. **Although there are** currently **75 large-scale, fully integrated carbon capture and storage projects in 17 countries** at various stages of development, **only eight are operational—a figure that has not changed since 2009.**

**CC is key to cut emissions**

**Hall 12** – editor of Energy Digital for WDM Group, the leading business news source for C-level executives worldwide (Carin, “Carbon Capture & Storage More Critical than Renewables” <http://www.energydigital.com/green_technology/carbon-capture-storage-more-critical-than-renewables>)//MR

In an effort to curb climate change, renewable energy development and energy efficiency retrofits are only half of the equation in reducing the world's dependency on oil, coal and natural gas. While **the burning of fossil fuels will remain a central component of the global energy matrix for at least another hundred years**, **developing technologies to capture** some of the **pollution** in that space **will be just as critical as developing alternatives to replace them** in the future.As **the American Association for the Advancement of Science** convention wrapped up last month, **specialists in** carbon capture and storage (**CCS**) **indicated that the technology can work on a global scale to cut emissions by 25 per cent over the next century. CCS will be especially critical in** rapidly **expanding countries like China, India and Russia, where coal-fired generation dominates. As the least expensive option in extending electricity supply to citizens in developing nations, coal is the most expensive option in terms of the environment, accounting for half of annual CO2 emissions globally** today.

# CCS Regs Now/Investment Key

**Regulations coming now—large scale investment in CCS key to solve emissions**

**Worldwatch Institute 11** (“Growth of Carbon Capture and Storage Stalled in 2011” Worldwatch Institute, 2011, <http://www.worldwatch.org/growth-carbon-capture-and-storage-stalled-2011>)//MR

**Although CCS** technology **has the potential to significantly reduce carbon dioxide emissions**—particularly when used in greenhouse gas-intensive coal plants—**developing the CCS sector to the point that it can make a serious contribution to emissions reduction will require large-scale investment.** Capacity will have to be increased several times over before CCS can begin to make a dent in global emissions. Currently, the storage capacity of all active and planned large-scale CCS projects is equivalent to only about 0.5 percent of the emissions from energy production in 2010. The prospects for future development and application of CCS technology will be influenced by a variety of factors, according to the report. **This March, the U.S. E**nvironmental **P**rotection **A**gency **proposed regulations on carbon dioxide emissions from power plants. As a result, U.S. power producers would soon be unable to build traditional coal plants without** carbon-control capabilities (including **CCS**). **The technology will** likely **become increasingly important as** power **producers adjust to the new regulations.**

# CCS Fails

**CCS increases the cost of electricity**

**Risbey 8** – research climatologist (Dr. James, “\'Clean\' coal fraud — renewables now!” Green Left, April 26 2008, <http://www.greenleft.org.au/node/39431>)//MR

**CCS** is too expensive. It **will substantially increase the cost of building coal plants (perhaps a near doubling of** plant **cost, according to the** US **D**epartment **o**f **E**nergy) **and therefore increase the cost of electricity** also. The **energy required to remove CO2 from the coal plant stream** is also substantial and **would consume up to 40% of the energy used by the plant.** Thus, **coal plants fitted with CCS would require more fossil fuel inputs, and the prices of these inputs can only increase** as time goes on and carbon is more fully costed. Therefore, **CCS** works to **make our energy supply more expensive and more wasteful** as we go on **and commits us to** further dependance on **coal**. **By contrast, renewable energy will get cheaper as time goes on, and** likely **would long have outcompeted CCS by the time CCS could be implemented on a commercial scale.** Those coun**tries that choose CCS will be locking themselves into expensive energy futures. They will have missed the renewables boat and face rising costs in coal plant commitments. Their economies will suffer** because they invested in old energy and **it would take** further **decades to turn** them **around**.

**CCS leaks turn solvency**

**Risbey 8** – research climatologist (Dr. James, “\'Clean\' coal fraud — renewables now!” Green Left, April 26 2008, <http://www.greenleft.org.au/node/39431>)//MR

**CCS is risky whereas renewables** and efficiency **carry very little risk. The CO2** from CCS **must be stored underground and there is no guarantee that it won't leak. Even small leakage** rates back into the atmosphere **undermine the point of capturing the carbon dioxide in the first place.** **The risks of leaks rise as CCS is scaled up, as the most promising sites would be utilised first, leaving increasingly leaky sites for** the **widespread implementation** of CCS schemes. **Leaks** from buried carbon stores **may contaminate ground water, and surface leakage poses a health risk and** may **damage ecosystems.**

**CCS fails—public picks up the tab**

**Risbey 8** – research climatologist (Dr. James, “\'Clean\' coal fraud — renewables now!” Green Left, April 26 2008, <http://www.greenleft.org.au/node/39431>)//MR

The **costs and risks of CCS will be passed on to the public**, whereas renewables and efficiency aren't exposed to these costs and risks. The **costs of research and testing of CCS are** being **borne in substantial part by the taxpayer**, not by the already heavily subsidised coal industry. Australia subsidises coal over renewables research by a huge margin and the gap is increasing. The **risks of long-term storage of CO2 are so great that no company will take on the liability** and many are seeking to limit their legal liability to a mere 10 years. **That means that the public will** ultimately **pick up the tab** for the real risks associated with this technology. **The flagship CCS project in the US collapsed on cost grounds despite receiving over a billion US dollars in public funds and receiving protection from financial and legal liability** in the event of accidental releases of carbon dioxide. **Through CCS we will be creating a global network of** potentially **contaminated and leaky sites that fall on the public purse.**

# AT Leaks

**No leaks—existing tech proves**

**Hill 12** – Ph.D. Senior Scientist / Geologist (Bruce, “Seismic Risk Won’t Threaten the Viability of Geologic Carbon Storage” Clean Air Task Force, June 20 2012, <http://www.catf.us/blogs/ahead/2012/06/20/seismic-risk-wont-threaten-the-viability-of-geologic-carbon-storage/#more-457>)//MR

What the article does not say is that **for a brittle fault or fracture zone to reach the surface it would take crossing thousands of feet of rock and shale layers that** may very well, in the process, **accommodate the** upwardly propagating **stress like a plastic substance bending** like taffy –**instead of fracturing. It** also **does not address the rate at which** any **CO2 affected by** such small scale **fracturing might migrate over time, and whether those volumes would be significant** over the time scales necessary to combat global warming. Moreover, **according to MIT geoscientist** Ruben **Juanes, there are no models** or data **that can predict seismicity from large-scale CO2 injections**. Furthermore, **CO2 injection technology is hardly new. Approximately 1 billion tons of CO2 have been safely injected** (and stored) **in the process of** enhanced oil recovery (**EOR**) in the U.S. since the late 1970s, with no reported seismic incidents. In fact, **there have been no earthquakes reported anywhere from saline CO2 injections either**, according to the June 15 NAS report (Induced Seismicity Potential in Energy Technologies).

# AT Earthquakes

**CCS doesn’t cause earthquakes**

**Hill 6/22** Senior Scientist and geologist with Clean Air Task Force (Bruce, June 22, 2012, “Seismic risk won't threaten the viability of geologic carbon storage,” [http://www.globalccsinstitute.com/community/blogs/authors/brucehill/2012/06/22/seismic-risk-wont-threaten-viability-geologic-carbon)//DR](http://www.globalccsinstitute.com/community/blogs/authors/brucehill/2012/06/22/seismic-risk-wont-threaten-viability-geologic-carbon%29//DR). H

This week’s rumblings against carbon capture and storage (CCS) as a powerful means to mitigate global climate change come not from any natural geological source, but solely from an opinion piece published in this week's Proceedings of the National Academy of Science (PNAS) Perspectives. Despite the arguments of two Stanford geophysicists, however, there is plenty of countervailing scientific evidence that CO2 from U.S. fossil power plants can be captured and safely stored. While the opinion piece rightly raises the importance of rigorous site selection and site characterization for commercial scale storage, it falls far short in its analysis of the overall feasibility of storing commercial volumes of CO2. Here’s why:

By analogy with recently experienced earthquakes resulting from brine injections, the authors attempt to cast doubt on the feasibility of large-scale geologic storage of carbon dioxide captured from industrial sources by pointing to the role of CO2 pressure buildup in the hosting formations in their potential to induce earthquakes and resulting fractures and faults. Their concern is not about the impacts of tremors nor large scale earthquakes that would let CO2 rush out, but instead, about the possibility that the induced seismicity could be accompanied by small scale fracturing that could migrate upwards and compromise the integrity of an overlying geologic seal.

# Add On—Air Pollution

**Plan solves Air Pollution**

**Nathanson 01** Master of Science, Environmental Health Engineering, Bachelor of Engineering, Civil Engineering (Jerry, January 31, 2001, “air pollution control,” [http://www.britannica.com/EBchecked/topic/1589060/air-pollution-control/286097/Incineration)//DR](http://www.britannica.com/EBchecked/topic/1589060/air-pollution-control/286097/Incineration%29//DR). H

The best way to reduce the levels of carbon dioxide in the air is to use energy more efficiently and to reduce the combustion of fossil fuels by using alternative energy sources (e.g., nuclear, wind, tidal, and solar power). In addition, carbon sequestration can be used to serve the purpose. Carbon sequestration involves the long-term storage of carbon dioxide underground, as well as on the surface of Earth in forests and oceans. Carbon sequestration in forests and oceans relies on natural processes such as forest growth. However, the clearing of forests for agricultural and other purposes (and also the pollution of oceans) diminishes natural carbon sequestration. Storing carbon dioxide underground—a technology under development that is also called geosequestration or carbon capture and storage—would involve pumping the gas directly into underground geologic “reservoir” layers. This would require the separation of carbon dioxide from power plant flue gases (or some other source)—a costly process..

**Extinction**

**Driesen 03** [David, Associate Prof. Law – Syracuse U., Buffalo Environmental Law Journal, “"LEARING SUSTAINABILITY": SYMPOSIUM ARTICLES: SYMPOSIUM HELD AT THE UNIVERSITY AT BUFFALO LAW SCHOOL, OCTOBER 13, 2001: Sustainable Development and Air Quality: The Need to Replace Basic Technologies with Cleaner Alternatives”, Fall 02-Spring 03, 10 Buff. Envt'l. L.J. 25, L/]

Air pollution can make life unsustainable by harming the ecosystem upon which all life depends and harming the health of both future and present generations. The Rio Declaration articulates six key principles that are relevant to air pollution. These principles can also be understood as goals, because they describe a state of affairs [\*27] that is worth achieving. Agenda 21, in turn, states a program of action for realizing those goals. Between them, they aid understanding of sustainable development's meaning for air quality. The first principle is that "human beings. . . are entitled to a healthy and productive life in harmony with nature", because they are "at the center of concerns for sustainable development." n3 While the Rio Declaration refers to human health, its reference to life "in harmony with nature" also reflects a concern about the natural environment. n4 Since air pollution damages both human health and the environment, air quality implicates both of these concerns. n5

# AT Topicality

**Pipelines are transportation—prefer contextual definitions**

**GAO 98** (General Accounting Office, April 1998, SURFACE TRANSPORTATION: Issues Associated With Pipeline Regulation by

the Surface Transportation Board,” Report to Congressional Committees)//DR. H

**Pipelines also offer transportation advantages over other modes**: They provide safe and dependable service with little opportunity for accidents and weather-related delays because **the product is transported underground and is completely encased.** For example, out of more than 7,000 accidents involving railroad, barge, and pipeline transport in 1995, only about 350, or 5 percent, occurred on pipelines.9

**The federal economic regulation of interstate pipelines is provided by two agencies: the Federal Energy Regulatory Commission and STB.** Most pipelines—for oil and natural gas—are regulated by the Federal Energy Regulatory Commission. These **pipeline carriers are required to file reports disclosing the rates charged to transport commodities through their pipelines** and, in most cases, an annual report on their operations. As described in the next section, STB does not require such filings from the pipeline carriers under its jurisdiction.

# \*\*\*Miscellaneous

# Politics Link

**Loan guarantees are subject to substantial media spin**

**Ross 2/29** Director of Energy and Environmental Policy, Former Senior Staff Member in the U.S. Senate, Master's degree in National Security and Strategic Studies(Brydon, February 29, 2012, “Trends in Pipeline Safety and State Damage Prevention Programs,” Knowledge Center, [http://knowledgecenter.csg.org/drupal/content/trends-pipeline-safety-and-state-damage-prevention-programs)//DR](http://knowledgecenter.csg.org/drupal/content/trends-pipeline-safety-and-state-damage-prevention-programs%29//DR). H

The nation’s continued weak economic growth and growing public unease with our national deficit have created paradigm shifts in federal support for alternative and renewable energy projects. Many would not have predicted the precipitous drop in public and political support for the notion of “stimulus” funding and incentives in Washington.The bankruptcy of Solyndra garnered significant media coverage and increased oversight of federal loan guarantees created in the 2005 Energy Policy Act. The slow pace and sometimes scattershot efforts of the incredible levels of funding in the Recovery Act caused many to reassess the proper role of government supporting new alternative energy projects. Lost in the high-profile media coverage was the expiration of the ethanol production tax credits that historically enjoyed bipartisan support for nearly 30 years and provided nearly $20 billion in support.State will be faced with new and challenging decisions in their efforts to provide incentives and spur development for renewable and alternative energy without being perceived as trying to be venture capitalists. This will require significant strategic thinking and creativity in order to meet public expectations and balance budgets.

# AT Competitiveness K

**Competition solves monopolies**

**GAO 98** (General Accounting Office, April 1998, SURFACE TRANSPORTATION: Issues Associated With Pipeline Regulation by

the Surface Transportation Board,” Report to Congressional Committees)//DR. H

**The federal government has often regulated industries engaged in interstate competition** when the market structure exhibits the characteristics of a natural monopoly. A market’s structure refers to the characteristics of firms and purchasers of a particular product and the way **their interaction determines the market price and quantities transacted.** Markets that have a competitive structure should, by their nature, have product prices that are low relative to the cost of producing the good. **The key characteristics of competitive markets are the presence of many firms producing a good** (so that no one firm has influence over the market price) **and the lack of any significant barriers** to new firms entering or exiting the market.

Markets may not be competitively structured when the production of a good entails significant economies of scale, meaning that firms need to be fairly large in relation to the market to be served in order to produce the good efficiently. In particular, **a large firm may be considered a natural monopoly if it has very high fixed costs but low marginal costs of production, enabling it to produce the good at a lower per-unit cost than any combination of two or more firms. This single firm has the ability to temporarily charge low prices in the face of real or potential competition**, thus frustrating the emergence of competitive alternatives. However, **in the absence of competition, the firm could**, if unregulated, **charge rates that are high relative to the cost of providing the service.** **Economic regulation**, then, **is intended to protect consumers against the unreasonably high prices that might be charged by an unregulated natural monopolist.**

# Aff K Cards

**WCI 6** (“COAL: MEETING GLOBAL CHALLENGES” World Coal Institute, May 2006, <https://mail.google.com/mail/u/0/?tab=wm#inbox>)//MR

**Fossil fuels will continue to dominate energy consumption – accounting for around 85% of the increase in world primary energy demand over the next 30 years.** While **nuclear energy** provides a significant proportion of energy in some economies, it **can face** very **long permitting and construction cycles and private financing is difficult to find. Renewable energies** are growing fast but from a small base and **by 2030** they **are** still **only expected to meet 14% of total energy demand** [IEA 2005a]. **The forecast growth in demand will not alleviate the major concerns around energy poverty. In 2000, only one in six people worldwide had the access to energy required to provide** the **high living standards** enjoyed in the developed world. **These one billion people consumed over 50% of the world’s energy supply, while the one billion poorest used only 4%** [WBCSD 2004]. As UN-Energy has stated: “**This situation entrenches poverty, constrains the delivery of social services, limits opportunities for women, and erodes environmental sustainability** at the local, national and global levels”. **Energy is essential to poverty alleviation.** All fuel sources will be needed – but **as the most abundant and affordable of all the fossil fuels, the role of coal will be vital.**

**WCI 6** (“COAL: MEETING GLOBAL CHALLENGES” World Coal Institute, May 2006, <https://mail.google.com/mail/u/0/?tab=wm#inbox>)//MR

Almost **half of the population of Africa lives in** this state of **extreme poverty** – a proportion that has actually grown worse over the past two decades [Sachs 2005]. **There are** currently **1.6 billion people – or 25% of the global population – without any access to electricity.** A further **2.4 billion people rely on primitive biomass for cooking and heating. In the absence of radical new policies, 1.4 billion people will still lack access to electricity in 30 years time** [IEA 2004]. **This is a huge challenge**. IEA studies have projected that **a total of US$200 billion of investment in electricity will be needed to help halve the proportion of people living on less than US$1 a day by 2015. This is in addition to the** US**$5.8 trillion needed just to meet existing projections** in electricity demand [IEA 2004]. At **the U**nited **N**ations Millennium Summit in September 2000, world leaders agreed to a **set** of time-bound **targets for tackling poverty, hunger, illiteracy, gender inequality, disease, and environmental degradation** – the eight ‘Millennium Development Goals’ (MDGs). While there is no MDG specifically on energy, **access to energy services is vital to the achievement of all these goals** [UNDP 2005]. This link was also recognised at the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002, where the priority was placed on sustainable development, incorporating economic, social and environmental sustainability. While **energy services** themselves are not sufficient to eradicate extreme poverty, they **are necessary to create the conditions for economic growth and improved social equality. Coal has a critical role to play in extending access to energy worldwide. Coal underpins the economic and social development of many countries, as well as providing the support infrastructure for such development to occur.**

**WCI 6** (“COAL: MEETING GLOBAL CHALLENGES” World Coal Institute, May 2006, <https://mail.google.com/mail/u/0/?tab=wm#inbox>)//MR

**Coal plays an important role in providing affordable electricity worldwide – 40% of global electricity is coal-based.** In many countries, the use of coal in electricity generation is even more significant (see table on page 12). The **availability of affordable, abundant supplies of coal has been significant in the social and economic development of many countries.** The IEA projects that the key role provided by coal will continue, with coal use in power generation projected to almost double in the next three decades [IEA 2004]. The situation in **sub-Saharan Africa gives an example of how coal-based electricity can make a** valuable **contribution to** raising electrification levels and **aiding development. Access to the electricity grid in sub-Saharan Africa has slowly increased**, from 9% of the population in 1970 to 24% in 2005 (just over 20% if South Africa is excluded). **However**, despite this growth, **around 500 million people are still living without electricity** [World Bank 2006]. A further **575 million people rely on biomass for their energy** [IEA 2004]. The extensive use of traditional biomass is incompatible with sustainable development. 12 World **Coal** Institute programme **has dramatically improved the quality of life for South Africans, stimulating** the creation of new b**usinesses, creating jobs and making South Africa more competitive internationally. South Africa’s** significant **indigenous coal supplies have been vital to this electrification programme.** In 2004, coal-fired generation accounted for nearly 92% (202TWh) of the power produced by South Africa’s national electricity utility, Eskom; all of it fuelled by low-cost, locally sourced coal [Eskom 2006]. **China** also **offers a striking example of the link between coal-based electrification and development. Over** the past **20 years, China has connected** some **700 million people to the electricity system. The country is now 99% electrified**, the same level as most developed countries. **Electrification was a vital component of its poverty alleviation campaign** in the mid-1980s, which built up the basic infrastructure and created local enterprises. As a result, from 1985 to 2003, electricity production in China rose by over 1500 TWh, of which around 80% is coal-fired. China’s economy grew by an annual rate of 9.5% during this period [IEA 2006b]. **Securing access to modern energy services is therefore one of the most significant milestones towards sustainable development in sub-Saharan Africa.**

# Natural Gas prevents CCS

**Natural gas bars commercial-scale CCS**

**Inmann 12** (Mason, “Shale Gas: A Boon That Could Stunt Alternatives, Study Says” National Geographic News, January 17 2012, <http://news.nationalgeographic.com/news/energy/2012/01/120117-shale-gas-boom-impact-on-renewables/>)//MR

However, **the expansion of shale gas would** also put **limits on the expansion of other sources of electricity, because natural gas power plants would** tend to **be cheaper** than wind or solar. In the strong policy scenario, the study forecasts that **natural gas would take over about a third of the electricity market by 2050, completely driving out coal.** In this case, renewable energy would increase as well, tripling between now and 2050—but this growth of renewables would be much slower than what the U.S. has seen in the past several years. **Low-cost gas would** also **hamper the development of carbon capture and storage** (CCS), a way of keeping carbon dioxide, the primary greenhouse gas, from going up power plants' smokestacks, and instead storing it underground. According to the study, **if there were no shale gas, meeting the stronger policy target would** first **bring CCS into play** around 2030, and then it would expand to become a crucial part of the electricity system. **But with shale gas available, CCS is projected to be pushed back by up to two decades. "In the long run, we need renewables, carbon capture and storage, and nuclear power**," Jacoby said. "Shale gas is a good thing overall, but **we've got to keep our eye on the long term**,"—beyond 2050.

# Renewables t/o w/ Natural Gas

**Renewables decrease natural gas consumption**

**Hall and Kirkham 7** – natural resource attorneys with Stoel Rives LLP (Richard R. and John S., “Coal: Like It or Not, It's Here to Stay” The Enterprise Newspaper, June 4 2007, <http://www.stoel.com/showarticle.aspx?Show=2484>)//MR

**Alternative means of electricity production** are actively being pursued to reduce global reliance on coal. These alternatives, however, **have had only limited success**. For instance, in the United States, where coal is used almost exclusively to generate electricity, **the chief alternative to coal is** cleaner, **natural gas.** During the 1990s, the price of natural gas averaged below $3 per thousand cubic feet. These **low prices made new, low-cost, efficient natural gas** combined cycle power plants **competitive with coal**-generated power. **As a result of the lower prices and environmental concerns, the electric power sector shifted to increased natural gas use.** Since 2000, **natural gas prices have increased** and are projected to remain above $3 per thousand cubic feet, **making coal-fired plants increasingly more competitive. Based on** the **current forecasts, coal will retain its competitive advantage over natural gas for the foreseeable future. This has resulted in a swing back toward** greater reliance on **coal**. Consistent with this shift, the Department of Energy recently reported that **U.S. utilities are planning to build 150 more coal-fired power plants through 2030**, with nearly half slated for operation by 2011. **Some point to** the introduction of **renewable portfolio standards as a means to reduce coal reliance** and the environmental impacts associated with coal-fired generation. Renewable portfolio standards typically require a certain level or percentage of electricity purchased or consumed by a utility or governmental entity to be produced from **renewable sources.** While renewable portfolio standards have had measured success in promoting the development of renewable energy sources, they **do not** appear to **have a significant effect on coal consumption**. Due to price differentials, **renewable portfolio standards tend to decrease the consumption of natural gas, rather than coal**. In the long run, the development of renewable energy sources may certainly prove key to reducing global reliance on coal. However, **in the short term, encouraging** the development of **renewable energy sources alone does not** appear **to have a substantial effect on coal use or carbon dioxide emissions from the electricity sector in the absence of other** policy **measures**.