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# Squo Solves

**China’s domestic gas production is growing**

**Jiping 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

**China's natural gas sector is undergoing booming development.** Ever **since the start of the new century, China's gas production has been growing by 13% annually.** Our gas output reached102.5 bcm in 2011, and represented a 3.9-fold increase over our output in the year of 2000. And our ranking in the world's gas producing countries has risen to the 6th place from the 16th place in 2000. On the consumption side, **the annual growth rate of our gas consumption has been as high as 16% since the beginning of this century**. Last year, we consumed 130.7 bcm natural gas, a 5.3 times increase over the year of 2000. Now, China has already become the world's fourth largest natural gas consumer only after the U.S., Russia and Iran. **The proportion of natural gas in China's primary energy consumption mix has grown to 5% in 2011** from 2.4% in 2000. **Regarding gas infrastructure construction**, we have made very rapid progress and **a national gas pipeline network has been built to link east to west, north to south, and China to neighboring countries.** By the end of 2011, **China's total length of gas trunk lines has been over fifty thousand kilometers,** and our total gas transmission capacity has surpassed 160 bcm per year. So far, five LNG receiving terminals have been put into operation with a total capacity of 15.8 million tons per year. In 2011, we imported 31.4 bcm natural gas from abroad, accounting for 24% of our domestic consumption. **China's diversified gas supply structure has already taken initial shape.** China has a very broad natural gas market. **China's natural gas consumption pattern is being changed from "supply-driven" to "demand-driven". Looking ahead, China's demands for gas will keep going up rapidly** by 2030. With proper incentives, our gas demands are going to grow by about 8% annually, which is to increase our consumption to 350 bcm and 550 bcm in 2020 and 2030 respectively, accounting for 10% to 12% of China's primary energy consumption. By that time, China may overtake Russia to become the world's second largest gas consuming countries.

**Domestic natural gas solves energy security**

**Jiping 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

**China is** quite **rich in natural gas resources, and** we mainly **rely on** our **domestic production to ensure the supply security. According** to the latest resources assessment by our Ministry of Land and Resources, **China's technically recoverable resources of conventional gas amount to 32 tcm**. By the end of 2011, our rate of proven resources is just 16%, a quite low degree of exploration. Therefore, we are **still in the peak period of reserves growth, and** our **future exploration is highly potential and will be the main force to increase** our **reserves and production. China is also rich in unconventional gas resources**. The **technically recoverable resources of** our tight **sandstone gas are about 12 tcm**, and scale development has been achieved with our 2011 production reaching 20 bcm. China's technically recoverable resources of CBM stand at 10.9 tcm. Our CBM is still in the development stage of industrialization and we have built a production capacity of nearly 10 bcm. For China's shale gas, the technically recoverable resources are 25.1 tcm according to our initial estimate. We are now conducting the development pilot tests. **By integrating technologies and expertise of foreign companies with** our **own research results, CNPC drilled a horizontal well in the marine facies shale gas reservoir in southwestern China's Sichuan Basin, and** we **obtained an initial daily output of 200 thousand cubic meters** at a stable wellhead pressure of 20MPa. **This has shown very good prospects for future development of shale gas resource**s in our country. **For the next 20 years, China's gas production is going to remain in the peak period of growth. Our country's gas production capacity is expected to surpass 200 bcm and 300 bcm in 2020 and 2030** respectively. In addition, such **remote areas with rich coal resources as Xinjiang and Inner Mongolia Autonomous Regions have been formulating coal-to-gas development plans**, and they have started to build demonstration projects. Actually, **CTG has the cost advantage compared with imported gas, so it has a quite good future** as well. **China's domestic gas output will be able to meet the bulk of our demand growth, and it will be the main body to satisfy our needs over the coming decades.**

**Squo solves—China is leading the way in CCS**

**Juan 11** (Du, “China leads in carbon capture, says IEA” China Daily, November 22 2011, http://usa.chinadaily.com.cn/business/2011-09/22/content\_13764808.htm)//MR

**China is playing a leading role in applying** carbon capture and storage (**CCS**) technologies, an initiative that the International Energy Agency (IEA) expects to help cut global carbon emissions in industrial sectors by 4 gigatons a year by 2050. "**The Chinese government is making serious efforts in CCS in both investment and technological research, which has put it ahead of many other countries," said Ellina Levina, energy analyst of the** agency's **CCS unit**. CCS technologies capture carbon dioxide (CO2) before or after combustion in the industries such as cement, oil and power, and store it for other uses. The IEA considers it the most effective way to cut carbon emissions. "One goal of the IEA is to generate 100 CCS projects worldwide by the end of 2020, and we estimate that half of them will probably be in developing countries," Levina said. **China has great potential to launch more CCS projects in the next 10 years**, Levina said, adding that **those projects will help it meet its emission-reduction target.** China has committed to reduce its CO2 emissions by 40 to 45 percent from 2005 levels for each unit of GDP by 2020. **CCS can be profitable for China** - the world's second-largest economy and a big emitter - **if it develops its own technology and sells it to other countries**, **Levina** said. She said that she **is confident in Chinese technologies for carbon capture, storage and utilization.**

**Multiple projects already underway prove China solves**

**Juan 11** (Du, “China leads in carbon capture, says IEA” China Daily, November 22 2011, http://usa.chinadaily.com.cn/business/2011-09/22/content\_13764808.htm)//MR

**China Huaneng Group, one of the country's leading power companies, launched** in cooperation with the Australian Commonwealth Scientific and Industrial Research Organization **a CO2 capture facility in coal-fired power plants in** December **2007**. It was put into operation in 2008, with an annual capturing capacity of 3,000 tons. **Huaneng also has a CCS project in Shanghai** with an annual capacity of 120,000 tons, **and** it **is preparing another project** with a yearly capacity of more than 1 million tons, said S. Ming Sung, chief representative of Asia-Pacific at the Clean Air Task Force, a nonprofit organization. According to Sung, **China Power Investment Corp has built a CCS facility** with an annual capacity of 100,000 tons, **which will soon be put into operation. Another CCS project,** Integrated Gasification Combined Cycle Power Plant, **will begin operation by the end of the year** in Tianjin. **Shenhua Group Corp, China's largest coal miner** by output, and Peabody Energy Corp, the US-based energy company, **participated in the project**. Sung said **Shenhua has another CCS program in Ordos**, the Inner Mongolia autonomous region, which has a capacity for 10,000 tons a year. CO2 can be refined to 99.99 percent purity and can be used to produce carbonated beverages.

# Natural Gas K/ Energy Security

**Natural gas is key to China’s energy security**

**Forbes 12** – Senior Associate, Climate and Energy Program (Sarah M., ‘HEARING BEFORE THE U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION: “CHINA’S GLOBAL QUEST FOR RESOURCES AND IMPLICATIONS FOR THE UNITED STATES; CHINA’S PROSPECTS FOR SHALE GAS AND IMPLICATIONS FOR THE U.S.’” World Resources Institute, January 26 2012, <http://pdf.wri.org/testimony/forbes_testimony_china_shale_gas_2012-01-26.pdf>)

Current state and future direction of China’s shale gas industry: **The shale gas industry in China** is in early development, but the topic **has already garnered significant interest from the national government. The Chinese government is implementing new policies that support** the future **development of China’s gas industry** broadly, **as well as** supporting **shale gas research.** State-owned and provincial-owned **enterprises are conducting exploration and pilot demonstrations on shale gas in China.** Through its state-owned enterprises, China2 is also investing in shale gas development in the United States. 2. U.S.-China cooperation on shale gas: The global oil and gas industry operates joint ventures (JVs) to sustain growth and defuse financial risk. The emerging international shale gas industry will rely on the same tactics, particularly given the current state of the global economy. In recent years, major investments or partnerships between U.S. and Chinese companies in the shale gas sector have been used to the near-term economic benefit of both countries and provide potential for U.S. companies to benefit domestically and abroad. 3. Impacts on the energy situation in China: **Shale gas development in China will reduce natural gas imports**, thus **improving China’s energy security. Because total natural gas demand will continue to** far **outstrip all domestic production** for the foreseeable future, **any natural gas from shale in China is expected to be consumed domestically**. From an environmental perspective, **the more China can develop energy alternatives to imported oil and domestic coal, the less pressure it exerts on global energy markets and the** global **environment**. China’s domestic use of its own natural gas resources would be unlikely to have an effect on net U.S. energy imports, as the U.S. is projected to domestically produce sufficient quantities of natural gas to meet its own demand for at least the next 25 years3,4.

**Chinese shale gas improves energy security—consumption increasing now**

**Forbes 12** – Senior Associate, Climate and Energy Program (Sarah M., ‘HEARING BEFORE THE U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION: “CHINA’S GLOBAL QUEST FOR RESOURCES AND IMPLICATIONS FOR THE UNITED STATES; CHINA’S PROSPECTS FOR SHALE GAS AND IMPLICATIONS FOR THE U.S.’” World Resources Institute, January 26 2012, <http://pdf.wri.org/testimony/forbes_testimony_china_shale_gas_2012-01-26.pdf>)

**The potential of China’s shale gas reserves is of great interest to the Chinese government for** both **energy security** and environmental reasons. While **China** has made real advancements in renewable energy and energy efficiency, it **still depends on** fossil fuels such as **coal to sustain its** current pace of **development**. For example, in 2008 coal accounted for 66% of China’s primary energy consumption6. The **growing energy demand places stress on China’s energy security** – as prices from chief import partners, such as Russia, continue to fluctuate. In the context of emissions goals for traditional air pollutants and greenhouse gases, natural gas is generally more favorable compared with more carbon-intensive fuels like coal or oil7. **Increasing the share of natural gas in the energy mix both improves energy security and helps in meeting climate goals, and China has been expanding its production and use of natural gas. Natural gas production has been growing** at an annual rate of **15-20% for more than a decade** and the 12th Five Year Plan set a target for natural gas to become 8.3% of total primary energy in 2015 (compared to 3.8% in 2008 and a goal in the 11th Five Year Plan of 5.3%)8.

# AT Russia-China Alliance

**No energy coop now—and broader impediments to natural gas pipeline**

**Cole 6** – Professor, National War College (Bernard D., “Chinese Naval Modernization and Energy Security” Institute for National Strategic Studies, National Defense University, 2006, <http://www.ndu.edu/inss/symposia/pacific2006/colepaper.pdf)//MR>

**China is making an** extensive **effort to include the energy sector in any strategic partnership with Moscow**; similar **efforts are being made with Russia’s former republics in Central Asia.** Extensive programs have been launched in Kazakhstan, for instance, with whom Beijing has signed agreements and contracts and from whom it has purchased a small amount of oil. Significant shipments of oil to China from the central Asian nation remain far in the future, as the project’s feasibility study, originally scheduled for completion in late 2004, remains incomplete.22 With respect to Siberian reserves, **China’s task is** relatively **straightforward: convince Russia to build the pipeline** either directly **across their common border to Daqing or**, a poor second best (but still preferable to a pipeline to Nakhodka), **to build a pipeline to China across Mongolia.** Despite the economic and technical factors affecting the selection of a route for a Siberian pipeline, **Moscow’s final decision will** most likely **reflect political** rather than economic **factors**. The **current** state of **good relations between Russia and China is unprecedented in length and historical factors of mistrust and fears may** reasonably **be expected to cool the relationship to the point where Moscow would** simply **be too uncomfortable with a routing that placed control of the pipeline terminus in Chinese hands.** Indeed, in early March 2006, **Beijing expressed its dissatisfaction “with the development of energy cooperation with Russia,” based** largely **on the lack of progress in selecting a route for the Siberian pipeline.** Zhang Guobao, Deputy Director of the Chinese National Development and Reform Commission, stated that **while “Russia has undertaken various oral obligations,” there “has been no practical progress**.”23 Russia, however, has pointed out that while the “Resolution of the Russian Government #1737 of 31 December 2004, demonstrates “the political will of the Russian Government to take specific steps in the development of the Eastern direction of the Russian oil exports,” **the decision about the “Far East Pipeline…still remains tentative and leaves far too many uncertainties**,” some of which are credited to “the Chinese factor still remain[ing] a mystery.” 24 The most likely outcome is for the pipeline to be built to Nakhodka, with a spur constructed to Daqing or some other Chinese terminal. **U.S. strategists should take satisfaction in the lack of agreement between Moscow and Beijing.**

**Energy cooperation unsustainable**

**Jakobson et al. 11** – Linda Jakobson; Paul Holtom; Dean Knox; Jingchao Peng (“CHINA’S ENERGY AND SECURITY RELATIONS WITH RUSSIA: Hopes, Frustrations and Uncertainties” Stockholm International Peace Research Institute, 29 October 2011)//MR

While some of the **grander expectations of China–Russia relations are unlikely to develop**, **the** two **countries will** nevertheless **avoid antagonizing one another and will find common interests in a stable relationship. The relationship may encounter tension** over specific issues, **but it is** relatively **resistant to long-term damage** because of the pragmatism of both parties and the willingness to discuss differences behind closed doors. China and Russia will continue to be pragmatic partners of convenience, but not partners based on deeper shared world views and strategic interests. In the coming years, **while relations will remain close at the diplomatic level**, the two cornerstones of the partnership over the past two decades—military and **energy cooperation—will** continue to **crumble**. As a result, **Russia’s significance to China will continue to diminish.**

# AT Russia-China Impact

# Relations Not a Threat

**Russia-China alliance not a threat to US  
Druzhinin 11** Staff Writer for Russia Times (Alexey, October 12, 2011, “The Bear and Dragon’s growing friendship,” Russia Times, <http://www.rt.com/news/russia-china-cooperation-us-693/)//DR>. H  
  
A recent visit by Prime Minister Vladimir Putin to Beijing is being viewed by many as a sign of Moscow’s shifting focus toward the East. The growing ties between Russia and China are raising questions about each side’s motives. **Russian-Chinese cooperation is natural and is not necessary targeted at the West**, and at the United States in particular, Zhang Yongjin, a professor of international politics at the University of Bristol, told RT. Russia and China have common economic interests, says Zhang, noting that they are at the top of the agenda of the current visit by the Russian prime minister to China. “Both Russia and China are great powers, they are permanent Security Council members, they have responsibilities in a much broader international arena,” he explained. “They also have some common strategic interests.” Yongjin argues that even though Putin’s visit to China was a scheduled meeting between the prime ministers, its importance is much more than symbolic. As Putin is expected to return to the Russian presidency, it is a very important opportunity for him to articulate his strategic vision toward the East to the Chinese leadership. The Russian prime minister arrived in Beijing on Tuesday for a two-day official visit. The two countries agreed on crude oil prices and decided to actively push forward cooperation on oil and gas. However, Oded Shenkar, an Ohio State University professor and expert in global business management, believes that Russian-Chinese cooperation is not about friendship, but about a cautious rapprochement based on mutual interests.

# Relations Good—War

**Russia-China war kills hundreds of millions and ends in extinction**

**Sharavin 01** (Alexander, Director of the Institute for Military and Political Analysis, “What the Papers Say”, 10/3)

Chinese propaganda has constantly been showing us skyscrapers in free trade zones in southeastern China. It should not be forgotten, however, that some 250 to 300 million people live there, i.e. at most a quarter of China's population. A billion Chinese people are still living in misery. For them, even the living standards of a backwater Russian town remain inaccessibly high. They have absolutely nothing to lose. There is every prerequisite for "the final throw to the north." The strength of the Chinese People's Liberation Army (CPLA) has been growing quicker than the Chinese economy. A decade ago the CPLA was equipped with inferior copies of Russian arms from late 1950s to the early 1960s. However, through its own efforts Russia has nearly managed to liquidate its most significant technological advantage. Thanks to our zeal, from antique MiG-21 fighters of the earliest modifications and S-75 air defense missile systems the Chinese antiaircraft defense forces have adopted Su-27 fighters and S-300 air defense missile systems. China's air defense forces have received Tor systems instead of anti-aircraft guns which could have been used during World War II. The shock air force of our "eastern brethren" will in the near future replace antique Tu-16 and Il-28 airplanes with Su-30 fighters, which are not yet available to the Russian Armed Forces! Russia may face the "wonderful" prospect of combating the Chinese army, which, if full mobilization is called, is comparable in size with Russia's entire population, which also has nuclear weapons (even tactical weapons become strategic if states have common borders) and would be absolutely insensitive to losses (even a loss of a few million of the servicemen would be acceptable for China). Such a war would be more horrible than the World War II. It would require from our state maximal tension, universal mobilization and complete accumulation of the army military hardware, up to the last tank or a plane, in a single direction (we would have to forget such "trifles" like Talebs and Basaev, but this does not guarantee success either). Massive nuclear strikes on basic military forces and cities of China would finally be the only way out, what would exhaust Russia's armament completely. We have not got another set of intercontinental ballistic missiles and submarine-based missiles, whereas the general forces would be extremely exhausted in the border combats. In the long run, even if the aggression would be stopped after the majority of the Chinese are killed, our country would be absolutely unprotected against the "Chechen" and the "Balkan" variants both, and even against the first frost of a possible nuclear winter.

# Relations High

**Relations are super high—solves all global problems  
Xinhua News 6/3** (June 3, 2012, “Russia-China relations at "unprecedented high": Russian FM,” <http://news.xinhuanet.com/english/china/2012-06/03/c_131628116.htm)//DR>. H  
  
MOSCOW, June 3 (Xinhua) -- **Relations between Russia and China have reached unprecedented high levels**, Russian Foreign Minister Sergei Lavrov says in an interview ahead of President Vladimir Putin's upcoming visit to China. Top leaders of the two countries are expected to discuss the expansion of bilateral cooperation in various fields during Putin's state visit to China on June 5-7, Lavrov said. Since Russia and China signed the Treaty on Good-Neighborliness, Friendship and Cooperation in 2001, the two countries have witnessed many breakthroughs in the development of their relations, Lavrov told Xinhua in a written interview. He listed some of the achievements, including an overall settlement of the border issues, a record high of 80 billion U.S. dollars in bilateral trade in 2011, the strategic cooperation in the energy sector, the launches of reciprocal National Years and Years of Languages, and close coordination in international affairs. "During Putin's visit, officials from both Russia and China are going to sign a joint communique on relations and their entrepreneurs will sign a number of agreements," Lavrov said. The two countries will also explore ways of further promoting their trade and economic relations, including how to optimize their bilateral trade structure, ensure rational use and protection of cross-border water resources, and conducting joint border inspections, he added. Since the leaders of the two countries decided to upgrade their relationship to a comprehensive strategic partnership of coordination based on equality, mutual trust and support, common prosperity and lasting friendship, the countries have made concerted efforts to further their relations, Lavrov said. On the political front, the two sides have agreed to continue enhancing mutual trust, promoting high-level exchanges and providing mutual support in efforts to safeguard their own sovereignty, state unity, and territorial integrity; On the economic front, the two countries have set a goal for bilateral trade to reach 100 billion U.S. dollars in 2015 and 200 billion dollars in 2020, Lavrov said. Besides, both Russia and China have strived to boost people-to-people and cultural exchanges and deepen their military cooperation, he said. Meanwhile, Moscow and Beijing have carried out close cooperation in global and regional organizations, such as the United Nations, the Shanghai Cooperation Organization (SCO), the Group of 20 (G20) and the BRICS, he said. The two sides have also actively coordinated with each other on the world's hot-spots, including the situation in West Asia and North Africa and the nuclear issue on the Korean Peninsula, he added. **"Russia-China cooperation at all levels in international affairs has set a good example for other countries to harmonize their positions and solve the most complicated global problems,"** Lavrov said. Sharing similar positions on many international issues, the two countries have conducted close coordination in response to the fundamental changes of global geopolitics and economy, the Russian foreign minister said. "Russia and China have common core interests. They hold similar stances on the ongoing profound changes in the world and similar approaches to new challenges," Lavrov said. "Russia and China support building a multi-polar world, establishing a more just and democratic global political and economic system, and enhancing the UN's central role in coordinating and resolving hot international issues," he said. Russia-China cooperation on the international arena has "facilitated global peace and stability," he said. With regard to the upcoming 12th Meeting of the Council of Heads of Member States of the SCO which Putin will attend, Lavrov said the meeting is of great significance to consolidating cooperation among SCO member states. According to Lavrov, the leaders are expected to endorse a number of documents during their meeting and review the proposal to accept Afghanistan as an observer state and Turkey as a dialogue partner. Only through joint efforts can countries counter the threats to regional security, Lavrov said, adding that the SCO is becoming a key factor in safeguarding regional security and stability. The expansion of the SCO "would strengthen the organization's potential and raise its international prestige. New blood would bring extra energy to the SCO," he said. Established on 15 June, 2001 in Shanghai, the SCO is an intergovernmental international organization which groups Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan and Uzbekistan. Its observer states include India, Iran, Mongolia and Pakistan, while its dialogue partners are Belarus and Sri Lanka.

# Relations Resilient

**Relations are resilient  
AFP 6/3** Global News Agency (Agence France-Presse, June 3, 2012, “Putin Visits China to Tighten Key Alliance,” <http://www.thejakartaglobe.com/asia/putin-visits-china-to-tighten-key-alliance/521936)//DR>. H

President Vladimir Putin visits China Tuesday on the first trip to Asia of his new Kremlin mandate to tighten an increasingly close alliance that is key for Russia’s diplomatic and economic strategy. Putin, who began a historic third term as president less than a month ago, has already made a lightning trip to Germany and France but will symbolically be visiting Beijing before the United States. The sometimes troubled Moscow-Beijing relationship has warmed during Putin’s 12 years of domination over Russia and the two governments are notably in lockstep in opposing outside intervention to solve the Syrian crisis. “One can understand where the vector of Russian policy is turned” with the Beijing visit, commented Georgy Kunadze, a China expert at the Russian Academy of Sciences and former diplomat. Putin is likely to coordinate positions with President Hu Jintao on the violence in Syria and Iranian nuclear crisis, with the West keenly aware both UN Security Council permanent members are prepared to wield their vetoes. But economic issues are also set to figure prominently on the three-day trip, particularly the energy sector as Russia searches for new markets while China seeks cheap natural resources. Russian energy giant Gazprom over the last week held talks in China in an apparent bid to overcome continued disagreements over gas prices in a landmark contract that has been in its final stages since last summer. The long-term deal envisages that Russia is to annually supply nearly 70 billion cubic meters of natural gas to China over the next thirty years, under a framework agreement signed in late 2009. Russian Deputy Prime Minister Arkady Dvorkovich said this week that the sides have still not reached an agreement on price, and it is unlikely that the deal will be signed during Putin’s visit. Meanwhile, Russian media reported this week that the two countries are also preparing to launch a joint aerospace project to develop a long-range passenger plane based on Russian know-how and Chinese investment which would challenge giants Airbus and Boeing. The presidency of Dmitry Medvedev — who held the Kremlin from 2008 to May of this year while Putin served as prime minister — was marked by optimism about Russia’s strengthening relations with the United States. But Putin led observers to believe his foreign policy will be rooted elsewhere when he surprisingly cancelled a trip to the United States last month that was to have been the first foreign visit of his new term. On Wednesday, Putin will participate in a Beijing summit of the Shanghai Cooperation Organization, a security body that includes Russia’s former Soviet partners in Central Asia and a handful of observer states, including Iran. Putin’s attendance at the SCO summit — seen as a fledgling eastern counterpart to NATO — is also symbolic given he was absent from the NATO summit in Chicago amid a row with the United States over missile defense. Putin is a frequent guest of Chinese leaders, last visiting Beijing as recently as October in his capacity as prime minister. It was his only foreign trip after he announced in September his plan to run for president. A month after his visit, he was awarded China’s version of the Nobel prize for “keeping world peace.” Relations between the territorial giants, who share a frontier of 4,000 kilometers, have improved since Putin first entered the Kremlin in 2000, especially after outstanding border issues were regulated in 2005. While Russia’s economy pales in comparison with China’s growing economic might, Putin indicated in his pre-election foreign policy manifesto that Moscow does not view its neighbor to the east as a threat. “Growth of China’s economy is not a threat,” he wrote, instead seeking “Chinese potential in developing Siberia and the Far East,” regions with a wealth of energy resources which are battling a population drain.

**Relations resilient—joint naval exercises**

**AP 4/22** (Associated Press, April 22, 2012, “China-Russia Yellow Sea naval drills begin,” <http://www.foxnews.com/world/2012/04/22/china-russia-yellow-sea-naval-drills-begin/)//DR>. H

China and Russia launched joint naval exercises Sunday that highlight warming ties between their militaries and growing cooperation in international affairs. Chinese state broadcaster CCTV said the six days of drills feature simulated anti-aircraft, anti-submarine and search-and-rescue operations, including electronic countermeasures and other sensitive technologies. Retired major general Yin Zhuo said it shows a high degree of trust between the sides. "It's an excellent exchange for China to be able to drill jointly in such sensitive areas," Yin told CCTV. China's Defense Ministry said China was sending two submarines and 16 ships to take part, including destroyers, escort vessels and hospital ships. The deputy chiefs of the countries' navies oversaw the start of drills in the northeastern Chinese port of Qingdao, the home of China's northern fleet. The two militaries hold frequent exchanges, despite recent disputes over Chinese copying of Russian military technology such as Sukhoi jet fighters. China was a key customer for the former Soviet arms industry, but recent technological advances at home have made it far less dependent on Russian weaponry. Much of that cooperation takes place within the confines of the Shanghai Cooperation Organization, a grouping of Central Asian states that seeks to check U.S. influence in the region and began holding joint drills in 2005.

**Russia China Alliance resilient**

**Jintao 6/5** Government-funded[[1]](http://en.wikipedia.org/wiki/RT_(TV_network)#cite_note-r1-0) global multilingual television news network based in [Russia](http://en.wikipedia.org/wiki/Russia) (Hu, June 5, 2012, “Russia and China: New horizons for cooperation,” Russia Today, **http://rt.com/politics/official-word/putin-russia-china-article-997/)//DR**. H

Ahead of his visit to China,Vladimir Putin wrote an article about cooperation between the two nations in the fields of economics, energy and international security. The article was published by the Chinese daily Renmin Ribao. I am pleased to have this opportunity on the eve of my state visit to China and the Shanghai Cooperation Organisation summit to address the millions of readers of one of the world’s most influential newspapers, Renmin Ribao. I value this chance to share my views on the future of our countries’ partnership and the role Russian-Chinese relations play in today’s world, which is in the midst of complex transformation, faces big global and regional security challenges, attempts to dilute the principles of international law, and economic and financial upheaval. All of these issues are the subject of much discussion and attention at the big international forums and summits that take place, and I am confident that reason and collective approaches will prevail in tackling today’s problems. The main thing is that all clear-headed politicians and experts in economics and international relations realise that it is not possible to set the global agenda today behind Russia’s and China’s backs and without taking their interests into account. Such is the geopolitical reality of the twenty-first century. In this context, we are aware of our common responsibility for the Russian-Chinese partnership’s long-term development and the importance of our common efforts within the United Nations and other multilateral organisations and regional bodies. We therefore have high hopes for the intensive programme of meetings we have planned with the Chinese leadership, and we also hope for fruitful work at the upcoming Shanghai Cooperation Organisation summit that will conclude China’s successful presidency of this organisation. ‘Russian-Chinese relations free from prejudices and stereotypes’ Russian-Chinese relations have been deservedly called an example of the new type of relations between states. Our relations are free from prejudices and stereotypes and this makes them stable and not subject to short-term considerations, which is valuable indeed in today’s world, where stability and mutual trust are so clearly lacking. The 2008-2009 global financial crisis showed us how important it is for us to understand and listen to each other and pursue common, consensus-based policies. Joint infrastructure and energy projects, big contracts and orders, and reciprocal investment are the resources that enabled our countries and our business communities to overcome the difficulties, create new jobs, and keep factories and businesses working. Russian-Chinese bilateral trade reached the record mark of $83.5 billion in 2011. We have now set the medium-term target of $100 billion by 2015, and will work towards reaching $200 billion by 2020. If we keep up today’s dynamic, we will be able to reach these targets even earlier.

# AT US-China Relations

**US-China relations low now—sliding towards 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

**Relations between the U**nited **S**tates **and China are on a course that may** one day **lead to war.** This month, **Defense Secretary** Leon **Panetta announced that by 2020, 60 percent of the U.S. Navy will be deployed in the Pacific.** Last November, in Australia, President **Obama** announced the establishment of a U.S. military base in that country, and **threw down an ideological gauntlet to China with his statement that the U**nited **S**tates **will “continue to speak candidly to Beijing about the importance of upholding international norms and respecting** the universal **human rights** of the Chinese people.” The dangers inherent in present developments in American, Chinese and regional policies are set out in “The China Choice: Why America Should Share Power,” an important forthcoming book by the Australian international affairs expert Hugh White. As he writes, “**Washington and Beijing are** already **sliding toward rivalry by default**.” To escape this, White makes a strong argument for a “concert of powers” in Asia, as the best — and perhaps only — way that this looming confrontation can be avoided. The economic basis of such a U.S.-China agreement is indeed already in place.

**Relations crises are structural and unavoidable**

**Feigenbaum 11**

Evan, Adjunct Senior Fellow for East, Central, and South Asia, Evan A Feigenbaum: Why US-China relations will get tougher, Business Standard, http://www.business-standard.com/india/news/evanfeigenbaumus-china-relations-will-get-tougher/424210/

**Structural changes are afoot that are sure to make the next several years more difficult. Even when the two sides share interests, divergent threat assessments and countervailing interests** too often **obstruct efforts to fashion complementary policies**. It is instructive, in that light, to take a hard look at President Hu Jintao’s just-concluded visit to Washington. The visit cleared the air in some areas while yielding symbolic initiatives in others. Hu received 21 cannon shots on the White House south lawn. And his visit yielded $45 billion in new commercial deals — a striking contrast, perhaps, with the important (but rather less hefty) $10 billion touted during Obama’s November visit to India. Yet **the central challenges in US-China relations are increasingly structural**. For one, **many**, both in and out of China’s government, **want to test what Beijing’s growing weight might yield.** They are confident of China’s growing strength and relish the opportunity to, at minimum, make Washington work harder for China’s support of ostensibly shared objectives. Some wish to see whether and how Washington will accommodate a wider array of Chinese interests. For their part, **many in Washington have been chastened by China’s choices of the past year. Beijing has proved less accommodating** than many in the Obama administration had hoped of US preferences **on issues from climate, to the pace of renminbi appreciation, to coordinated action in response to North Korean provocations. There were successes** — for example, mutual support for Iran-related sanctions in the United Nations Security Council**. But China’s deliberate, self-interested approach did not mesh in many areas with American exhortations and expectations.** Most important, **supportive domestic constituencies, who have provided ballast to US-China relations in tough times, continue to fracture**. In China, for example, the central bank has, in various ways, made the case for currency appreciation. But export lobbies continue to resist, arguing that companies will go under and China will suffer massive job losses. This more pluralistic political dynamics is playing out on the US side too: a once-solid business lobby has become more conflicted. Few, if any, US firms are pulling out of China. But a 2010 survey from the American Chamber of Commerce in China put the percentage of US companies that feel unwelcome in the Chinese market at 38 per cent, up 15 points from 23 per cent just two years earlier in 2008. This sentiment extends beyond technology companies, like Google, into the manufacturing sector. Companies complain about a host of issues, from intellectual property theft to non-tariff barriers to various aspects of China’s regulatory regime. Are such challenges manageable? Probably. The US and China share an array of interests, certainly in broad strokes. Who in China would not wish to support and sustain global growth? Who in China “wants” a nuclear North Korea? Or who in China truly thinks there is “benefit” from instability in Central Asia and Afghanistan? **The problem is twofold: First, Beijing rarely shares American threat assessments**. Chinese leaders are more relaxed than are Americans about the scope and nature of global threats. **Second, even when threat assessments converge, countervailing interests obstruct cooperation.** China may well seek a non-nuclear North Korea. But its emphasis on stability above all other objectives puts it at odds with Washington about how to prioritise this goal relative to others. Meanwhile, **China and the US have become centerpieces in debates on each side that transcend bilateral relations per se. Ultimately, these will play out in domestic politics. In the US, such debates include the future of American manufacturing, competitiveness and innovation**; the future of US primacy in Asia; and what kind of global arrangements best serve US interests. **In China, they include the pace and scope of economic rebalancing**; whether (and when) to knuckle under to international pressure on currency and industrial policies; and how to bolster Chinese military projection. These structural changes comprised the backdrop to Hu’s recent visit. Just take Chinese industrial policy. Tensions in this area strike at the core of each country’s economic competitiveness. Indeed, China’s ability to compete with US firms has improved faster in some areas than many had anticipated. From high-speed rail to nuclear power plants, China’s capacity to digest foreign technology, re-engineer it to Chinese specifications, and then produce (but as a lower-cost competitor) have unnerved a host of foreign companies, that now question the wisdom of transferring technology to China. The underlying fear is that if China can quickly produce substitutable (but cheaper) products, then foreign firms will be marginalised. But **Hu’s trip,** in some sense, **showcased just how difficult it will be to coordinate US actions and responses**. Boeing scored the sale of 200 new airplanes, valued at $19 billion. Meanwhile, General Electric is supplying the avionics for the C919, China’s indigenous competitor to the Boeing 737. The bottom line? Notwithstanding interdependence, **the next several years are sure to be more fraught.**

**Relations resilient- relations are not a horse trade- mutual interests and shift in Chinese attitude ensures future cooperation**

**Christensen 11 (**Thomas J. Christensen, Nonresident Senior Fellow, Foreign Policy, John L. Thornton China Center, Brookings Institute, “The Advantages of an Assertive China: Responding to Beijing's Abrasive Diplomacy”, http://www.brookings.edu/articles/2011/03\_china\_christensen.aspx)

But **understanding U.S.-Chinese relations as a horse trade over** Chinese and U.S. core **national interests is intellectually incorrect** and politically unhelpful. The most basic problem is that almost everything the United States is asking of China falls directly in line with China's interests. In other words, curbing nuclear proliferation or policing international waters for pirates is not "assisting" the United States -- it is serving China's own interests as well. Consequently, if China reduces its cooperation with the United States on such issues, it will harm its own foreign policy portfolio. China's North Korea policy provides the clearest example. If the six-party talks were to fail permanently, the biggest loser -- besides the North Korean people -- would arguably be China. Beijing justifiably gained diplomatic prestige by becoming a leader in the six-party talks; the other parties were quick to credit China for taking an unexpectedly proactive stance. But just as China gained praise for the progress in the six-party talks in 2006 and 2007, it now suffers a loss of prestige when North Korea refuses to abide by the demands of the international community. How can China portray itself as a great power when it cannot even influence the behavior of its weak neighbor and ally, which is entirely dependent on its economic ties to China? Moreover, since China maintains basically normal economic and diplomatic relations with North Korea -- despite the UN Security Council sanctions it helped create and the much stricter unilateral sanctions by Japan and South Korea -- its relationship with North Korea raises suspicions in regional capitals about Beijing's long-term intentions. North Korea's nuclear program is also likely to spur the buildup of new military hardware and the deepening of alliances in East Asia. Japan considers Pyongyang's development of deliverable nuclear weapons a real threat, for example. In the most dramatic, although arguably least likely, scenario, advancements in North Korea's nuclear program might cause Japan to scrap its nuclear taboo and develop its own nuclear weapons. What is less appreciated is how North Korean nuclear developments could affect Japan's conventional military programs in ways that would worry China. It is reasonable to expect increased Japanese participation in the ongoing U.S.-led program to develop a regional missile defense system in East Asia, an initiative that China considers a challenge to its own deterrent capabilities. Moreover, Japan seems likely to jettison its long-standing self-restraint on developing offensive conventional capabilities by investing in an arsenal of fast, conventionally tipped strike weapons that could destroy North Korean missiles on the ground before launch. These strike weapons would have multiple uses, and their development would have symbolic meaning for the future of Japan's overall military posture, making such an outcome undesirable from China's perspective. If left unchecked, the further development of North Korean nuclear weapons would also lead to greater and more active cooperation between the United States and its regional allies. Many components of this effort would be unwelcome in Beijing. For example, South Korea might more readily join a regional missile defense program with Japan and the United States. More generally, since the international community is also concerned about the transfer of nuclear materials from North Korea to other states and nonstate groups, the United States and its regional allies are likely to enhance their naval cooperation and exercises, as well as active inspections of North Korean shipping vessels as part of the Proliferation Security Initiative. In a related way, North Korea's military provocations last year led to a series of U.S.-South Korean military exercises, including antisubmarine warfare training, and a tightening of security consultations among Seoul, Tokyo, and Washington. In the near term, Chinese leaders must consider the potential for instability or war on the neighboring Korean Peninsula in the event North Korea were to retaliate against these new measures. And over the long term, Beijing is likely to be concerned about the effects of this increased cooperation on its own military position in the region. What is true for China's North Korea policy is also true for its policy toward Iran. China is a net importer of energy with a large export sector that would be greatly affected by sudden, sharp price increases in energy, which would raise the costs of both production and shipping. This reality should affect its calculus with Iran, a major destabilizing force in the energy-rich Middle East and Persian Gulf -- and one that would likely become only more destabilizing if its regime gained the added confidence of a nuclear deterrent. Moreover, Israel considers the development of Iranian nuclear weapons an existential threat; it appears quite probable that if diplomacy fails to alter the current trajectory of Iran's nuclear ambitions, Israel will eventually take military action against Iran. Such a turn of events could lead to massive instability in the region, threatening the free flow of energy on which China and all other net importers rely. It is therefore in Beijing's interest to work more closely with Washington and its allies -- all of which would like to see stable energy markets -- to craft diplomatic approaches that might prevent such an outcome. PERSUASION, NOT CONTAINMENT There may be some cause for optimism, however restrained, regarding Beijing's recent turn toward a more conservative and reactive foreign policy. Fortunately for the United States and its allies, there is an active debate among elites in Beijing about the costs and benefits of the country's current policy line (according to my interlocutors, this debate is most heated about China's recent policies toward North Korea). Washington and other governments have an opportunity to shape the international environment in a way that can assist those Chinese elites who are espousing creative, constructive, and assertive policies while undercutting those who advocate reactive, conservative, and aggressive ones. The best way to do this is to consistently offer China an active role in multilateral cooperative efforts -- and without displaying jealousy of the newfound influence China might gain by accepting this role. At the same time, the United States and its allies need to emphasize that they will react to the challenges posed by North Korea or Iran with or without Chinese cooperation; China's interests will suffer if it obstructs those efforts or even stands on the sidelines. Such an approach has historically been successful. In the mid-1990s, Beijing similarly alienated many of its neighbors and the United States, by bullying Taiwan, adopting a muscular posture toward the Philippines in the South China Sea, and overreacting to enhanced U.S. security cooperation with Japan. But a combination of wise and firm policies by Washington and its partners (for example, the "Nye Initiative" to strengthen the U.S.-Japanese alliance and the dispatch of two aircraft carrier battle groups to the waters off Taiwan during a crisis in 1996) helped foster the ascendance of more moderate thinking in Beijing. By 1997, Chinese diplomacy was on a much more positive track. There is no reason to believe that a similar process cannot occur today -- but given the perceptions about China's increased power and potential domestic instability discussed above, the challenges now may be greater than they were in the 1990s. Although some in Washington and many in Beijing grossly exaggerate when they say that the United States has "returned to Asia" under Obama, there is no question that China and other regional players have noticed that Obama and his principal advisers -- Secretary of State Clinton, Secretary of Defense Robert Gates, and National Security Adviser Thomas Donilon -- have traveled often to the region, including in November 2010, when Obama and Clinton went on separate multination tours of Asia. More concretely, the U.S.-South Korean military exercises in the Yellow Sea following the November attack by North Korea and the trilateral meeting of Japanese, Korean, and U.S. security officials in Washington demonstrated that the United States and its partners have diplomatic and security options even without China's active cooperation. Beijing does not like such initiatives -- all the more reason for China to return to a more creative, assertive, and reassuring set of policies to solve the problems that caused the United States and its allies to react this way in the first place. The Obama administration should continue to strengthen U.S. relationships in Asia. Such an agenda is a good idea under any circumstances. But especially when China's policies are damaging to everyone's interests -- including its own -- Washington should underscore that even though it would prefer to address problems with Beijing's active cooperation, there are other, less attractive options available. This is persuasion and not containment; China is still being asked to play a larger, not smaller, role both regionally and globally. In addition, Washington should portray the prospect of cooperation not as a request based on U.S. national interests but as a means through which Beijing can pursue its own interests and, at the same time, reassure other actors. The fact that the term "core national interest" has not been used by a high-level U.S. official since the 2009 joint statement suggests that U.S. government officials already understand the counterproductive psychology that such terms foster in China's strategic thinking. Instead, U.S. diplomacy toward China has appropriately emphasized the pursuit of mutual interests while recognizing areas of serious difference. Finally, as it has in the past, Washington should publicize and laud the examples of past and current Chinese cooperation with the international community in addressing global problems. In 2010, the Obama administration's policies in Asia had a positive, albeit limited, effect. Despite ongoing differences between China and the United States -- over North Korea, Chinese currency valuation, and the U.S. Federal Reserve's "quantitative easing" policy -- Beijing nonetheless sought to improve bilateral relations in the lead-up to President Hu's visit to the United States in January of this year. For example, Beijing allowed for the restoration of military-to-military dialogue in the fall of 2010 after a nine-month hiatus caused by China's disapproval of U.S. arms sales to Taiwan earlier in the year, and China's minister of defense, General Liang Guanglie, invited Defense Secretary Gates to visit China the same month Hu traveled to Washington. There are also signs that China is beginning to reach out to ASEAN member states to address ongoing security concerns that were exacerbated by Beijing's bullying at the last ASEAN Regional Forum. Finally, China may have played a constructive role in reining in North Korea after it threatened South Korea in response to a South Korean artillery exercise off Yeonpyeong Island in December 2010, just a month after North Korea's attack on the island: as of this writing, no retaliation had occurred. That is the good news. What is less commonly noted, however, is that the same factors that have caused China's recent tensions with its neighbors and the United States have produced an arguably stickier and more consequential long-term problem: they have retarded, if not halted outright, what was a very positive and much-needed shift in Chinese foreign policy during the last two years of the Bush administration. During that period, Beijing showed a willingness to soften some of its traditional prohibitions on an assertive foreign policy so as to assist the international community in dealing with problems faced by all global actors, including China. Even if U.S.-Chinese ties improve and China reverses the negative trends in its regional diplomacy, Washington may still be unsatisfied if the shift does not include enhanced Chinese participation in international efforts to tackle global problems, especially proliferation in North Korea and Iran.

**No impact- conflicting interests are inevitable but economic interdependence and Chinese military weakness prevent escalation**

**Zhou 4/14 (**Jinghao Zhou is an associate professor at Hobart and William Smith Colleges in New York, “US-China rivalry still a mismatch”, http://www.atimes.com/atimes/China/MD14Ad01.html)

For China, to challenge US dominance may be economically self-destructive, and whenever possible, Beijing avoids public confrontation with Washington. The Chinese government recently issued the Defense White Paper, which, once again, pledges that China will never seek hegemony or engage in military expansion. A long time for China to catch up A recent survey shows many Americans see China's growing economic power as a threat to the US. China is the fastest growing economy in the world with its gross domestic product (GDP) growing 10.3% annually in past three decades. If the Chinese economy continues to grow at such a pace, China will surpass the US in the next couple of decades. But the question is whether China will be able to maintain such high-speed growth. Although many scholars agree that the Chinese economy will continue to grow at 8% or higher annually in the next 5-10 years, David Beim, a professor with Columbia Business School, believes that the golden age of Chinese super-growth is nearing an end. [7] The Asian Development Bank has predicted that that China's growth rates in the next two decades will be only about half of what they were in the last 30 years. [8] The Economist recently predicted that China will overtake the United States as the world's largest economy within the next 10 years. According to the Economist, if you double expected American growth from 2.5% per year to 5% per year, you push the key date back from 2019 to 2022. If you slow China's growth to 5% annually, you delay the transition to 2028. [9] However, this prediction uses a simple mathematics model without taking social factors into consideration. At the present time, social protests in China are increasingly growing. Wei wen is growing more and more costly. Social instability may slow growth. While China's GDP ranks as the second-highest in the world, it's still just about one-third of the US's. And China's per capita GDP is only some $4,500, about a tenth of the US, ranking below 100th in the world. In this sense, China is still an emerging economy. Moreover, of China's 1.3 billion population, about 800 million still live in rural areas and some 20 million live in poverty. In this sense, China is still a developing country and it may take a long time, if not a century, to really become an economic power. Interestingly, more and more American people feel that China is catching up to the US. According to a survey conducted by the Washington-based Pew Research Center for the People and the Press in 2011, about 47% of participants say China, not the US, is the world's top economic power, while 31% continue to name the US. The result of the survey obviously contradicts the reality, though it shows the American people's uneasiness with China's growing power. They worry that the US is at risk of falling behind in a global battle for influence with China. Secretary of State Hillary Clinton has admitted that the US is struggling to hold its role as global leader. [10] Policy of defense Ever since the Great Wall was built more than 2,000 years ago, China's military policy has largely revolved around defense. So much so that Western powers had to use gun ships to knock out the doors of the Middle Kingdom in the mid-19th century. Yet Washington is concerned about the development of China's military. The 2010 Report to Congress of the US-China Economic and Security Review Commission pointed out that China has accelerated military modernization, including foreign purchases and indigenous production of high-technology equipment. No doubt, China's military budget has rapidly grown. In 2010, the defense budget was 532.115 billion yuan (US$81.3 billion), while this year it is expected to hit 601 billion yuan. Western governments are wondering why China has accelerated its military modernization since it faces no obvious threat. After visiting China in 2010, US Defense Secretary Robert Gates concluded that China's military development will challenge US military power in Asia and may challenge the US military operation worldwide. That China has sped up its military modernization is a fact. But this does not prove China has any intention of challenging US dominance. This kind of thinking displays a Cold War mentality, as if simply owning a strong military is a threat, then the US is the biggest threat to every country in the world. China spends one-eighth of the US's military budget, if one accepts the official figures. The US has the largest defense budget in the world, accounting for 47% of the world's total military spending. There are about 154 countries with a US military presence and 63 countries with US military bases and troops. By contrast, China does not have a single military base in any foreign country. Even now, the Chinese military lags far behind the US and European countries. Although China has nuclear-weapons capability, the Chinese army is ill-equipped. China does not have a large navy or a single aircraft carrier. China's air force does not have any long-range bombers. Chinese Defense Minister Liang Guanglie told Gates that China is not an advanced military country and poses no threat to the rest of the world. This said, China needs to increase transparency of its military expansion, to let the world including the US know its military strategic intent, so as to assure the world that its rise is really "peaceful". China's military expansion will inevitably upset the existing balance of global forces with US in dominance. It is common sense that a nation's strength must be supported by military power. China needs a stronger military to protect its growing global interests. Dispatching naval warships to escort Chinese commercial ships off Somalia and help evacuate Chinese nationals in Libya is a good example. China could not have taken such actions 20 or 30 years ago when its military was rather weak. Another major reason for China to modernize its military force is to protect its territorial integrity, especially to prevent Taiwan from actually separating from China. If Washington sees this as a potential threat to US, then it has to gain a better understanding of Chinese people's feelings. The majority of the Chinese people clearly remember that China was bullied and humiliated by Western powers for a century. Patriotism in China is growing increasingly strong. Nevertheless, the US has kept selling weapons to Taiwan. The Chinese government has no choice but to elevate its military capabilities. The reunification of Taiwan with the mainland is the common will of the majority of the Chinese people. While China's trade surplus exceeded $21 billion in 2010, its cultural trade deficit is growing. According to a China However, this is a misconception. A democratic government does not necessarily make peace with another democratic one. For example, there are many conflicts between the US and other democracies. On the other hand, a democracy could make friends with a non-democracy, such as the US and Saudi Arabia. So there is no reason why US could not co-exist with China, non-democratic as it may be for the time being. To be sure, different nations have different national interests; and every nation puts its national interests as top priority. **Conflicts of interest between different nations are very normal. Benign economic and cultural competition between different nations is healthy.** China is no longer a typical communist country; and China today is more open than 30 years ago. The CCP is willing to tolerate different opinions to some extent. Although it is proper to criticize China for its human-rights violations, the West should not ignore the substantial progress China has made since 1978. China's political reform is pressing but it cannot be completed overnight. The CCP remains a powerful and pervasive influence in every sphere of the Chinese society. There is no other opposition party in China to compete with it. For the CCP to dissolved before the Chinese political system is successfully restructured could mean chaos. The best way for China is to reform the political system within the current political system. It is necessary to continue to use the CCP as the main vehicle to drive China toward the future. John and Doris Naisbitts believe China has a different type of democracy than Western nations to deter an overly quick rush to judgment of China using Western values. [15] The Chinese government has learned from the collapse of the former Soviet Union, the June 4 Tiananmen crackdown in 1989, and the ongoing popular uprisings roiling autocratic governments in the Middle East, so the CCP will approach political reform cautiously in order to maintain social stability. It is expected that the CCP will continue to resist political changes, even though this could delay China becoming a world superpower. China is a huge country with a massive population and 56 ethnic groups, making it very difficult to govern. Any attempt to launch a "Jasmine" revolution in China is not only unrealistic but could also harm China's national interests. A fragile China simply could not afford a violent Jasmine revolution. An unrealistic bid for democracy would waste political resources and sacrifice the interests of the majority of Chinese people. [16] China's political reform will be a very slow process. The US and the West do not have any other choice but to patiently work with China while continuing to do business with it. In reality, Western political leaders often push aside political disagreements in favor of maintaining the crucial economic relationship, because many Westerners see economic ties with China as a means of binding them together.

# AT South China Sea

**China won’t escalate fights with Japan or in the South China Sea**

**Spitzer 6/11**/12 (Kirk, “U.S. Takes A Pass — For Now — On China Sea Disputes” TIME, June 11 2012, <http://battleland.blogs.time.com/2012/06/11/u-s-takes-a-pass-for-now-on-china-sea-disputes/#ixzz1zTcVBswz>)//MR

For its part, **China has played down the dispute with Japan in recent months, and has promised that it won’t interfere with anyone’s navigation rights in the South China Sea**. And **it would seem foolish even to try.** For all its double-digit defense spending, **China is still many years away from being able to challenge U.S. military power, and** no doubt **knows that. Nor would it** seem to **have much to gain; China’s economy is** thoroughly **dependent on sea-going trade and cutting off any shipping would mean cutting off its own, as well.**

**Conflicts have been de-escalated—China withdrew vessels**

**Perlez 6/18**/12 (Jane, “Philippines and China Ease Tensions in Rift at Sea” The New York Times, June 18 2012, http://www.nytimes.com/2012/06/19/world/asia/beijing-and-manila-ease-tensions-in-south-china-sea.html)//MR

**Chinese fishing boats near the disputed Scarborough Shoal** off the Philippine coast **were heading back to port** on Monday **after Philippine vessels withdrew from the same area in an easing of tensions in the South China Sea**, the Chinese Foreign Ministry said. **The pullback**, made necessary by the arrival of typhoon season, **had been expected after two months of conflicting claims** over ownership of the shoal, about 140 miles west of Luzon, the main island of the Philippines. The **underlying antagonism** between China and the Philippines **over disputed islands in the South China Sea remained unresolved, but diplomats said they hoped the absence of the vessels would lead to a cooling-off period. “We hope there will continue to be an easing in the situation, and** hope **bilateral cooperation will recover** and be safeguarded,” a Chinese Foreign Ministry spokesman, Hong Lei, said Monday at a regular news briefing.

**China and Vietnam won’t escalate violence over natural gas**

**Keyuan 9** – Harris Chair Professor in International Law at the University of Central Lancashire, United Kingdom (Zou, “Maritime Conflict and Cooperation in Sino-Vietnamese Relations” University of Central Lancashire, April 27 2009, http://www.uclan.ac.uk/ahss/lancashire\_law\_school/maritime\_conflict.php)//MR

**The relationship between China and Vietnam is** generally **characterized as "love and hate"** relationship, **but history shows that the basis for** the **bilateral co-operation is profound in terms of their similarities in cultures, languages, traditions, social infrastructures, etc.** For this reason, **it is unlikely that the two sides would resort to the use of force to resolve their disputes.** Rather**, a consensus has been reached by the two countries to settle their disputes according to the established international norms including the UN Convention on the Law of the Sea. China and Vietnam have established the negotiation mechanism for maritime issues with a view to seeking a long-term dispute solution** acceptable to both sides. **They have agreed to maintain the stability in the South China Sea and discuss** out an appropriate model for **joint development** there. It is well perceived that **the two sides will continue to carry out various cooperative activities in less sensitive areas such as** the management of fishery resources, oil and **gas exploration and development**, marine environmental protection, etc., but for the disputes over the Paracel Islands and Spratly Islands, there is no sign so far that China and Vietnam can find a solution to it in the years to come. In this sense, it is concluded that while maritime cooperation can enhance the friendship of the two countries, conflict in maritime interests particularly concerning the sovereignty of islands will disrupt the development of the Sino-Vietnamese bilateral relationship from time to time.

# AT East China Sea

**China and Japan are promoting cooperation over energy insecurity**

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**In reality**, however, **while China and Japan have competed for resources that are viewed as important for** national **energy security, they have prevented the competition from escalating into a conflict.** Moreover, **the** two **governments are** now **trying to find common interests in energy issues where they can cooperate.** For example, Japan and China engaged in an intense bidding competition for the route of a Russian oil pipeline, but it was eventually resolved after Russia decided to build both routes and Japan conceded that the Chinese branch would be built first. Currently, both China and Japan import East Siberian oil delivered via the newly built East Siberia Pacific Ocean (ESPO) pipeline. **The Sino-Japanese dispute over the exploration of gas in the East China Sea turned dangerous** when Chinese and Japanese military forces confronted each other near the disputed gas fields, **but after many rounds of consultations the two sides reached an agreement to jointly develop a new gas field in the disputed area and to allow the participation of Japanese firms in Chinese development of the Chunxiao gas field.** Furthermore, **Japan and China have held a number of high-level bilateral dialogues and business forums on energy cooperation in areas such as energy conservation and environmental protection.**

**Bilateral relations between China and Japan check resource wars**

**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

First, **the bilateral relationship between China and Japan includes political, economic, military, and social relations** between the two countries. **The tone and tenor of the bilateral relationship set the parameters for the level of energy** competition and **cooperation** between the two countries. **If the overall bilateral relationship is good, this becomes an incentive** for both sides **to avoid the escalation of resource competition. Thus, they might** deemphasize the competitive parts of their materialistic calculations and instead **focus on mutual interests. Sound bilateral relationship** also fosters an environment conducive to **dialogue and cooperative measures for energy projects. In bad bilateral relations** characterized by distrust and little communication**, energy competition is likely to intensify** because both sides are likely to conduct their cost-benefit calculations in more zero-sum terms. Any concession could face backlash from the domestic population that the government gave in to the other side, so the government might take a harder line. This could feed back into further deterioration of the bilateral relationship. **However, both governments are careful not to do this, because it is much more beneficial to have a stable bilateral relationship**. The level of bilateral relationship is assessed by government reports, statements by high-level officials, opinion polls, news reporting of bilateral issues, and economic data on trade and investment.

**East Asian conflict unlikely—informal networks, high relations, and economic interdependence.**

**Weissmann 10** “THE SOUTH CHINA SEA CONFLICT AND SINO-ASEAN RELATIONS: A STUDY IN CONFLICT PREVENTION AND PEACE BUILDING” Mikael Weissmann (Research Fellow at the Swedish Institute of International Affairs in Stockholm, Sweden. He is also a Research Associate at the East Asian Peace program at Uppsala University, Sweden. He has been a visiting fellow at the University of Warwick, UK, as well as Peking, Renmin, and China Foreign Affairs University, China. He has done extensive fieldwork in East Asia and has published on conflict prevention and peacebuilding in the East Asian region.) ASIAN PERSPECTIVE, Vol. 34, No. 3, 2010, pp. 35-69. http://search.proquest.com.proxy.lib.umich.edu/pais/docview/867055995/fulltextPDF/137BCE3A4BD312BFA9/1?accountid=14667

The underlying presumption in this study—that different informal processes, and interrelated mechanisms, constitute at least part of the explanation for the relative peace—is based on three observations. First, there is an absence of any security organization or other formalized conflict management mechanism to prevent conflict escalation and/or build peace. This indicates that there needs to be a more informal mechanism in place. Second, the importance of informality and informal processes is widely acknowledged. **The Asian states are enmeshed in informal and personalized networks in all spheres**.5 On the international level**, the importance of informality is not only underscored by the regional preference for non-legalistic institutions. The region-wide acceptance of the “ASEAN Way” as the diplomatic norm, and the importance given to interpersonal interaction between leaders,** also illustrate the role of informality. Third, there is research focusing on peace and conflict that points to the importance of informality and informal processes, such as informal networks.6 **Peace is understood not merely as the absence of war, but as a continuum ranging from crisis, through unstable and stable peace, to durable peace. A durable peace is a situation where interparty relations have reached a high level of cooperation and reciprocity, and war is unthinkable**. With stable peace, r**elations have transcended the stage where war does not happen and moved into a situation where war is perceived as something that will not happen,** at least in people’s minds.7 At the unstable peace level, tensions and suspicions between the parties are so high that peace no longer seems guaranteed and the parties perceive each other as enemies. Tensions and suspicion run high, but violence is either absent or only sporadic.8 At the crisis level, the risk of war is imminent and military action is the preferred, or likely, option. There may be sporadic utterances of violence between the parties, but no regular, organized and open violence. When applying the peace continuum to the SCS conflict, it becomes clear that the conflict has been transformed since the early 1990s, when it was best characterized as a very fragile, unstable peace. At the time, military forces were seizing claims and a conflict between the Philippines and China over the Mischief Reef in 1995 stopped short of military conflict mainly because of the unequal power of the two. Since then the conflict has moved toward a more stable peace**. Despite tensions and unresolved underlying incompatibilities in the SCS, war is considered most unlikely as the SCS conflict cannot be separated from the overarching Sino-ASEAN relations**. Since the early 1990s, **peaceful relations between China and ASEAN have been institutionalized, and there has been a strong regional integration process that links the two and makes them economically interdependent**. Thus, as a manifestation of the latter**, the conflict is tilting toward a stable peace where war is very unlikely**, rather than toward an unstable peace. The process that creates peace is understood as dual, including both “the prevention of conditions conductive to violence” and “the promotion of conditions conducive to peace.”9 The former roughly equates to preventing negative relations between groups, and the latter translates into the promotion of positive intergroup relations. In this article, the terms “conflict prevention” and “peace building” are used to capture the two aspects**. Conflict prevention covers the prevention of negative relations from escalating, while peace building encompasses the development of positive relations between states**. In general, conflict prevention covers mechanisms with impact over a relatively short term, while peace building concerns the building of a longer-term peace.

# Modernization DA

**Energy insecurity prevents china from accelerating military growth**

**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

In terms of energy security, China acts just like any rational actor. Its energy policies will be driven to achieve security of supply, to manage demand, and to mitigate price effects. Yet **the CCP appears slow to recognize that energy**/environmental **policies should not be used as a**nother **tool for economic growth.** With limited resources, **Beijing has to balance economic and military growth to mitigate energy insecurity.** And the Chinese people want a vibrant economy and secure energy/environmental/water supplies. According to a recent survey, Chinese citizens have high expectations for their local economy, 59 and energy users have attached high importance to energy/environment/ water securities. 60 **In light of its current energy dilemmas, China may not be able to afford to rapidly develop both its economy and its military.** Furthermore, **Beijing needs to balance the trade-off between cheap and clean energy, as well as tread carefully between ensuring undisrupted oil supplies and managing foreign relations.** Issues related to energy supply, demand, and price will continue to take center stage for Chinese policy makers but they will not be the sole driver of foreign policy.

[Plan solves china’s energy security]

**Chinese growth is key to their weapons modernization**

**Perkins 6** – H.H. Burbank Research Professor of Political Economy at Harvard University (Dwight, “Military Modernization in an Era of Uncertainty” Strategic Asia 2005–06, http://www.nbr.org/publications/strategic\_asia/pdf/Preview/SA05/SA05\_ChinaBudget\_preview.pdf)

**If China does manage to sustain high economic growth rates**, not only will such growth strengthen political stability, but **Beijing would** also **find it easier to expand China’s military expenditures**. Over the long term, **China will** likely **strive to become a world military power commensurate with the country’s size, population, and role in world history. Slow growth will** not necessarily stop this military expansion (Beijing can to some degree raise the share of GDP allocated to the military), but would certainly **make this expansion much more difficult.** Attempts to forecast China’s future economic growth rate, therefore, are not simply exercises designed to provide information to investors on the Shanghai and Shenzhen stock exchanges. **Having a** reasonably reliable **estimate of China’s future economic growth** prospects **is** also **essential for any informed discussion of China’s future domestic stability and the likelihood of continued international stability in Asia** more broadly.

**This Tanks US Leadership in Asia—leads to Asian war**

**Global NATO 6** (pg. http://www.globalnato.org/index.php?option=com\_content&view=article&id=398:chinas\_military\_modernization&catid=122:military\_news&Itemid=56)

**The modernization of the PLA is a tangible manifestation of China’s growing national power.** The 2006 *Quadrennial Defense Review* cautions that, **of the** major and emerging g**reat powers, China has the greatest potential to compete militarily with the U**nited **S**tates and fled disruptive military technologies that could, over time, offset traditional U.S. military advantages.77 Regardless of China’s intent today, **powerful and modernized armed forces provide China with military capabilities that the U**nited **S**tates **must consider.** With near-term focus on Taiwan, PLA **modernization efforts appear to be aimed** specifically **at combating U.S. maritime forces that might be called to defend Taiwan and at denying the U**nited **S**tates **access to regional military bases** in locations such as Japan and South Korea. Many of China’s new weapon systems are applicable to a range of operations beyond the Taiwan Strait. The **expanding capability of China’s military power threatens not only Taiwan—and therefore the U**nited **S**tates—**but also** challenges **U.S**. friends and **allies throughout the Western Pacific, Southeast Asia, and South Asia**.78 **Unchecked or disproportionate, China’s military modernization could lead to a major reordering of the balance of power throughout the Pacific.**

**Asian conflict escalates to global nuclear war  
Dibb 1 – Professor @ Australian National University**

Paul, Professor @ Australian National University, Strategic Trends: Asia at a Crossroads, Naval War College Review, Winter, Proquest

The areas of **maximum danger** and instability in the world today **are in Asia**, followed by the Middle East and parts of the former Soviet Union. The strategic situation in Asia is more uncertain and potentially threatening than anywhere in Europe. Unlike in Europe, it is possible to envisage war in Asia involving the major powers: remnants of Cold War ideological confrontation still exist across the Taiwan Straits and on the Korean Peninsula; India and Pakistan have nuclear weapons and ballistic missiles, and these two countries are more confrontational than at any time since the early 1970s; in Southeast Asia, Indonesia-which is the world's fourth-largest country-faces a highly uncertain future that could lead to its breakup. The Asia-Pacific region spends more on defense (about $150 billion a year) than any other part of the world except the United States and Nato Europe. China and Japan are amongst the top four or five global military spenders. Asia also has more nuclear powers than any other region of the world. Asia's security is at a crossroads: the region could go in the direction of peace and cooperation, or it could slide into confrontation and military conflict. There are positive tendencies, including the resurgence of economic growth and the spread of democracy, which would encourage an optimistic view. But there are a number of negative tendencies that must be of serious concern. There are deep-seated historical, territorial, ideological, and religious differences in Asia. Also, the region has no history of successful multilateral security cooperation or arms control. Such multilateral institutions as the Association of Southeast Asian Nations and the ASEAN Regional Forum have shown themselves to be ineffective when confronted with major crises.

# \*\*\*Neg

# 1NC Warming

**1. Greater reliance on natural gas is a better and quicker solution to warming and pollution**

**Natural Gas.org 04** (“Natural Gas and the Environment,” http://www.naturalgas.org/environment/naturalgas.asp) // JMP

Pollutants emitted in the United States, particularly from the combustion of fossil fuels, have led to the development of many pressing environmental problems. Natural gas, emitting fewer harmful chemicals into the atmosphere than other fossil fuels, can help to mitigate some of these environmental issues. These issues include: Greenhouse Gas Emissions Smog, Air Quality and Acid Rain Industrial and Electric Generation Emissions Pollution from the Transportation Sector - Natural Gas Vehicles Greenhouse Gas Emissions Global warming, or the 'greenhouse effect' is an environmental issue that deals with the potential for global climate change due to increased levels of atmospheric 'greenhouse gases'. There are certain gases in our atmosphere that serve to regulate the amount of heat that is kept close to the Earth's surface. Scientists theorize that an increase in these greenhouse gases will translate into increased temperatures around the globe, which would result in many disastrous environmental effects. In fact, the Intergovernmental Panel on Climate Change (IPCC) predicts in its 'Third Assessment Report' released in February 2001 that over the next 100 years, global average temperatures will rise by between 2.4 and 10.4 degrees Fahrenheit. The principle greenhouse gases include water vapor, carbon dioxide, methane, nitrogen oxides, and some engineered chemicals such as cholorofluorocarbons. While most of these gases occur in the atmosphere naturally, levels have been increasing due to the widespread burning of fossil fuels by growing human populations. The reduction of greenhouse gas emissions has become a primary focus of environmental programs in countries around the world. One of the principle greenhouse gases is carbon dioxide. Although carbon dioxide does not trap heat as effectively as other greenhouse gases (making it a less potent greenhouse gas), the sheer volume of carbon dioxide emissions into the atmosphere is very high, particularly from the burning of fossil fuels. In fact, according to the EIA in its report 'Emissions of Greenhouse Gases in the United States 2000', 81.2 percent of greenhouse gas emissions in the United States in 2000 came from carbon dioxide directly attributable to the combustion of fossil fuels. Because carbon dioxide makes up such a high proportion of U.S. greenhouse gas emissions, reducing carbon dioxide emissions can play a huge role in combating the greenhouse effect and global warming. The combustion of natural gas emits almost 30 percent less carbon dioxide than oil, and just under 45 percent less carbon dioxide than coal. One issue that has arisen with respect to natural gas and the greenhouse effect is the fact that methane, the principle component of natural gas, is itself a very potent greenhouse gas. In fact, methane has an ability to trap heat almost 21 times more effectively than carbon dioxide. According to the Energy Information Administration, although methane emissions account for only 1.1 percent of total U.S. greenhouse gas emissions, they account for 8.5 percent of the greenhouse gas emissions based on global warming potential. Sources of methane emissions in the U.S. include the waste management and operations industry, the agricultural industry, as well as leaks and emissions from the oil and gas industry itself. A major study performed by the Environmental Protection Agency (EPA) and the Gas Research Institute (GRI) in 1997 sought to discover whether the reduction in carbon dioxide emissions from increased natural gas use would be offset by a possible increased level of methane emissions. The study concluded that the reduction in emissions from increased natural gas use strongly outweighs the detrimental effects of increased methane emissions. Thus the increased use of natural gas in the place of other, dirtier fossil fuels can serve to lessen the emission of greenhouse gases in the United States.

**2. Natural gas industry is committed to environmentally safe production**

**Natural Gas.org 04** (“Natural Gas and the Environment,” http://www.naturalgas.org/environment/naturalgas.asp) // JMP

Natural gas is the cleanest of the fossil fuels, and thus its many applications can serve to decrease harmful pollution levels from all sectors, particularly when used together with or replacing other fossil fuels. The natural gas industry itself is also committed to ensuring that the process of producing natural gas is as environmentally sound as possible. Learn about the natural gas industry and the environmental effects of natural gas production.

**3. Can’t solve warming**

**Hamilton 10** – Professor of Public Ethics @ ANU

Clive Hamilton, Professor of Public Ethics in Australia, 2010, “Requiem for a Species: Why We Resist the Truth About Climate Change,” pg 27-28

The conclusion that, **even if we act promptly and resolutely**, the world is on a path to reach 650 ppm is almost too frightening to accept. That level of greenhouse gases in the atmosphere will be associated with warming of about 4°C by the end of the century, well above the temperature associated with tipping points that would trigger further warming.58 So it seems that even with the most optimistic set of assumptions—the ending of deforestation, a halving of emissions associated with food production, global emissions peaking in 2020 and then falling by 3 per cent a year for a few decades—**we have no chance** of preventing emissions rising well above a number of critical tipping points that will spark uncontrollable climate change. The Earth's climate would enter a chaotic era lasting thousands of years before natural processes eventually establish some sort of equilibrium. Whether human beings would still be a force on the planet, or even survive, is a moot point. One thing seems certain: there will be far fewer of us. These conclusions arc alarming, co say the least, but they are not alarmist. Rather than choosing or interpreting numbers to make the situation appear worse than it could be, following Kevin Anderson and Alice Bows 1 have chosen numbers that err on the conservative side, which is to say numbers that reflect a more buoyant assessment of the possibilities. A more neutral assessment of how the global community is likely to respond would give an even bleaker assessment of our future. For example, the analysis excludes non-CO2, emissions from aviation and shipping. Including them makes the task significantly harder, particularly as aviation emissions have been growing rapidly and are expected to continue to do so as there is no foreseeable alternative to severely restricting the number of flights.v' And any realistic assessment of the prospects for international agreement would have global emissions peaking closer to 2030 rather than 2020. The **last chance to reverse the trajectory of global emissions** by 2020 **was forfeited** at the Copenhagen climate conference in December 2009. As a consequence, a global response proportionate to the problem was deferred for several years.

**4. No warming and it’s not anthropogenic—the Earth is cooling—recent studies prove. Also their authors are bias**

**Ferrara 5/31** Forbes: Staff Writer in public policy, Cites Recent ICCC Conference (Peter, May 31, 2012, “Sorry Global Warming Alarmists, The Earth Is Cooling,” <http://www.forbes.com/sites/peterferrara/2012/05/31/sorry-global-warming-alarmists-the-earth-is-cooling/)//DR>. H

Climate change itself is already in the process of definitively rebutting climate alarmists who think human use of fossil fuels is causing ultimately catastrophic global warming. That is because natural climate cycles have already turned from warming to cooling, global temperatures have already been declining for more than 10 years, and global temperatures will continue to decline for another two decades or more.

That is one of the most interesting conclusions to come out of the seventh International Climate Change Conference sponsored by the Heartland Institute, held last week in Chicago. I attended, and served as one of the speakers, talking about The Economic Implications of High Cost Energy.

The conference featured serious natural science, contrary to the self-interested political science you hear from government financed global warming alarmists seeking to justify widely expanded regulatory and taxation powers for government bodies, or government body wannabees, such as the United Nations. See for yourself, as the conference speeches are online.

What you will see are calm, dispassionate presentations by serious, pedigreed scientists discussing and explaining reams of data. In sharp contrast to these climate realists, the climate alarmists have long admitted that they cannot defend their theory that humans are causing catastrophic global warming in public debate. With the conference presentations online, let’s see if the alarmists really do have any response.

The Heartland Institute has effectively become the international headquarters of the climate realists, an analog to the UN’s Intergovernmental Panel on Climate Change (IPCC). It has achieved that status through these international climate conferences, and the publication of its Climate Change Reconsidered volumes, produced in conjunction with the Nongovernmental International Panel on Climate Change (NIPCC).

Those Climate Change Reconsidered volumes are an equivalently thorough scientific rebuttal to the irregular Assessment Reports of the UN’s IPCC. You can ask any advocate of human caused catastrophic global warming what their response is to Climate Change Reconsidered. If they have none, they are not qualified to discuss the issue intelligently.

Check out the 20th century temperature record, and you will find that its up and down pattern does not follow the industrial revolution’s upward march of atmospheric carbon dioxide (CO2), which is the supposed central culprit for man caused global warming (and has been much, much higher in the past). It follows instead the up and down pattern of naturally caused climate cycles.

For example, temperatures dropped steadily from the late 1940s to the late 1970s. The popular press was even talking about a coming ice age. Ice ages have cyclically occurred roughly every 10,000 years, with a new one actually due around now.

In the late 1970s, the natural cycles turned warm and temperatures rose until the late 1990s, a trend that political and economic interests have tried to milk mercilessly to their advantage. The incorruptible satellite measured global atmospheric temperatures show less warming during this period than the heavily manipulated land surface temperatures.

Central to these natural cycles is the Pacific Decadal Oscillation (PDO). Every 25 to 30 years the oceans undergo a natural cycle where the colder water below churns to replace the warmer water at the surface, and that affects global temperatures by the fractions of a degree we have seen. The PDO was cold from the late 1940s to the late 1970s, and it was warm from the late 1970s to the late 1990s, similar to the Atlantic Multidecadal Oscillation (AMO).

In 2000, the UN’s IPCC predicted that global temperatures would rise by 1 degree Celsius by 2010. Was that based on climate science, or political science to scare the public into accepting costly anti-industrial regulations and taxes?

Don Easterbrook, Professor Emeritus of Geology at Western Washington University, knew the answer. He publicly predicted in 2000 that global temperatures would decline by 2010. He made that prediction because he knew the PDO had turned cold in 1999, something the political scientists at the UN’s IPCC did not know or did not think significant.

Well, the results are in, and the winner is….Don Easterbrook. Easterbrook also spoke at the Heartland conference, with a presentation entitled “Are Forecasts of a 20-Year Cooling Trend Credible?” Watch that online and you will see how scientists are supposed to talk: cool, rational, logical analysis of the data, and full explanation of it. All I ever see from the global warming alarmists, by contrast, is political public relations, personal attacks, ad hominem arguments, and name calling, combined with admissions that they can’t defend their views in public debate.

Easterbrook shows that by 2010 the 2000 prediction of the IPCC was wrong by well over a degree, and the gap was widening. That’s a big miss for a forecast just 10 years away, when the same folks expect us to take seriously their predictions for 100 years in the future. Howard Hayden, Professor of Physics Emeritus at the University of Connecticut showed in his presentation at the conference that based on the historical record a doubling of CO2 could be expected to produce a 2 degree C temperature increase. Such a doubling would take most of this century, and the temperature impact of increased concentrations of CO2 declines logarithmically. You can see Hayden’s presentation online as well.

Because PDO cycles last 25 to 30 years, Easterbrook expects the cooling trend to continue for another 2 decades or so. Easterbrook, in fact, documents 40 such alternating periods of warming and cooling over the past 500 years, with similar data going back 15,000 years. He further expects the flipping of the ADO to add to the current downward trend.

But that is not all. We are also currently experiencing a surprisingly long period with very low sunspot activity. That is associated in the earth’s history with even lower, colder temperatures. The pattern was seen during a period known as the Dalton Minimum from 1790 to 1830, which saw temperature readings decline by 2 degrees in a 20 year period, and the noted Year Without A Summer in 1816 (which may have had other contributing short term causes).

Even worse was the period known as the Maunder Minimum from 1645 to 1715, which saw only about 50 sunspots during one 30 year period within the cycle, compared to a typical 40,000 to 50,000 sunspots during such periods in modern times. The Maunder Minimum coincided with the coldest part of the Little Ice Age, which the earth suffered from about 1350 to 1850. The Maunder Minimum saw sharply reduced agricultural output, and widespread human suffering, disease and premature death.

**5. 3 periods of rapid warming show no extinctions- models are flawed guesswork**

**NIPCC 11** (Nongovernmental International Panel on Climate Change, “2011 Interim Report from the Nongovernmental International Panel on Climate Change,” http://nipccreport.org/reports/2011/2011report.html)

The first period they examined was the Eocene Climatic Optimum (53–51 million years ago), when the atmosphere‘s CO2 concentration exceeded 1,200 ppm and tropical temperatures were 5–10°C warmer than modern values. Yet far from causing extinctions of the tropical flora (where the data are best), the four researchers report ―all the evidence from low-latitude records indicates that, at least in the plant fossil record, this was one of the most biodiverse intervals of time in the Neotropics.‖ They also note ―ancestors of many of our modern tropical and temperate plants evolved ...when global temperatures and CO2 were much higher than present ... indicating that they have much wider ecological tolerances than are predicted based on present-day climates alone.‖ The second period they examined included two rapid-change climatic events in the Holocene—one at 14,700 years ago and one at 11,600 years ago—when temperatures increased in the mid- to high-latitudes of the Northern Hemisphere by up to 10°C over periods of less than 60 years. There is evidence from many sites for rapid plant responses to rapid warming during these events. The researchers note ―at no site yet studied, anywhere in the world, is there evidence in the fossil record for large-scale climate-driven extinction during these intervals of rapid warming.‖ On the other hand, they report extinctions did occur due to the cold temperatures of the glacial epoch, when subtropical species in southern Europe were driven out of their comfort zone. The Willis et al. study also makes use of recent historical data, as in the case of the 3°C rise in temperature at Yosemite Park over the past 100 years. In comparing surveys of mammal fauna conducted near the beginning and end of this period, they detected some changes but no local extinctions. Thus they determined that for all of the periods they studied, with either very warm temperatures or very rapid warming, there were no detectable species extinctions. In a study that may help explain how some researchers could have gotten things so wrong in predicting massive extinctions of both plants and animals in response to projected future warming, Nogues-Bravo (2009) explains the climate envelope models (CEMs)—often employed to predict species responses to global warming (and whether or not a species will be able to survive projected temperature increases)—―are sensitive to theoretical assumptions, to model classes and to projections in non-analogous climates, among other issues.‖ To determine how appropriate these models are for determining whether a particular species will be driven to extinction by hypothesized planetary warming, Nogues-Bravo reviewed the scientific literature pertaining to the subject and found several flaws. Nogues-Bravo writes, ―the studies reviewed: (1) rarely test the theoretical assumptions behind niche modeling such as the stability of species climatic niches through time and the equilibrium of species with climate; (2) they only use one model class (72% of the studies) and one palaeoclimatic reconstruction (62.5%) to calibrate their models; (3) they do not check for the occurrence of non-analogous climates (97%); and (4) they do not use independent data to validate the models (72%).‖ Nogues-Bravo writes, ―ignoring the theoretical assumptions behind niche modeling and using inadequate methods for hindcasting can produce ―a cascade of errors and naïve ecological and evolutionary inferences. Hence, he concludes, ―there are a wide variety of challenges that CEMs must overcome in order to improve the reliability of their predictions through time. Until these challenges are met, contentions of impending species extinctions must be considered little more than guesswork (see also Chapman, 2010).

**6. Plan doesn’t solve pollution**

**KFTC 08** an informal partnership encouraging resource management professionals from all disciplines and segments (forest industries, public agencies, private forestry consultants, and forest landowner organizations, an informal partnership encouraging resource management professionals from all disciplines and segments (forest industries, public agencies, private forestry consultants, and forest landowner organizations,Promotes actions that sustain forests, watersheds, and wildlife habitat through the power of private stewardship, (Kentucky Tree Farm Committee, June 19, 2008, “THE REALITY OF THE “CLEAN COAL” CAMPAIGN,” <http://www.kftc.org/publications/nancys-research/The%20Reality%20of%20the%20Clean%20Coal%20Campaign.pdf)//DR>. H

The coal industry has spent $40 million on a public campaign to promote technologies that they claim will clean up coal.**1** Clean coal does not exist. Technology to capture more air pollutants from coal combustion exists, but most coal plants don’t have those features and they are too expensive to add. The campaign hasconvinced Congress to commit billions of tax dollars towards these so-called “clean coal technologies” and has mislead the public about just what “clean coal” really means.

Coal industry advocates are attempting to persuade Congress and the public that increasing coal production is the only viable solution to our energy crisis. Kentucky, as the third largest coal producing state is both politically and geographically at the center of the clean coal debate. Of the 150 power plants newly opened or proposed in 2006, 7 were located here. Two of these are slated to open soon.2

Red circles on the map are proposed power plants through 2012. Tan circles are power plants currently in operation. The size of the circles indicate a plant’s operating capacity.3

The American Coalition for Clean Coal Electricity (also known as Americans for Balanced Energy Choices), in charge of the campaign, says that an increase in coal production is the best way to decrease dependence on foreign oil. Campaign representatives thus want to increase coal production through 2025.4 They claim that the supposed “clean coal” methods will address the already disastrous coal-burning pollution problems that will only worsen with increased production--methods the industry is using public tax dollars to try and develop.

One of the industry’s claims is that a process called carbon capture and storage (CCS) will not only decrease coal’s pollution, but do so in a cost-effective manner.5 The facts about CCS, however, tell quite a different story. CCS aims to remove carbon dioxide emissions from coalburning power plants prior to release into the air. The technology has never been proven to work on an industrial scale, despite years of research and development. **Further,** Scientists project a 21-91% increase in the overall energy costs of new coal-burning plants equipped with CCS. Applying CCS to existing plants will be very expensive**.** 6 CCS is explained in more detail in a section below.

# Ext—Nat Gas Solves Warming

**Natural gas solves warming—fracking impacts are empirically denied**

**Biello 10** (David, 30 March 2010, What the Frack? Natural Gas from Subterranean Shale Promises U.S. Energy Independence--With Environmental Costs [Slide Show], http://www.scientificamerican.com/article.cfm?id=shale-gas-and-hydraulic-fracturing, RBatra)

Nevertheless, a 2004 study by the EPA found hydraulic fracturing harmless and **the oil industry has been using a roughly similar extraction method since the 1940s**. If shale gas can be extracted safely, it might go a long way to cutting back on U.S. emissions of greenhouse gases, as acknowledged at the U.N. Copenhagen climate conference this past December by environmentalists such as Christopher Flavin of the Washington, D.C.–based World Resources Institute. "**Compared with coal, natural gas allows a 50 to 70 percent reduction in greenhouse gas emissions**," he said. "It's a good complement to the wind and solar generators that will be the backbones of a low-carbon electricity system."

# Ext—Industry Safe

**International Calls for a switch to natural gas**

**EA 12** News covering Going Green (Ecoist Abode, Copyrighted in 2012, “Can Natural Gas help US decrease pollution?”<http://www.ecoistabode.com/natgas-pollution09.aspx)//DR>**.** H

**The rest of the world is demanding that the US, China and other developed nations decrease their pollution in an attempt to slow global warming. An unlikely source of energy has emerged to meet international demands that the United States do more to fight global warming: natural gas. It is cleaner than coal, cheaper than oil and we have a massive supply right here.**

The same fossil fuel that was in such short supply a decade ago is now being uncovered at such a rapid pace that its price is near a seven year low. Long used to heat half the nation's homes, it's becoming the fuel of choice when building new power plants. Someday, it may win wider acceptance as a replacement for gasoline in our cars and trucks.

Utilities in the US aren't waiting for Washington to jump on the gas bandwagon. Looming climate legislation has altered the calculus that they use to determine the cheapest way to deliver power. Coal may still be cheaper, but **natural gas emits half as much carbon when burned to generate the same amount of electricity.**

The world's largest oil company, Exxon Mobil Corp., entered the sector in a big way last Monday when it announced a $30 billion deal to acquire XTO Energy Inc. The move will make it the country's top producer of natural gas. Exxon expects to be able to dramatically boost natural gas sales to electric utilities. In fact, CEO Rex Tillerson says that's why the deal is such a smart investment.

XTO, the company that Exxon is buying, was one of the pioneers in developing new drilling technologies that allow a single well to descend 9,000 feet and then bore horizontally through shale formations up to 1 1/2 miles away. Water, sand and chemical additives are pumped through these pipes to unlock trillions of cubic feet of natural gas that until recently had been judged unobtainable.

**Even with the big increases in reserves they were logging, expansion plans by XTO and its rivals were limited by the debt they took on to finance these projects that can cost as much as $3 million apiece.** Under Exxon, which earned $45.2 billion last year, that barrier has been obliterated.

So **look for the United States to move towards natural gas in the future. A move that will not only be good for the country, but also better for the environment.**

# Ext—CCS Can’t Solve

**CCS can’t solve in time—also increases emissions and costs a ton**

**KFTC 08** an informal partnership encouraging resource management professionals from all disciplines and segments (forest industries, public agencies, private forestry consultants, and forest landowner organizations, an informal partnership encouraging resource management professionals from all disciplines and segments (forest industries, public agencies, private forestry consultants, and forest landowner organizations,Promotes actions that sustain forests, watersheds, and wildlife habitat through the power of private stewardship, (Kentucky Tree Farm Committee, June 19, 2008, “THE REALITY OF THE “CLEAN COAL” CAMPAIGN,” <http://www.kftc.org/publications/nancys-research/The%20Reality%20of%20the%20Clean%20Coal%20Campaign.pdf)//DR>. H

CCS technologies built into a new power plant could potentially reduce CO2 emissions by approximately 80-90%. However, the process of capturing and storing the carbon would increase the fuel needs of such plants by 25%. These and other system costs are expected to increase the overall energy costs of new coal-burning plants equipped with CCS by 21-91%. Applying CCS to preexisting plants or plants far from a storage location will be even more expensive than this, elevating costs of operating such plants between 50-300%.**11** The sheer energy cost of such a proposal outweighs any benefit.

CCS is not slated to be used in the U.S. until 2030.Even knowing this, “Clean Coal” campaign representatives conveniently rely on the future hope of CCS to clean up coal’s pollution and they therefore use it to argue that federal emission caps on carbon emissions today are unnecessary**.** By 2030, the worst impacts of global warming will be too late to prevent. CCS is an expensive stop-gap measure and does little to help Kentucky or its people work towards energy and economic independence.12

**The plan results in toxic dumps**

**Chameides 09** (Bill, February 4, 2009, “Clean Coal’s Dirty Secret - When 'Clean' Isn't Clean,” <http://www.nicholas.duke.edu/thegreengrok/morecoalwaste/)//DR>. H

**Coal is the dirtiest fossil fuel. Burning it produces a myriad of noxious air pollutants.** That's a problem. **Clean coal technology supposedly scrubs those pollutants before they get into the atmosphere.** Problem gone, right? Not quite. **Guess where those pollutants end up.**

It has always amazed me that the best we've been able to do with waste from nuclear power plants is let it pile up at **the plant itself** – just not a sustainable solution. Little did I know that the same short-sighted model is being adopted at our nation’s coal-fired power plants.

**When coal**, a complex mixture of hydrocarbons and minerals, **is burned, it generates not just electricity but byproducts in the form of air pollutants and solid waste including fly ash.** I remember years ago asking someone who should know, what happens to the waste; he said it was recycled, put into construction materials and the like.

Another Turn of the Screw in the Story of Coal

That turns out to be only a small part of the story. And as a result of t**he coal ash spill at the Tennessee Valley Authority’s Kingston coal-fired power plant in Tennessee, the whole story of coal waste is beginning to see the light of day.**

Since 2002 **coal-fired power plants in the United States have produced an average of more than 120 million short tons of coal waste each year.** In 2007 the United States produced more than 131 million short tons of coal waste. **Only about 40 percent of that is recycled, and the rest is dumped into landfills and containment ponds like the one that gave way in Kingston. Every year we burn more coal, more of the stuff ends up in these ponds. Talk about toxic waste dumps.**

But there’s more to this story than the leftover ash. **There is also the serious problem of air pollutants: these include sulfur oxides** (SOX), **nitrogen oxides** (NOX) **and particulate matter** (PM), **which contribute to acid rain and smog, and a plethora of toxic metals such as mercury, which, among other things, renders fish caught from our lakes and streams unsafe for us to eat.**

# 1NC Pollution

**1. Greater reliance on natural gas is a better and quicker solution to pollution**

**Natural Gas.org 04** (“Natural Gas and the Environment,” http://www.naturalgas.org/environment/naturalgas.asp) // JMP

Pollutants emitted in the United States, particularly from the combustion of fossil fuels, have led to the development of many pressing environmental problems. Natural gas, emitting fewer harmful chemicals into the atmosphere than other fossil fuels, can help to mitigate some of these environmental issues. These issues include: Greenhouse Gas Emissions Smog, Air Quality and Acid Rain Industrial and Electric Generation Emissions Pollution from the Transportation Sector - Natural Gas Vehicles Greenhouse Gas Emissions Global warming, or the 'greenhouse effect' is an environmental issue that deals with the potential for global climate change due to increased levels of atmospheric 'greenhouse gases'. There are certain gases in our atmosphere that serve to regulate the amount of heat that is kept close to the Earth's surface. Scientists theorize that an increase in these greenhouse gases will translate into increased temperatures around the globe, which would result in many disastrous environmental effects. In fact, the Intergovernmental Panel on Climate Change (IPCC) predicts in its 'Third Assessment Report' released in February 2001 that over the next 100 years, global average temperatures will rise by between 2.4 and 10.4 degrees Fahrenheit. The principle greenhouse gases include water vapor, carbon dioxide, methane, nitrogen oxides, and some engineered chemicals such as cholorofluorocarbons. While most of these gases occur in the atmosphere naturally, levels have been increasing due to the widespread burning of fossil fuels by growing human populations. The reduction of greenhouse gas emissions has become a primary focus of environmental programs in countries around the world. One of the principle greenhouse gases is carbon dioxide. Although carbon dioxide does not trap heat as effectively as other greenhouse gases (making it a less potent greenhouse gas), the sheer volume of carbon dioxide emissions into the atmosphere is very high, particularly from the burning of fossil fuels. In fact, according to the EIA in its report 'Emissions of Greenhouse Gases in the United States 2000', 81.2 percent of greenhouse gas emissions in the United States in 2000 came from carbon dioxide directly attributable to the combustion of fossil fuels. Because carbon dioxide makes up such a high proportion of U.S. greenhouse gas emissions, reducing carbon dioxide emissions can play a huge role in combating the greenhouse effect and global warming. The combustion of natural gas emits almost 30 percent less carbon dioxide than oil, and just under 45 percent less carbon dioxide than coal. One issue that has arisen with respect to natural gas and the greenhouse effect is the fact that methane, the principle component of natural gas, is itself a very potent greenhouse gas. In fact, methane has an ability to trap heat almost 21 times more effectively than carbon dioxide. According to the Energy Information Administration, although methane emissions account for only 1.1 percent of total U.S. greenhouse gas emissions, they account for 8.5 percent of the greenhouse gas emissions based on global warming potential. Sources of methane emissions in the U.S. include the waste management and operations industry, the agricultural industry, as well as leaks and emissions from the oil and gas industry itself. A major study performed by the Environmental Protection Agency (EPA) and the Gas Research Institute (GRI) in 1997 sought to discover whether the reduction in carbon dioxide emissions from increased natural gas use would be offset by a possible increased level of methane emissions. The study concluded that the reduction in emissions from increased natural gas use strongly outweighs the detrimental effects of increased methane emissions. Thus the increased use of natural gas in the place of other, dirtier fossil fuels can serve to lessen the emission of greenhouse gases in the United States.

**2. Natural gas industry is committed to environmentally safe production**

**NG 04** (Naguralgas.org, “Natural Gas and the Environment,” http://www.naturalgas.org/environment/naturalgas.asp) // JMP

Natural gas is the cleanest of the fossil fuels, and thus its many applications can serve to decrease harmful pollution levels from all sectors, particularly when used together with or replacing other fossil fuels. The natural gas industry itself is also committed to ensuring that the process of producing natural gas is as environmentally sound as possible. Learn about the natural gas industry and the environmental effects of natural gas production.

**3. Air Pollution inevitable and no impact**

**Huang et al 91** Department of Pediatrics, National Taiwan University Hospital (JL, SY Wang, KH Hsieh, “Effect of short-term exposure to low levels of SO2 and NOx on pulmonary function and methacholine and allergen bronchial sensitivities in asthmatic children.” <http://www.ncbi.nlm.nih.gov/pubmed/1953037)//DR>. H

Air pollution is an inevitable consequence of industrializatio**n**. Continuous exposure to air pollution may cause or trigger respiratory allergic diseases. This study was designed to evaluate whether short-term, 5-min exposures to low levels of sulfur dioxide (SO2) and nitrogen oxides (NOx) influence pulmonary function and increase bronchial sensitivity to methacholine and specific allergens. Five male and 1 female mite-sensitive asthmatic children (mean age 12 y) were studied during symptom-free periods. Pulmonary function tests were conducted after breathing 5, 15, 35, 65, and 105 breaths of compressed polluted air, which was collected from the Lin-Sun S. Road tunnel in Taipei city. Concentrations of SO2 and NOx were 70-120 ppb and 450-500 ppb, respectively, and were 6-fold and 20-fold, respectively, higher than those of ambient air. Methacholine and mite allergen bronchial challenges were completed after 105 breaths of polluted air were inhaled. No difference in pulmonary function was noted after polluted air and ambient air were inhaled, and the methacholine and allergen sensitivities of airways were not increased after polluted air was inhaled. The authors concluded that short-term exposures to low concentrations of SO2 and NOx did not affect the lung function and did not increase bronchial sensitivity to methacholine and allergen.

**4. Alt causes to pollution—China and India**

**Platt 07** National Geographic News(Kevin, July 9, 2007, “Chinese Air Pollution Deadliest in World, Report Says,” <http://news.nationalgeographic.com/news/2007/07/070709-china-pollution.html)//DR>. H

Damaging air pollutants include sulfur dioxide, particulate matter—a mixture of extremely small particles and water droplets—ozone, and nitrogen dioxide. China accounts for roughly one-third of the global total for these pollutants, according to Krzyzanowski. (See a map of China.)

In neighboring India, air pollution is believed to cause 527,700 fatalities a year. In the United States, premature deaths from toxic air pollutants are estimated at 41,200 annually.

The combustion of fossil fuels—whether to power China's many automobiles, its burgeoning factories, or its expanding megacities—is a primary source of outdoor air pollutants.

The burning of coal or charcoal to heat homes, common throughout China, also produces a range of indoor air pollutants. (Related: "China's Boom Is Bust for Global Environment, Study Warns" [May 16, 2005].)

**5. Plan doesn’t solve pollution**

**KFTC 08** an informal partnership encouraging resource management professionals from all disciplines and segments (forest industries, public agencies, private forestry consultants, and forest landowner organizations, an informal partnership encouraging resource management professionals from all disciplines and segments (forest industries, public agencies, private forestry consultants, and forest landowner organizations,Promotes actions that sustain forests, watersheds, and wildlife habitat through the power of private stewardship, (Kentucky Tree Farm Committee, June 19, 2008, “THE REALITY OF THE “CLEAN COAL” CAMPAIGN,” <http://www.kftc.org/publications/nancys-research/The%20Reality%20of%20the%20Clean%20Coal%20Campaign.pdf)//DR>. H

The coal industry has spent $40 million on a public campaign to promote technologies that they claim will clean up coal.**1** Clean coal does not exist. Technology to capture more air pollutants from coal combustion exists, but most coal plants don’t have those features and they are too expensive to add. The campaign hasconvinced Congress to commit billions of tax dollars towards these so-called “clean coal technologies” and has mislead the public about just what “clean coal” really means.

Coal industry advocates are attempting to persuade Congress and the public that increasing coal production is the only viable solution to our energy crisis. Kentucky, as the third largest coal producing state is both politically and geographically at the center of the clean coal debate. Of the 150 power plants newly opened or proposed in 2006, 7 were located here. Two of these are slated to open soon.2

Red circles on the map are proposed power plants through 2012. Tan circles are power plants currently in operation. The size of the circles indicate a plant’s operating capacity.3

The American Coalition for Clean Coal Electricity (also known as Americans for Balanced Energy Choices), in charge of the campaign, says that an increase in coal production is the best way to decrease dependence on foreign oil. Campaign representatives thus want to increase coal production through 2025.4 They claim that the supposed “clean coal” methods will address the already disastrous coal-burning pollution problems that will only worsen with increased production--methods the industry is using public tax dollars to try and develop.

One of the industry’s claims is that a process called carbon capture and storage (CCS) will not only decrease coal’s pollution, but do so in a cost-effective manner.5 The facts about CCS, however, tell quite a different story. CCS aims to remove carbon dioxide emissions from coalburning power plants prior to release into the air. The technology has never been proven to work on an industrial scale, despite years of research and development. **Further,** Scientists project a 21-91% increase in the overall energy costs of new coal-burning plants equipped with CCS. Applying CCS to existing plants will be very expensive**.** 6 CCS is explained in more detail in a section below.

# Ext—Nat Gas Solves

**Natural gas emits less—fracking impacts are empirically denied**

**Biello 10** (David, 30 March 2010, What the Frack? Natural Gas from Subterranean Shale Promises U.S. Energy Independence--With Environmental Costs [Slide Show], http://www.scientificamerican.com/article.cfm?id=shale-gas-and-hydraulic-fracturing, RBatra)

Nevertheless, a 2004 study by the EPA found hydraulic fracturing harmless and the oil industry has been using a roughly similar extraction method since the 1940s. If shale gas can be extracted safely, it might go a long way to cutting back on U.S. emissions of greenhouse gases, as acknowledged at the U.N. Copenhagen climate conference this past December by environmentalists such as Christopher Flavin of the Washington, D.C.–based World Resources Institute. "Compared with coal, natural gas allows a50 to 70 percent reduction in greenhouse gas emissions," he said. "It's a good complement to the wind and solar generators that will be the backbones of a low-carbon electricity system."

# Ext—No Impact

**Their authors’ impact claims are flawed**

**EPA 91** (Environmental Protection Agency, March 1991, “Publication - Risk Assessment for Toxic Air Pollutants: A Citizen's Guide - EPA 450/3-90-024,” <http://www.epa.gov/oar/oaqps/air_risc/3_90_024.html)//DR>. H

Although scientists can estimate risks caused by toxic air pollutants in animals experimentally or in humans who have unusual exposures, converting these estimates to those expected in people under a wide range of conditions is difficult, and can be misleading.

By their nature, risk estimates cannot be completely accurate. The main problem is that scientists don't have enough information on actual exposure and on how toxic air pollutants harm human cells.The exposure assessment often relies on computer models when the amount of pollutant getting from the source(s) to people can't be easily measured. Dose-response relationships often rely on assumptions about the effects of pollutants on cells for converting results of animal experiments at high doses to human exposures at low doses.

When information is missing or uncertain, risk analysts generally make assumptions that tend to prevent them from underestimating the potential risk **--** that is, these assumptions provide a margin of safety in the protection of human health.

# Ext—Alt Cause

**China is an alternative cause**

**AFP 10** Global news agency delivering fast, in-depth coverage of the events shaping our world(Agence France-Presse, July 27, 2010, “China says air pollution worsening,” <http://www.terradaily.com/reports/China_says_air_pollution_worsening_999.html)//DR>. H

The level of inhalable particles, a major air pollution index, was also up during that time in those cities for the first time since 2005, Tao said, blaming the deterioration in air quality on severe spring sandstorms.

"More construction and industrial projects that started this year due to economic recovery and the rapid increase in automobiles should also be blamed," Chai Fahe, vice head of the Chinese Research Academy of Environmental Sciences, told the China Daily newspaper.

The ministry also found that more than a quarter of surface water in China was contaminated, and fit only for industrial or agricultural use.

Acid rain was also a problem in the first half of the year -- out of 443 cities the ministry monitored, 189 suffered from the harmful precipitation.

And in eight cities, including a district of Shanghai, the rain that fell for the first six months was constantly acid, the statement said.

Tao said that despite some improvements, China still faced a "grim" situation in fighting pollution**.**

China has some of the world's worst water and air pollution after rapid industrialisation over the last 30 years triggered widespread environmental damage.

**Alt cause—China**

**Wong 11** Staff Writer for the New York Times (Edward, December 7, 2011, “Outrage Grows Over Air Pollution and China’s Response,” <http://www.nytimes.com/2011/12/07/world/asia/beijing-journal-anger-grows-over-air-pollution-in-china.html)//DR>. H

**The ceaseless churning of factories and automobile engines in and around Beijing has led to** this: **hundreds of flights canceled** since Sunday **because of smog, stores sold out of face masks, and *many Chinese complaining on the Internet* that officials are failing to level with them about air quality or make any improvements to the environment.**

**Chronic pollution in Beijing**, temporarily scrubbed clean for the 2008 Summer Olympics, has made people angry for a long time, but the disruptions it causes to daily life are **now raising questions about the economic cost**, and the government’s ability to ensure the safety of the population.

“As a Chinese citizen, we have been kept in the dark on this issue for too long,” said Yu Ping, the father of a 7-year-old boy, who has started a public campaign to demand that officials report more accurately about Beijing’s air quality. “**The government is just so bureaucratic that they don’t seem to care whether we common people live or die. And it’s up to us, the common people, to prod them and to put pressure on them so that they can reflect on their actions and realize that they really just have to do something.”**

When the frustration of parents boils over, Communist Party leaders start worrying about their legitimacy in the eyes of the people. That was the case in 2008 when parents vented anger over deadly school collapses in the Sichuan earthquake and over adulterated milk.

**The motionless cloud of pollution that has smothered the capital and its surroundings in recent days has frayed tempers. Long stretches of highway have been shut down because of low visibility, hobbling transportation of people and goods**. Workers at Capital International Airport have faced crowds of irate travelers whose flights have been grounded. From Sunday to 11 a.m. Tuesday, more than 700 outbound and inbound flights were canceled, one airport official said. A tour guide, Wang Lanhuizi, 23, clutched dozens of passports from a stranded group. **“I’m really worried, but there’s nothing we can do,”** she said.

**An announcement at the airport made no mention of pollution**, attributing the cancellations and delays to “the weather condition.” That has long been the government line: the haze is fog, not fumes. But increasingly, **Chinese know better. People like Mr. Yu,** a newspaper editor, are lobbying officials to stop whitewashing their air quality reports.

**Many people now follow a Twitter feed** from the United States Embassy that gives hourly updates on air quality; gauges on top of the embassy in central Beijing measure, among other things, the amount of fine airborne particles, which are extremely damaging to the lungs. Since Sunday, **the air has been rated “very unhealthy” or “hazardous,”** meaning that people should avoid any outdoor activity; on Sunday, the particulate measurement exceeded the scale’s maximum of 500, a reading that **the embassy once called** **“crazy bad” on its** **@BeijingAir Twitter** feed.

# 1NC LNG

**1. US shifting away from LNG now—cost competition disadvantage and the need for more infrastructure undermines it**

**EIA 1/19** (US Energy Information Administration, “Analysis and Projections: Effect of Increased Natural Gas Exports on Domestic Energy Markets as requested by the Office of Fossil Energy,” 1/19/12 <http://205.254.135.7/analysis/requests/fe///Mkoo>)

The prospects for U.S. LNG exports depend greatly on the cost-competitiveness of liquefaction projects in the United States relative to those at other locations. The investment to add liquefaction capacity to an existing regasification terminal in the United States is significant, typically several times the original cost of a regasification-only terminal. However, the ability to make use of existing infrastructure, including natural gas processing plants, pipelines, and storage and loading facilities means that U.S. regasification terminals can reduce costs relative to those that would be incurred by a “greenfield” LNG facility. Many of the currently proposed LNG supply projects elsewhere in the world are integrated standalone projects that would produce, liquefy, and export stranded natural gas. These projects would require much more new infrastructure, entailing not only the construction of the liquefaction plant from the ground up, but also storage, loading, and production facilities, as well pipelines and natural gas processing facilities. While the additional infrastructure for integrated standalone projects adds considerably to their cost, such projects can be sited at locations where they can make use of inexpensive or stranded natural gas resources that would have minimal value independent of the project. Also, while these projects may require processing facilities to remove impurities and liquids from the gas, the value of the separated liquids can improve the overall project economics. On the other hand, liquefaction projects proposed for the lower-48 United States plan to use pipeline gas drawn from the largest and most liquid natural gas market in the world. Natural gas in the U.S. pipeline system has a much greater inherent value than stranded natural gas, and most of the valuable natural gas liquids have already been removed. Future exports of U.S. LNG depend on other factors as well. Potential buyers may place additional value on the greater diversity of supply that North American liquefaction projects provide. Also, the degree of regulatory and other risks are much lower for projects proposed in countries like the United States, Canada, and Australia than for those proposed in countries like Iran, Venezuela, and Nigeria. However, due to relatively high shipping costs, LNG from the United States may have an added cost disadvantage in competing against countries closer to key markets, such as in Asia. Finally, LNG projects in the United States would frequently compete not just against other LNG projects, but against other natural gas supply projects aimed at similar markets, such as pipeline projects from traditional natural gas sources or projects to develop shale gas in Asia or Europe

**2. An LNG explosion would do minimal damage – this specifically indicts their impact evidence**

**Lloyd's Register 04** – Leading participants in the safety and verification of LNG facilities around the world

(“Statement on LNG risks from Lloyd's Register North America, Inc.” 9-23-2004, http://www.lr.org/News+and+Events/News+Archive/2004/Statement+on+LNG+risks+from+Lloyds+Register+North+America+Inc.htm) AMK

LNG. The real risks

In the US, regulators and other interested parties have identified as key concerns the possibility of a terrorist attack involving an LNG terminal or an LNG carrier, and the consequences for the surrounding population and infrastructure. Global terrorism is certainly a major threat and all reasonable measures should and must be taken to mitigate the risks and consequences of any actions, however, commentators and observers are incorrect if they believe that a terrorist attack on an LNG carrier would have the impact of a nuclear explosion. There are several technical reasons which bear this out:

1. LNG is transported globally in insulated tanks on specialised ships. These tanks provide four physical barriers and two layers of insulation between the LNG and the outside environment. Further, the separation between the inner and outer hulls of an LNG carrier is typically over two meters. These two factors combined mean that LNG cargo carried at sea has a very high in-built level of protection from external blast sources.

2. In the event of an attack, even if a one-meter hole were to be formed in the inner hull, the resultant holes in the primary containment barrier would be significantly smaller due to the increased separation distance from the blast source combined with the pressure absorption properties of the secondary containment barrier and insulation materials.

3. It is unrealistic to imagine that the entire cargo of any ship can be instantaneously released. To mount an attack on an LNG carrier that would result in the instantaneous release of all of its cargo would require the equivalent of a full scale military operation, not a clandestine terrorist operation like those carried out against the USS Cole and the Limburg.

4. The idea that LNG carriers are potential nuclear devices is erroneous. There is a lot of energy in LNG and natural gas, as in any hydrocarbon. However, the 'nuclear explosion' statement describes the total energy an LNG carrier contains, not the rate at which the energy would be released in an incident. For example, a lump of coal contains lots of energy, but when set on fire, its energy doesn't all come out instantly like a bomb. Instead, the coal burns over a period of time releasing its energy as it goes. Similarly, LNG carriers contain large quantities of energy, but the energy can only be released slowly in the event of a spill or a fire.

5. An LNG spill in open air will not result in a bomb-like explosion. This has been consistently demonstrated in experiments. Not everything that is ignited explodes like a bomb. For example, when a match is lit, it burns but does not explode. Similarly, the natural gas vapour that could result from an LNG carrier spill also falls under the category of substances that will burn but not explode like a bomb.

Reason and caution

Paul Huber, Director of LRNA, says: "There are risks associated with the transport and storage of LNG, as there are with any hydrocarbon energy source, and these are precisely the reasons that the LNG industry operates with extensive international and national regulations which govern the safety of LNG transport and storage. The effectiveness of these regulations is apparent in the LNG shipping sector, which has an unblemished safety record spanning 40 years - a track record which is unrivalled by any other maritime sector and most land-based industries. It should also be remembered that LNG itself is one of the cleanest-burning and most environmentally friendly energy sources currently available on a global scale.

"While the shadow of terrorism hangs over us, we have to do as much as we can to protect ourselves and our borders, but it is misleading to state, as some have, that an attack on an LNG carrier would be similar to a nuclear event. It is difficult for us to know the rationale behind the assertion contained in the speech to the Houston Forum, but it is clear that it is not supported by fact.

**3. Their impacts are empirically denied—40 years**

**Foss 06** Ph.D., Chief Energy Economist, CEE Head (Michelle, November 2006, “LNG SAFETY AND SECURITY,” Center For Energy Economics, Bureau of Economic Geology)//DR. H

**LNG has been transported and used safely in the U.S. and worldwide for roughly 40 years. The U.S. has the largest number of LNG facilities in the world, scattered throughout the country** and located near population centers where natural gas is needed. **Our analysis of data on LNG safety and security indicates an excellent safety record. This strong safety record is a result of several factors. First, the industry has technically and operationally evolved to ensure safe and secure operations.** Technical and operational advances include everything from the engineering that underlies LNG facilities to operational procedures to technical competency of personnel. **Second, the physical and chemical properties of LNG are such that risks and hazards are easily defined and incorporated into technology and operations. Third, a broad set of standards, codes and regulations applies to the LNG industry to further ensure safety. These have evolved through industry experience worldwide and affect LNG facilities and operations everywhere.** Regulatory compliance provides transparency and accountability. This report defines and explains how LNG safety and security is achieved, based on our extensive review of technical and operational data. Our conclusion is that **LNG can continue to be transported, stored and used safely and securely, as long as safety and security standards and protocols developed by the industry are maintained and implemented with regulatory supervision.** It is in the best interest of the industry, regulators and the general public that this goal be achieved so that the benefits of natural gas can be realized for consumers.

**4. LNG is safe—I promise**

**Foss 06** Ph.D., Chief Energy Economist, CEE Head (Michelle, November 2006, “LNG SAFETY AND SECURITY,” Center For Energy Economics, Bureau of Economic Geology)//DR. H

**Primary Containment**2 **is the first and most important requirement for containing the LNG product. This first layer of protection involves the use of appropriate materials for LNG facilities** as well as proper engineering design of storage tanks onshore and on LNG ships and elsewhere.

**Secondary containment ensures that if leaks or spills occur** at the onshore LNG facility, **the LNG can be fully contained and isolated from the public.**

**Safeguard systems offers a third layer of protection. The goal is to minimize the frequency and size of LNG releases both onshore and offshore and prevent harm from potential associated hazards**, such as fire. For this level of safety protection, **LNG operations use technologies such as high level alarms and multiple back-up safety systems, which include Emergency Shutdown** (ESD) **systems.** ESD systems can identify problems and shut off operations in the event certain specified fault conditions or equipment failures occur, and which are designed to prevent or limit significantly the amount of LNG and LNG vapor that could be released. **Fire and gas detection and fire fighting systems all combine to limit effects if there is a release.**

**The LNG facility or ship operator then takes action by establishing necessary operating procedures, training, emergency response systems and regular maintenance to protect people, property and the environment from any release.**

Finally, **LNG facility designs are required by regulation to maintain separation distances to separate land-based facilities from communities and other public areas. Safety zones are also required around LNG ships.**

**5. No Terrorism—the war on terror is over**

**Murphy 6/7** Staff Writer for CS Monitor (Dan, June 7, 2012, “Can we declare the war on terrorism over?” <http://www.csmonitor.com/World/Backchannels/2012/0607/Can-we-declare-the-war-on-terrorism-over)//DR>. H

The National Counterterrorism Center's annual report for 2011 was released on Tuesday and what it points to is a less violent (though still plenty violent) world. **Total "terrorist" attacks fell 12 percent from the previous year and are down 29 percent from 2007**, which the center says is a five year low. **There were over 10,000 attacks classified by the government as terrorism across the world last year, claiming 12,500 lives. None of them were in the US, and three-quarters of the fatalities were in just four countries: Afghanistan** (3,353), **Iraq** (3,063), **Pakistan** (2,033), **and Somalia** (1,101).

**The cost in American lives? The report says 17 American "private citizens"** were killed in terrorist incidents last year, 15 in Afghanistan and one each in Jerusalem and in Iraq. Though the report doesn't say, it's safe to assume the US citizens killed in Afghanistan were mostly aid workers or private contractors. Not to say they deserved what happen to them, but that **these were people who placed themselves in a war zone** (much as reporters do) **fully aware of the risks.** Trouble didn't come looking for them. **The number of American's killed in terrorist attacks in 2010? 15.**

As Micah Zenko points out, **between 2000 and 2010 an average of 29 US citizens were killed each year by falling televisions, dressers, and other household furnishings. Yet we haven't declared war on the killer flat-screens rampaging through the heartland.**

To be sure, **terrorism is declining from a high base**, thanks to the surging use of the tactic in Afghanistan and Iraq following the 2002 and 2003 US-led invasions of the two countries. Last year, the US military presence in Iraq was mostly about packing up and leaving, with far fewer patrols or offensives. **Iraq**, still the second most terrorism plagued country in the world by the US reckoning, **saw attacks fall sharply last year. There were 13,600 people killed in terrorist attacks in Iraq in 2007, and that number fell to 3,654 by 2009 and to 3,063 last year.**

**6. Terrorism doesn’t affect the economy**

**Shapiro 03** Undersecretary of commerce in the Clinton administration, Fellow of the Brookings Institution, Directs Sonecon, LLC, an economic consulting firm(Robert, February 28, 2008, “Al-Qaida and the GDP: How much would terrorism damage the U.S. economy? Less than you'd expect.” <http://www.slate.com/articles/business/the_dismal_science/2003/02/alqaida_and_the_gdp.html)//DR>. H

**In the few places where terrorist activity has been pervasive and protracted**—Colombia, Northern Ireland, the Basque region of Spain, and Israel—**it depresses growth and sometimes stunts development. Where terrorism has been more occasional and local, the economic impact is modest,** **resembling ordinary crime. So long as al-Qaida or its counterparts are unable** (or unwilling) **to use weapons much more powerful than airliners,** especially nuclear weapons, **any ambition to derail a large, advanced economy like ours will fail.**

**The immediate costs of terrorism are rarely very high for an economy.** For small operations—**a political murder or bombing that kills a few people** (think Colombian narco-terrorists, IRA operatives, or Palestinian suicide bombers)—**the direct economic impact is negligible. Even a huge terror strike is a blip in a vast economy like the United States'. The World Trade Center attack did not move the U.S. economy, as consumer spending and GDP accelerated strongly in the quarter immediately following the attack.** Modern economies regularly absorb greater losses from bad weather and natural disasters—for example, the 1988 heat wave that took the lives of more than 5,000 Americans or the 1999 earthquake in Izmit, Turkey, that killed 17,000—without derailing.

**7. Economic crisis won’t cause war - Financial crisis disproves**

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

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

# Ext—LNG Low Now

**US shifting away from LNG—not cost competitive**

**LNGWN 1/11** (LNG World News, January 11, 2012, “USA: EIA Expects 26 Percent Decline in LNG Imports This Year,” <http://www.lngworldnews.com/usa-eia-expects-26-percent-decline-in-lng-imports-this-year/)//DR>. H

U.S. liquefied natural gas imports are expected to decline by 0.2 Bcf/d (26 percent) in 2012 as higher global LNG market prices reduce LNG’s competitiveness in the U.S. market, the EIA said in its latest “Short-Term Energy Outlook”.

A small amount of LNG will continue to arrive at U.S. terminals in 2012 and 2013 either to take advantage of temporarily high local prices due to cold snaps and disruptions or to fulfill long-term contract obligations.

# Ext—No Explosions

**LNG has little potential to explode or combust**

**UPI 04** 7/14/04, “LNG a security risk to the U.S.?” Lexis

The possible consequences of a terrorist attack on LNG facilities or a tanker remain unknown. In the absence of precedents, scientists cannot agree on the aftermath of such an incident. Experts including chemistry Nobel Prize winner Alan Heeger argue that LNG cannot explode in its liquid state, noting that only when LNG reaches its "boiling" point of minus 259 Fahrenheit and vaporizes will it become flammable**.** If a vessel loses the pressure necessary to transport LNG and the cryogenic liquid begins to vaporize, the fire hazards of an uncontrolled release of LNG remains unknown. While companies can ensure only that LNG is handled properly, federal and state authorities will continue to insist on stringent security measures as U.S. demand for LNG continues to rise. The LNG lobby asserts thatLNG has a faultless safety record. Since the United States began LNG shipments more than 30 years ago, not a single vessel had any accidental spills, caught fire, or been attacked or sabotaged. American Gas Association's Managing Director of Policy Analysis Chris McGill told the Baltimore Sun on Feb. 12: "They all see the possibility of capturing the growth in the natural gas market ... with the vast natural gas supplies overseas that can be converted to liquefied natural gas.

**The tankers are secure and strong, and the gas cant explode – The Hiroshima analogy is a lie. Even LNG critics agree.**

**Fialka and Gold 04** Wall Street Journal 5/14/2004, **Lexis**

The night after the meeting, Green Futures sponsored a meeting at a local church hall where one of its members, Alfred Lima, told the audience that an LNG tanker carried the explosive equivalent of "55 Hiroshimas**." "**My family overlooks that facility," said a woman rushing out the door during his presentation. "They could all be wiped out!" Mr. Shearer and other LNG industry officials have accused Dr. Fay of fear-mongering and gross exaggeration. "Some of the things Fay talks about are physically impossible," asserts Francis J. Katulak, who operates the LNG terminal in Everett for Distrigas of Massachusetts LLC, a subsidiary of Suez SA, a French company. Mr. Katulak, a chemical engineer, says that Dr. Fay's calculations assume that the entire cargo of a 900-foot LNG tanker spills into the water. But "it would take a huge amount of explosives" to achieve that, he says, since the tankers contain five separate compartments and have two hulls separated by 8 feet of protective materials. Mr. Robinson, the FERC official, says LNG won't explode and won't burn in its liquid state. In a spill, the product can be ignited, but only after it vaporizes and combines with a mixture of air ranging from 5% to 15%. Mixtures outside that range are either too lean or too rich to burn and most of the gas, being lighter than air, quickly dissipates. The resulting fire will be of "very short duration," according to Mr. Robinson, who describes it as a "lazy flame" that burns less than five minutes**.** So far, he says, government tests have been conducted on relatively small spills, but further studies are under way**.** Dr. Fay, who still teaches an occasional course at MIT, admits that some of the conclusions being reached by his disciples are exaggerated. "I think the Hiroshima comparison is unfair**,"** he says, but he continues to assert that the heavily guarded LNG tankers are vulnerable to terrorist bomb boats as they move through the harbor. "It's easy to do. All you need is a 35-foot motorboat. You fill it up with two tons of ammonium nitrate, and you're in business."

# Ext—LNG Safe

**Federal Regulations force LNG to be distanced away from the public**

**Foss 06** Ph.D., Chief Energy Economist, CEE Head (Michelle, November 2006, “LNG SAFETY AND SECURITY,” Center For Energy Economics, Bureau of Economic Geology)//DR. H

Separation Distance. Federal regulations have always required that LNG facilities be sited at a safe distance from adjacent industrial, communities and other public areas. Also, safety zones are established around LNG ships while underway in U.S. waters and while moored. The safe distances or exclusion zones are based on LNG vapor dispersion data, and thermal radiation contours and other considerations as specified in regulations.

**Risks have been identified and solved**

**Foss 06** Ph.D., Chief Energy Economist, CEE Head (Michelle, November 2006, “LNG SAFETY AND SECURITY,” Center For Energy Economics, Bureau of Economic Geology)//DR. H

Our focus is on the properties of LNG, the particular hazards and risks that can develop from these properties and on the achievement of safety and security of LNG facilities. The major potential hazards of LNG and LNG vapors have been identified, analyzed, and taken into account, all to ensure the safe design, construction, operation and maintenance and to prevent or mitigate the probability of these hazards. Prevention and mitigation steps are identified and implemented to reduce the probability of these hazards. Adherence to the regulations, codes and operating practices makes the probability of an incident relating to such hazards extremely low. Much has been accomplished with respect to design and engineering of LNG facilities to address the risks and hazards associated with LNG. LNG facility design and engineering ensure that the experience is extended and safety record of the past 40 years continues into the future, so that society can reap the benefits of natural gas as a safe, clean fossil fuel.

# Ext—No Terror

**Al Qaeda is not a threat—their authors exaggerate**

**Mayer 4/30** CBC Reporter (Andre, April 30, 2012, “Al-Qaeda 'irrelevant' since bin Laden's death,” <http://www.cbc.ca/news/world/story/2012/04/27/f-al-qaeda-osama-bin-laden.html)//DR>. H

While it would appear that al-Qaeda has been significantly compromised, its name continues to crop up in a number of regional conflicts. There have been suggestions that it is allied with the Haqqani network in Afghanistan and Ansar Dine in northern Mali, for example.

But in a column for the Atlantic Monthly last September, Alex Fisher argued the media have a tendency to overstate al-Qaeda’s clout.

“Our ever-rising expectations of their capabilities,” he writes, “have so exaggerated their strength and reach in our collective imaginations that we are ready to see them behind nearly every blast.”

By the same token, Fisher points out that bin Laden’s creation, as well as separate yet kindred extremist groups, have exploited the al-Qaeda brand.

When the media describe a group like Boko Haram as “al-Qaeda-affiliated,” it bestows a greater legitimacy on the Nigerian group’s cause and improves their recruitment chances. The benefit to al-Qaeda, Fisher argues, is that it “can claim virtually any Islamist militant group or gun-waving Muslim as part of their dark, global army.”

Still, security experts say that while these militant groups may have co-opted the al-Qaeda brand, those such as al-Qaeda in the Arabian Peninsula and al-Qaeda in the Islamic Maghreb aren't taking orders from central command.

"These groups are acting separately without any coordination with al-Qaeda," say Jabeur Fathally, a law professor at the University of Ottawa and the author of an upcoming book on Islamic jihad and international human law.

"For these groups, al-Qaeda is a model of inspiration, no less, no more."

**Al Quaeda’s in irreversible decline**

**Mayer 4/30** CBC Reporter (Andre, April 30, 2012, “Al-Qaeda 'irrelevant' since bin Laden's death,” <http://www.cbc.ca/news/world/story/2012/04/27/f-al-qaeda-osama-bin-laden.html)//DR>. H

When Osama bin Laden was still alive, intelligence experts envisioned one of three outcomes for al-Qaeda in the event of his death.

The first was that it would have no effect at all, because the group had made operational contingencies for such a crisis. The second was that it would embolden al-Qaeda to undertake even more gruesome attacks.

The third was that it would cripple the global terror network that bin Laden had created.

A year after his death in Abbottabad, Pakistan, at the hands of U.S. Navy SEALs, security watchers say events seem to support the third scenario.

“Al-Qaeda as an organization, as far as the core is concerned, is pretty much irrelevant,” says Scott Stewart, vice-president of tactical intelligence for Stratfor, a geopolitical analysis firm based in Austin, Tex.

Wesley Wark, a Canadian security expert who teaches at the Munk School of Global Affairs in Toronto, concurs.

“The organization remains on the run. It seems to be in eclipse, if not in precipitous decline,” he says.

In the past year, Wark says there’s been “very little organized al-Qaeda activity.” There have been few public utterances from bin Laden’s successor, Ayman al-Zawahiri, and “rumours of dissension in the senior al-Qaeda ranks.”

# Ext—Terror Doesn’t Collapse Econ

**No economic impact to terrorism**

**Zalman 08** Ph.D., Member, Board of Directors at Council for Emerging National Security Affairs, Owner at Strategic Narrative, New Markets Strategy at SAIC, Terrorism Issues Blogger at About.com(Amy, July 30, 2008, “Economic Impact of Terrorism and the September 11 Attacks,” <http://terrorism.about.com/od/issuestrends/a/EconomicImpact.htm)//DR>. H

**Economists and others have tried to calculate the economic impact of terrorism for years in areas beset by attacks**, such as Spain's Basque region and Israel. In the last several years, **most analyses of terrorism's economic costs begin with an interpretation of the costs of the September 11, 2001 attacks.**

**The studies I examined are fairly consistent in concluding that the direct costs of the attack were less than feared. The size of the American economy, a speedy response by the Federal Reserve to domestic and global market needs, and Congressional allocations to the private sector helped cushion the blow.**

# Ext—No Mpx Econ

**Econ collapse doesn’t cause war**

**Bazzi and Blattman 11** [Samuel Bazzi(Department of Economics at University of California San Diego) and Christopher Blattman (assistant professor of political science and economics at Yale University) November 2011 “Economic Shocks and Conflict: The (Absence of?) Evidence from Commodity Prices” <http://www.chrisblattman.com/documents/research/2011.EconomicShocksAndConflict.pdf?9d7bd4>

VI. Discussion and conclusions A. Implications for our theories of political instability and conflict The state is not a prize?—Warlord politics and the state prize logic lie at the center of the most influential models of conflict, state development, and political transitions in economics and political science. Yet **we see no evidence for this idea in economic shocks, even when looking at the friendliest cases: fragile and unconstrained states dominated by extractive commodity revenues**. **Indeed, we see the opposite correlation: if anything, higher rents from commodity prices weakly** 22 **lower the risk and length of conflict.** Perhaps shocks are the wrong test. Stocks of resources could matter more than price shocks (especially if shocks are transitory). But combined with emerging evidence that war onset is no more likely even with rapid increases in known oil reserves (Humphreys 2005; Cotet and Tsui 2010) we regard the state prize logic of war with skepticism.17 **Our main political economy models may need a new engine.** Naturally, an absence of evidence cannot be taken for evidence of absence. Many of our conflict onset and ending results include sizeable positive and negative effects.18 Even so, commodity price shocks are highly influential in income and should provide a rich source of identifiable variation in instability. It is difficult to find a better-measured, more abundant, and plausibly exogenous independent variable than price volatility. **Moreover, other** time-varying **variables, like rainfall and foreign aid, exhibit robust correlations with conflict in spite of suffering similar empirical drawbacks and generally smaller sample sizes** (Miguel et al. 2004; Nielsen et al. 2011). **Thus we take the absence of evidence seriously**. Do resource revenues drive state capacity?—State prize models assume that rising revenues raise the value of the capturing the state, but have ignored or downplayed the effect of revenues on self-defense. We saw that a growing empirical political science literature takes just such a revenue-centered approach, illustrating that resource boom times permit both payoffs and repression, and that stocks of lootable or extractive resources can bring political order and stability. This countervailing effect is most likely with transitory shocks, as current revenues are affected while long term value is not. Our findings are partly consistent with this state capacity effect. For example, conflict intensity is most sensitive to changes in the extractive commodities rather than the annual agricultural crops that affect household incomes more directly. The relationship only holds for conflict intensity, however, and is somewhat fragile. We do not see a large, consistent or robust decline in conflict or coup risk when prices fall. A reasonable interpretation is that the state prize and state capacity effects are either small or tend to cancel one another out. Opportunity cost: Victory by default?—Finally, the inverse relationship between prices and war intensity is consistent with opportunity cost accounts, but not exclusively so. As we noted above, the relationship between intensity and extractive commodity prices is more consistent with the state capacity view. Moreover, we shouldn’t mistake an inverse relation between individual aggression and incomes as evidence for the opportunity cost mechanism. The same correlation is consistent with psychological theories of stress and aggression (Berkowitz 1993) and sociological and political theories of relative deprivation and anomie (Merton 1938; Gurr 1971). Microempirical work will be needed to distinguish between these mechanisms. Other reasons for a null result.—**Ultimately**, however, the fact that commodity **price shocks have no discernible effect on new conflict onsets**, but some effect on ongoing conflict, suggests that **political stability might be less sensitive to income or temporary shocks than generally believed**. One possibility is that successfully mounting an insurgency is no easy task. It comes with considerable risk, costs, and coordination challenges. Another possibility is that the counterfactual is still conflict onset. In poor and fragile nations, income shocks of one type or another are ubiquitous. **If a nation is so fragile that a change in prices could lead to war, then other shocks may trigger war even in the absence of a price shock**. The same argument has been made in debunking the myth that price shocks led to fiscal collapse and low growth in developing nations in the 1980s.19 B. A general problem of publication bias? More generally, **these findings should heighten our concern with publication bias in the conflict literature. Our results run against a number of published results on** commodity **shocks and conflict, mainly because of select samples, misspecification, and sensitivity to model assumptions, and, most importantly, alternative measures of instability.** Across the social and hard sciences, there is a concern that the majority of published research findings are false (e.g. Gerber et al. 2001). Ioannidis (2005) demonstrates that **a published finding is less likely to be true when there is a greater number and lesser pre-selection of tested relationships; there is greater flexibility in designs, definitions, outcomes, and models; and when more teams are involved in the chase of statistical significance. The cross-national study of conflict is an extreme case of all these.** Most worryingly, **almost no paper looks at alternative dependent variables or publishes systematic robustness checks**. Hegre and Sambanis (2006) have shown that the majority of published conflict results are fragile, though they focus on timeinvariant regressors and not the time-varying shocks that have grown in popularity. We are also concerned there is a “file drawer problem” (Rosenthal 1979). Consider this decision rule: scholars that discover robust results that fit a theoretical intuition pursue the results; but if results are not robust the scholar (or referees) worry about problems with the data or empirical strategy, and identify additional work to be done. If further analysis produces a robust result, it is published. If not, back to the file drawer. In the aggregate, **the consequences are dire: a lower threshold of evidence for initially significant results than ambiguous ones**.20

**Studies and 93 crises prove no war impact**

**Miller, 2k** (Morris, economist, adjunct professor in the University of Ottawa’s Faculty of Administration, consultant on international development issues, former Executive Director and Senior Economist at the World Bank, Winter, Interdisciplinary Science Reviews, Vol. 25, Iss. 4, “Poverty as a cause of wars?” p. Proquest)

The question may be reformulated. Do wars spring from a popular reaction to a sudden economic crisis that exacerbates poverty and growing disparities in wealth and incomes? Perhaps one could argue, as some scholars do, that it is some dramatic event or sequence of such events leading to the exacerbation of poverty that, in turn, leads to this deplorable denouement. This exogenous factor might act as a catalyst for a violent reaction on the part of the people or on the part of the political leadership who would then possibly be tempted to seek a diversion by finding or, if need be, fabricating an enemy and setting in train the process leading to war. According to a study undertaken by Minxin Pei and Ariel Adesnik of the Carnegie Endowment for International Peace, there would not appear to be any merit in this hypothesis. **After studying ninety-three episodes of economic crisis in twenty-two countries** in Latin America and Asia in the years since the Second World War they concluded that:19 Much of the **conventional wisdom** about the political impact of economic crises may be wrong ... The severity of economic crisis - as measured in terms of inflation and negative growth - bore no relationship to the collapse of regimes ... (or, in democratic states, rarely) to an outbreak of violence ... In the cases of dictatorships and semidemocracies, the ruling elites responded to crises by increasing repression (thereby using one form of violence to abort another).

**Countries turn inward – no fighting  
deMause 2** (Lloyd deMause**,** director of The Institute for Psychohistory, “Nuclear War as an Anti-Sexual Group Fantasy” Updated December 18th 2002**,** http://www.geocities.com/kidhistory/ja/nucsex.htm

**The nation "turns inward" during this depressed phase of the cycle. Empirical studies have clearly demonstrated that major economic downswings are accompanied by "introverted" foreign policy moods, characterized by fewer armed expeditions, less interest in foreign affairs in the speeches of leaders, reduced military expenditures, etc.** (Klingberg, 1952; Holmes, 1985). Just as depressed people experience little conscious rage--feeling "I deserve to be killed" rather than "I want to kill others" (Fenichel, 1945, p. 393)--**interest in military adventures during the depressed phase wanes, arms expeditures decrease and peace treaties multiply.**

**No causal relationship – ignores other variables**

**Ferguson 6** (Niall Ferguson (Laurence A. Tisch Professor of History at Harvard University and a Senior Fellow at the Hoover Institution at Stanford University) 2006 Foreign Affairs, September/October, Vol. 85, Issue 5

**Nor can economic crises explain** the **bloodshed. What may be the most familiar causal chain in modern historiography links the Great Depression to the rise of fascism and the outbreak of World War II. But that simple story leaves too much out.** Nazi **Germany started the war** in Europe only **after its economy had recovered. Not all the countries affected by the Great Depression were taken over by fascist regimes, nor did all such regimes start wars of aggression**. In fact, **no general relationship between economics and conflict is discernible for the century as a whole. Some wars came after periods of growth, others were the causes rather than the consequences of economic catastrophe, and some severe economic crises were not followed by wars.**

# AT Hijacking

**Tons of things prevent the impact to hijackings**

**Foss 06** Ph.D., Chief Energy Economist, CEE Head (Michelle, November 2006, “LNG SAFETY AND SECURITY,” Center For Energy Economics, Bureau of Economic Geology)//DR. H

**LNG ships are designed with a double hull. This design provides optimum protection for the integrity of the cargo in the event of collision or grounding as well as separate ballast.** Separate from the hull design, **LNG ships have safety equipment to facilitate ship handling and cargo system handling. The ship-handling safety features include sophisticated radar and positioning systems that enable the crew to monitor the ship’s position, traffic and identified hazards around the ship.** A global maritime distress system automatically transmits signals if there is an onboard emergency requiring external assistance. **The cargo-system safety features include an extensive instrumentation package that safely shuts down the system if it starts to operate outside of predetermined parameters**. Ships also have gas and fire detection systems, and nitrogen purging. **Should fire occur on a ship, two 100 percent safety relief valves are designed to release the ensuing boil off to the atmosphere without over-pressurizing the tank.**

**LNG ships use approach velocity meters when berthing to ensure that the prescribed impact velocity for the berth fenders are not exceeded.** When moored, **automatic mooring line monitoring provides individual line loads to help maintain the security of the mooring arrangement while alongside.** When connected to the onshore system, **the instrument systems and the shore-ship LNG transfer system acts as one system, allowing emergency shutdowns of the entire system from ship and from shore.**

# AT Leaks

**No leaks—even if there is one detectors check**

**Foss 06** Ph.D., Chief Energy Economist, CEE Head (Michelle, November 2006, “LNG SAFETY AND SECURITY,” Center For Energy Economics, Bureau of Economic Geology)//DR. H

**LNG transfer lines are designed to prevent releases.** Should there be a failure of a segment of piping at an LNG facility, a spill of LNG or leak of gas vapor could occur. **An LNG spill from a transfer line is very unlikely due to the design requirements for equipment, such as use of proper materials of construction, minimal use of bolted flanges and rigorous testing of LNG piping. Gas and fire detectors throughout the facility activate alarms and foam systems to ensure rapid dispersion or containment of gas vapors and any fire hazard.**

# \*\*\*Natural Gas Good

# Oil Dependence

**Natural Gas trades off with oil dependence**

**Evans 3/1** Pickens is Major Oil investor, 328th richest man in America (Huw, March 1, 2012, “Oil Addiction? T. Boone Pickens Thinks So,” <http://www.hybridcars.com/news/could-natural-gas-solve-our-oil-addiction-t-boone-pickens-thinks-so-42004.html)//DR>. H

Boone **Pickens**, a former geologist turned billionaire energy investor, **believes that one way America can reduce its dependence on foreign oil is to make use of the country’s abundant, cheap natural gas reserves.**

As such, he has set an example by driving a Honda Civic that runs on natural gas supplied from pipes that are used to fuel his home. **Given that the price of natural gas in America is at almost record low levels, it costs Pickens less than $1 per gallon in the car he uses to drive from his home to his office**. Meanwhile, **gasoline is approaching the $4 per gallon** national average we witnessed back in 2008.

Pickens endorses the Natural Gas Act, a bill with bipartisan support that would provide tax credits to convert commercial vehicles from diesel power to natural gas, with usage fees from the gas making up the shortfall in lost revenue.

Of it, he said that as Americans, **“we’re foolish not to take advantage of [the opportunity].”**

In a CNN interview Pickens said that **the U.S. has gone 40 years with no energy plan, yet given abundant natural gas reserves available, if one were put in place to capitalize on these resources, it would enable the country to essentially replace the entire five million barrels of oil currently supplied each day by OPEC.** This is especially true, he said, as **domestic gas reserves are three times the size of oil reserves in Saudi Arabia**, OPEC’s largest single producer of black gold.

**Considering the U.S. natural gas supply also represents approximately a quarter of America’s daily crude consumption, the savings**, at least in theory, **could be significant**, not only in terms of consumption but also financially. Pickens said he believes **greater natural gas consumption will likely ease demand for gasoline, while greater competition from a much cheaper alternative fuel will likely cause gasoline prices to drop.**

**Oil dependence causes extinction**

**Rosen 10** Mark Rosen (Deputy General Counsel at the Center for Naval Analyses & Professor of Homeland Security Law and Policy at George Washington University) 2010 “Energy Independence and Climate Change: The Economic and National Security Consequences of Failing to Act” University of Richmond Law Review, Lexis

There is a growing consensus in U.S. national security circles that American dependence on imported oil constitutes a threat to the United States because a substantial portion of those oil reserves are controlled by governments that have historically pursued policies inimical to U.S. interests. For example, Venezuela, which represents eleven percent of U.S. oil imports, "regularly espouses anti-American and anti-Western rhetoric both at home and abroad ... [and] ... promotes ... [an] anti-U.S. influence in parts of Latin and South America ..." 72 that retards the growth of friendly political and economic ties among the United States, Venezuela, and a few other states in Latin and South America. This scenario plays out in many different regions. Russia, for example, has used its oil leverage to exert extreme political pressure upon Ukraine and Belarus. 73 Longstanding Western commercial relations with repressive regimes in the Middle East - i.e., Iran, Sudan, and Saudi Arabia - raise similar issues because of the mixed strategic messages that are being sent. Of course, large wealth [\*989] transfers have allowed the Taliban in Saudi Arabia to bankroll terrorism. 74 A. Chokepoints and Flashpoints For the foreseeable future, the U.S. military will most likely be involved in protecting access to oil supplies - including the political independence of oil producers - and the global movements of using oil to help sustain the smooth functioning of the world economy. The security challenges associated with preserving access to oil are complicated by geographical "chokepoints," through which oil flows or is transported, but which are vulnerable to piracy or closure. 75 "Flashpoints" also exist as a result of political - and sometimes military - competition to secure commercial or sovereign access to oil in the face of disputed maritime and land claims that are associated with oil and gas deposits. Together, these challenges have necessitated that the United States and its allies maintain costly navies and air forces to protect sea lanes, ocean access, and maintain a presence to deter military competition in disputed regions. A selection of today's chokepoints and flashpoints follow. The Strait of Hormuz. This strait is the narrow waterway that allows access from the Indian Ocean into the Persian Gulf. Two-thirds of the world's oil is transported by ocean, and a very large percentage of that trade moves through Hormuz. The northern tip of Oman forms the southern shoreline of the strait. 76 Hormuz is protected by the constant transits of the U.S. Navy and its allies. Even though the strait has not been closed, the Persian Gulf has been the scene of extensive military conflict. 77 On September 22, 1980, Iraq invaded Iran, initiating an eight-year war between the two countries that featured the "War of the Tankers," in which 543 ships, including the USS Stark, were attacked, while the U.S. Navy provided escort services to protect tankers [\*990] that were transiting the Persian Gulf. 78 There have been past threats by Iran to militarily close the strait. 79 Additionally, there are ongoing territorial disputes between the United Arab Emirates and Iran over ownership of three islands that are located in approaches to the strait. 80 Closure of the strait would cause severe disruption in the movements of the world's oil supplies and, at a minimum, cause significant price increases and perhaps supply shortages in many regions for the duration of the closure. 81 During the War of the Tankers, oil prices increased from $ 13 per barrel to $ 31 a barrel due to supply disruptions and other "fear" factors. 82 Bab el-Mandeb. The strait separates Africa (Djibouti and Eritrea) and Asia (Yemen), and it connects the Red Sea to the Indian Ocean via the Gulf of Aden. The strait is an oil transit chokepoint since most of Europe's crude oil from the Middle East passes north through Bab el-Mandeb into the Mediterranean via the Suez Canal. 83 Closure of the strait due to terrorist activities or for political/military reasons, could keep tankers from the Persian Gulf from reaching the Suez Canal and Sumed Pipeline complex, diverting them around the southern tip of Africa (the Cape of Good Hope). 84 This would add greatly to transit time and cost, and would effectively tie-up spare tanker capacity. Closure of the Bab el-Mandeb would effectively block non-oil shipping from using the Suez Canal. 85 In October 2002 the French-flagged tanker Limburg was attacked off the coast of Yemen by terrorists. 86 During the [\*991] Yom Kippur War in 1973, Egypt closed the strait as a means of blockading the southern Israeli port of Eilat. 87 The Turkish Straits and Caspian Oil. The term "Turkish Straits" refers to the two narrow straits in northwestern Turkey, the Bosporus and the Dardanelles, which connect the Sea of Marmara with the Black Sea on one side and the Aegean arm of the Mediterranean Sea on the other. Turkey and Russia have been locked in a longstanding dispute over passage issues involving the Turkish Straits. 88 The 1936 Montreux Convention puts Turkey in charge of regulating traffic through the straits; 89 yet Turkey has been hard pressed to stop an onslaught of Russian, Ukrainian, and Cypriot tankers, which transport Caspian Sea oil to markets in Western Europe. 90 Because of the very heavy shipping traffic and very challenging geography, there have been many collisions and groundings in the past, creating terrible pollution incidents and death. 91 Thus far, none of these incidents have been attributed to state-on-state-conflict or terrorism; 92 however, the confined waterway is an especially attractive target because of the grave economic and environmental damage that would result from a well-timed and well-placed attack on a loaded tanker. The issues surrounding the straits are also a subset of larger problems associated with the exploitation of Caspian oil, including severe pollution of the Caspian Sea as a result of imprudent extraction techniques, as well as the ever-present potential for conflict among the various claimants to the Caspian's hydrocarbon resources due to an inability of the various Caspian littoral states to agree on their maritime boundaries - and their [\*992] legal areas in which to drill. 93 Any one of these problems could become a major flashpoint in the future. China vs. Japan. The Daiyu/Senkaku islands located in the East China Sea have become an increasingly contentious dispute because both claimants have, in the past, used modern military platforms to patrol the areas of their claims in which there are suspected oil and gas deposits in the seabed. 94 In September 2005, for example, China dispatched five warships to disputed waters surrounding its oil and gas platforms, which were spotted by a Japanese maritime patrol aircraft. 95 There have been other similar military-to-military encounters. 96 Given the fact that both countries have modern armed forces and are comparatively energy starved, it is not difficult to envision serious conflict erupting over these disputed areas. The Arctic Super Highway. Traditionalists would probably not include the Arctic as a security

chokepoint. The oil connection is reasonably well known: "22 percent of the world's undiscovered energy reserves are projected to be in the region (including 13 percent of the world's petroleum and 30 percent of natural gas)." 97 However, given the very small margins that transporters earn transporting oil from point A to B, 98 shipping companies are always in search of shorter routes to transport oil to market. As the thawing of the Arctic Ocean continues as a result of climate change, 99 this may create new shipping routes that transporters of [\*993] oil and other goods will use to maximize their profits and minimize their transit times. As supplies of readily exploitable crude oil are reduced, the probability increases that some of this trade will result from exploitation activities in the land and littoral areas adjacent to the Arctic Sea. This development is concerning for a number of reasons: (1) the area is very remote and could provide a safe haven to pirates seeking to hijack cargoes; (2) the environmental sensitivity of the area, and the concomitant difficulty of mounting a cleanup effort, means that an oil spill in that marine environment will be much more persistent than an oil spill in temperate waters; 100 (3) the Arctic presents unique navigational difficulties due to the lack of good charts, navigational aids, and communications towers, as well as the impacts of extreme cold on the operational effectiveness of systems; 101 (4) the unsettled nature of claims by various countries, including the United States, to the seabed continental shelf resources in the littoral areas off their coastlines creates the potential for military competition and conflict over these claims. 102 The International Maritime Organization ("IMO") is now circulating draft guidelines for ships operating in Arctic areas to promote - but not require - ship hardening against an iceberg strike, better crew training, and environmental protection measures. 103 These guidelines are merely advisory and can only be implemented via the flag states. 104 Also, neither IMO nor any of the UN Law of the Sea Institutions have mandatory jurisdiction over any of the flashpoint issues relating [\*994] to competing continental shelf claims in the Arctic, 105 meaning that any disputes will remain unresolved for a long time. The above is only a selected list of potential flashpoints in which oil is the main culprit. Disputes between China and six other nations of the Spratly Islands, and other territories in the South China Sea, remain unresolved. 106 The Spratly Islands could become a flashpoint in the future, involving the United States or its allies, because of the proximity of those areas to the major sea routes to Japan and Korea. 107 The strategic straits of Malacca, Lombok, and Sunda in Southeast Asia are absolutely essential to the movement of raw materials to Japan, Korea, and China. 108 Because of Lombok's depth and strategic location, it is a major transit route for very large crude carriers that move between the Middle East and Asia. 109 Lombok is an undefended waterway that is only eighteen kilometers in width at its southern opening, making it an attractive chokepoint for hijacking or eco-terrorism in which the waters of the environmentally sensitive Indonesian archipelago would be held hostage. 110

# Ext—Link

**Fracking allows us to shift away from oil**

**Patrick 4/26** Researcher for CDA Press(Sholeh, April 26, 2012, “Frack this gas, please,” <http://www.cdapress.com/columns/sholeh_patrick/article_e630834e-d556-5b3c-ae15-0815c88c061b.html)//DR>. H

It's a fracking alternative. No, Battlestar Galactica fans, that's not a reference to the show's cursing substitute. But **one way to get this nation away from foreign oil dependence is to frack this: Gas.**

**We've got tons of the stuff**; **482 trillion cubic feet of natural gas exists in the U.S.** according to Department of Energy estimates. **At current fuel consumption rates, that would keep us supplied for 90 more years.** After our government's recent announcement of another 10-year commitment to boost security in Afghanistan (even after the 2014 major withdrawal), securing the region's oil looks even less palatable.

So do prices. **With prices at the pump sticking close to $4 per gallon, about 60 cents for the gas equivalent to power a car is appealing**. To be fair, the price of **liquefied natural gas** fluctuates, but **it's still cheaper and much cleaner than oil.** Although like other extracted resources, it's not without its problems.

**Natural Gas trades replaces oil dependence**

**Ganos 1/3** ForbesStaff Writer (Todd, January 3, 2012, “Breaking U.S. Dependence On Foreign Oil,” <http://www.forbes.com/sites/toddganos/2012/01/03/breaking-u-s-dependence-on-foreign-oil/)//DR>. H

We’ve heard the beating of the drum time and time again**: “We must reduce our dependence on foreign oil.”** It forces us into poor economic, political, diplomatic, and military choices. But, **what are we really doing about it?**

In this column, I’ve discussed a widely accepted concept called “peak oil”. It is a logistics model that has been able to predict the point in time at which the maximum rate of extraction occurs for a specific well, a field, a region, or the world, after which extraction quickly declines. Under this model, it appears that peak oil for the world might well occur this decade. While the extraction of oil might decline, energy consumption certainly won’t. So, energy consumers will turn to different sources.

**Given a combination of factors – our nation’s infrastructure, domestic resources, technology, and environmental impact – it might be that natural gas is the natural choice.** Of course, we would want to ultimately move to zero-emission sources of energy, but we’re not there yet . . . at least our infrastructure and technology are not there yet.

U.S. crude oil consumption is roughly 7 billion barrels per year, of which approximately 4.5 billion barrels is imported. Based on data from the U.S. Energy Information Administration, **about 24 trillion cubic feet of natural gas per year would be needed to replace the 4.5 billion barrels per year we import.**

**The U.S. currently produces just under this amount each year. With an effective doubling of consumption of natural gas each year**, an expansion of infrastructure would be needed. Such an expansion might take ten years to implement. But**, it would be a shift from energy investment that we are already paying for outside the United States to energy investment inside the United States. This would likely have the effect of pulling jobs back into the U.S.**

**Various sources estimate that the U.S. has between 1.5 and 2.5 quadrillion cubic feet of natural gas reserves. If we were to assume its complete replacement of foreign oil,** this translates to a 60 to 100-year supply. Tacking on the additional ten years for implementation, what might technology yield in the 2080 to 2120 timeframe? I posit **that technology will yield a clean, green, cheap source of domestic energy that will once and for all put the issue to rest.**

So, **while natural gas certainly is not the final solution, it might well be the steppingstone that gets us there.**

# Russian Economy

**Turn—Natural Gas exports are key to Russia’s economy**

**Burke 3/1** Eurasia News (Justin, March 1, 2012, “Russia: Putinism and the Russian Economy,” <http://www.eurasianet.org/node/65070)//DR>. H

During his tenure in power**,** Russia has experienced robust economic growth and benefited from a favorable balance of trade, enabling the Kremlin to amass cash reserves of just over $505 billion, according to Central Bank statistics. But trade-surplus figures provide only a partial picture of the Russian economy, creating an illusion of economic health. Russian growth is overly dependent on the export of raw materials, especially oil & gas, but also including minerals, precious metals and timber.

During his first go-round as president, Putin spoke repeatedly of a need to transform Russia’s economy. In a May 2006 speech to the Federation Council, for example, he said his administration was already taking “concrete steps to change the structure of our economy, and turn it into an economy of [technological] innovation.” And on May 8, 2008, the day he stepped down from the presidency and returned to the post of prime minister, he announced the government’s “number one priority” was economic diversification via the “development of innovative industries.”

If figures compiled by Russia’s Federal Service for State Statistics (FSSS) are to be believed, Putin’s quest to create a knowledge-based, high-tech economy has been a dismal failure. Import-export data for the past 12 years shows that Russia’s role in the global economy remains that of raw materials supplier, and that the high price of oil & natural gas is all that stands in the way of Russia becoming a fiscal train wreck.

**Nuclear war**

**Filger 09** (Sheldon, author and blogger for the Huffington Post, “Russian Economy Faces Disastrous Free Fall Contraction” <http://www.globaleconomiccrisis.com/blog/archives/356>)

In Russia historically, economic health and political stability are intertwined to a degree that is rarely encountered in other major industrialized economies. It was the economic stagnation of the former Soviet Union that led to its political downfall. Similarly, Medvedev and Putin, both intimately acquainted with their nation’s history, are unquestionably alarmed at the prospect that Russia’s economic crisis will endanger the nation’s political stability, achieved at great cost after years of chaos following the demise of the Soviet Union. Already, strikes and protests are occurring among rank and file workers facing unemployment or non-payment of their salaries. Recent polling demonstrates that the once supreme popularity ratings of Putin and Medvedev are eroding rapidly. Beyond the political elites are the financial oligarchs, who have been forced to deleverage, even unloading their yachts and executive jets in a desperate attempt to raise cash. Should the Russian economy deteriorate to the point where economic collapse is not out of the question, the impact will go far beyond the obvious accelerant such an outcome would be for the Global Economic Crisis. There is a geopolitical dimension that is even more relevant then the economic context. Despite its economic vulnerabilities and perceived decline from superpower status, Russia remains one of only two nations on earth with a nuclear arsenal of sufficient scope and capability to destroy the world as we know it. For that reason, it is not only President Medvedev and Prime Minister Putin who will be lying awake at nights over the prospect that a national economic crisis can transform itself into a virulent and destabilizing social and political upheaval. It just may be possible that U.S. President Barack Obama’s national security team has already briefed him about the consequences of a major economic meltdown in Russia for the peace of the world. After all, the most recent national intelligence estimates put out by the U.S. intelligence community have already concluded that the Global Economic Crisis represents the greatest national security threat to the United States, due to its facilitating political instability in the world. During the years Boris Yeltsin ruled Russia, security forces responsible for guarding the nation’s nuclear arsenal went without pay for months at a time, leading to fears that desperate personnel would illicitly sell nuclear weapons to terrorist organizations. If the current economic crisis in Russia were to deteriorate much further, how secure would the Russian nuclear arsenal remain? It may be that the financial impact of the Global Economic Crisis is its least dangerous consequence.

# Ext—Link

**Reducing Natural Gas imports kill economies**

**Shannon 10** Associate Editor, Money Morning (Kerri, April 19, 2012, “Decline in U.S. Natural Gas Imports is Causing Panic in Leading Exporting Nations,” <http://moneymorning.com/2010/04/19/natural-gas-imports/)//DR>. H

**The world 's biggest natural gas exporters met today** (Monday**) in Algeria and agreed to index gas prices to oil as shrinking U.S. natural gas imports are causing a global supply glut.**

"All ministers agreed and supported that **we continue our efforts to achieve indexing gas to oil," said Russian Energy Minister** Sergei Shmatko.

The Gas Exporting Countries Forum (GECF) members include **Russia, Iran, Qatar and eight other nations** that hold two-thirds of the world 's gas reserves. They 've **watched gas prices fall nearly 50% in the past two years.** Current gas prices of $4 per million British thermal unit (BTU) are about 20 times lower than oil, but are usually around 10 times lower than oil.

**U.S. natural gas prices have fallen 28% since December as an increase in the U.S. shale rock gas supply has reduced the need for U.S. natural gas imports.** Shale rock gas is retrieved from tight rock formations and its U.S. boom led the country to extract more gas than Russia last year for the first time since 2001.

**Russia 's energy giant Gazprom has a five-year plan to take 10% of the U.S. natural gas market share, but U.S. shale gas exploration has put a damper on that goal.**

"The influence of shale gas raises the prospect of change on gas markets," Russian Natural Resources Minister Yuri Trutnev told Reuters. "**We have a problem with shale gas. This is not only my position, but the position of Gazprom as well."**

**As the United States becomes a less reliable consumer, gas suppliers aren 't having much luck replacing the lost business.**

# \*\*\*Neg

# No Impact—Asia Shift

**No impact – railroads can shift coal to Asia and turn to other products**

**Trefis 12**

[Led by MIT engineers and Wall Street analysts, analyses stockmarket, " EPA’s New Regulations Hit Railroad Companies, Could Boost Coal Exports," 3/30/12, http://www.trefis.com/stock/csx/articles/111130/epas-new-regulation-for-power-plants-hits-railroad-companies-could-bolster-coal-exports/2012-03-30]//SH

Last Tuesday, the U. S. Environmental Protection Agency (**EPA**) **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 (NYSE:CSX), Norfolk Southern Corporation (NYSE:NSC), and Union Pacific Corporation (NYSE:UNP) 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 with 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.

**No impact – railroads shifting coal to Asia**

**Resor 12**

[Felicia, law degree from Yale, "Heat Exchange," 5/22/12, http://wyofile.com/2012/05/heat-exchange-efforts-to-increase-wyoming-coal-exports-turns-the-heat-up-on-legal-challenges-to-impacts-both-local-and-global/]//SH

**While coal may be losing favor among U.S. utilities, it has been the fastest growing fuel source in the world for the past 10 years** or more — **and that’s not about to change.** U.S. coal production between 1950 and 2010 (U.S. Energy Information Administration — click to enlarge) While speaking at the Howard Weil Energy Conference in New Orleans in March, Peabody Energy **chairman and CEO** Gregory H. **Boyce** **alluded to a bright future for coal. “**Coal has been the fastest-growing major global fuel and is expected to become the world’s largest energy source,” Boyce told attendees. Boyce’s comments may seem a sharp contrast to recent U.S. headlines about coal. His message of strong growth in global coal demand came the same week the U.S. Environmental Protection Agency (**EPA**) **issued a new ruling limiting the volume of carbon dioxide** (CO2) **emissions from new fossil fuel-fired power plants** here in the United States. The rule, if instituted, all but guarantees utilities will stop building new coal-fired power plants until carbon capture and sequestration technologies reach commercialization — a prospect that remains 10 years or more away, according to experts. But **while the EPA’s ruling impacts coal consumption domestically, Boyce and his coal mining colleagues are focused on the bigger picture. “The seaborne coal market has exceeded 1 billion tons for the first time, and the cost of coal is just a fraction of global oil and liquefied natural** gas,” Boyce said in his New Orleans address. During complete combustion, each carbon atom in the fuel combines with two oxygen atoms in the air to make carbon dioxide. The addition of two oxygen atoms to each carbon atom forms carbon dioxide, which has an atomic weight of 44 — roughly 3.6667 times the atomic weight of the carbon (12).For example, subbituminous coal is on average 51% carbon, so the carbon in a short ton (2,000 pounds) weighs 1,020 pounds. The carbon dioxide emissions from burning a short ton of subbituminous coal are approximately 3,740 pounds, or about 3.67 times the weight of the carbon in a short ton of coal, and 1.87 times the weight of a short ton of coal. Information courtesy of U.S. Energy Information Administration. In a press release earlier this year, **Arch Coal’s president and CEO**, John W. **Eaves, expressed similar confidence in the growth of overseas coal markets**. He said part of Arch’s long-term strategy is to grow coal exports fourfold in the next decade, consistent with the view that global coal demand will persist. **From the** Powder River Basin **coal industry’s perspective, the new world market opportunity for their coal couldn’t come at a better time.** The U.S. Energy Information Administration (EIA) projects that coal consumption in the United States this year will fall below 900 million short tons for the first time since 1996. Additionally, a 2010 report by international investment broker Credit Suisse predicts domestic coal demand could drop by 15 percent to 30 percent over the next decade. **Domestic demand for coal is on the decline** — approximately 19.5 percent since 2005 — **because utilities are switching to cheaper natural gas, and because of pressure to curb a laundry list of pollutants** related to coal-burning. Coal releases higher levels of carbon dioxide (CO2) and conventional air pollutants (nitrogen and sulfur oxides, particulate matter) per unit of energy than either oil or natural gas. **Regardless of where consumed, coal-derived electricity accounts for 30 percent of worldwide** CO2 **emissions** contributing to global climate change. Mines in the Powder River Basin produced 451.7 million tons of coal in 2008, according to EIA. An estimated 749.6 million metric tons of CO2 will be released from the combustion of all this coal. This is equivalent to 35 percent of total CO2 emissions from domestic coal combustion in 2008, according to the U.S. Energy Information Administration. China-bound **In the next couple of years**, Powder River Basin **coal exports may not make up for expected losses** in the U.S. market, **but** mining **companies** here **intend to** eventually **meet all the Asian demand they can. Demand for coal in Asia is on the rise, and for a long time to come, according to experts.** In 2009 China overtook the U.S. as the world’s largest energy consumer. **Coal accounts for about 70 percent of China’s energy needs, and China’s demand for coal increased** at a rate of **9.7 percent from 2010 to 2011. India also has a growing demand, and since it has a much smaller domestic coal supply than China, India is heavily reliant on coal imports. Mexico, Canada, and Europe have been consistent importers of U.S. coal**, but the United States, historically, has exported only small volumes of coal to Asia. The U.S. has predominately exported bituminous coal from eastern mines because of higher Btu-heating value and lower transportation cost. The Powder River Basin’s 8,400-8,800 Btu coal won favor among U.S. utilities over higher Btu coals from the eastern U.S. only because of its low sulfur content — a characteristic made valuable by the EPA’s Acid Rain Program initiated in 1990. While prized among U.S. utilities, Powder River Basin coal was regarded as uncompetitive in the export market. But Btu content has become less of an obstacle to reach international markets, according to Jim Orchard, senior vice president of marketing and government affairs for Cloud Peak Energy, a Powder River Basin coal producer. At the Wyoming Infrastructure Authority meeting in Cheyenne earlier this month, Orchard said the Pacific seaborne coal market includes coals as low as 5,000 Btus. “And their average Btu is shifting down,” Orchard said. “And as time goes on I think we’ll be more of a higher Btu compared to Indonesia.” Today, 99 percent of sub-bituminous coal from Powder River Basin mines is still consumed domestically. Total U.S. coal exports to Asia grew 22.6 million short tons, or 176 percent, from 2009 to 2010. **Coal companies are increasingly looking to western mines to satisfy this demand**. “Powder River Basin **coal is the cheapest energy on the planet**,” University of Wyoming economics professor Timothy Considine told WyoFile. “**A billion people in the world who do not have access to electricity or potable water are going to need inexpensive power**,” Considine explained. **With Asian demand increasing, existing northwest ports have become attractive targets for expansions, and the coal industry is gunning for new coal ports. Railroads are also gearing up to boost coal transportation capacity from the Powder River Basin to western seaports**.

# Railroads Low Now—Transportation Bill

**Transportation bill kills railroads**

**Union Pacific Railroad 12**

[major railroad company, ” Kohl Files Antitrust Amendment - Take Action," date inferred from the bill they are talking about and the context of the card, http://www.uprr.com/employee/gotv/kohl\_antitrust.shtml]

As the Senate begins formal consideration of their transportation bill, Senator Herb Kohl (D-WI) has introduced his railroad antitrust bill, S. 49, as an amendment. **The** Senate’s **transportation bill**, called “**MAP-21,”** is being considered on the floor of the Senate, and Senator Kohl views this as an opportunity to **include** his **railroad antitrust legislation** in this larger bill. **Railroads are subject to most antitrust laws. The few, very limited antitrust exemptions applicable to railroads pertain only to conduct for which the** Surface Transportation Board (**STB) has regulatory authority over railroads**. Senator **Kohl’s amendment goes far beyond just repealing the railroads' limited exemptions. It would subject railroads to discriminatory provisions that do not apply to other regulated industries**. As written, **the bill would** essentially **destroy the judicially important doctrine of primary jurisdiction, which allows courts to refer matters back to the regulatory agency**, in this case, the STB. **Eliminating this doctrine could create a nightmare of patchwork regulation across the country. The amendment also eliminates necessary procedural protections for railroads when they set joint rates. The amendment would not simply look towards future events, but invite retroactive application of antitrust laws. It would allow antitrust suits against the railroads for previously approved rail transactions and conduct that were given full antitrust immunity by the government. Years of transactions and agreements could be unraveled.**

# Alt Cause

**Alt causes: weather, natural gas, and EPA regulations**

**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]

**Major weather trends can have a big impact on the industry**: A particularly cold winter can burn through coal stockpiles, while a warm one, like this year's, can lead to an excess supply. Acting U.P. President and CEO Jack Koraleski said that's part of the situation right now, but it's not the full story. Part two is the affordability of natural gas, which has dropped to the lowest prices in a decade as the supply of it has surged. "**Anybody who had the ability to either burn coal or gas is now burning gas**," Koraleski said. "Coal stockpiles start to build, people don't buy as much coal, we don't move as much coal because they're burning gas. Suann Lundsberg, a spokeswoman for BNSF Railway, which is owned by Omaha's Berkshire Hathaway, said her company's customers are reporting the same situation. "**We have seen some coal plants displaced by natural gas due to the lower heating demand, coupled with a strong natural gas supply**," she said. Meanwhile, **coal is losing favor among some users as the U.S. Environmental Protection Agency looks to tighten the rules surrounding power plant emissions. The Carbon Pollution Standard for New Power Plants, proposed late last month, wouldn't have an impact on existing power plants. But new facilities would have to limit their carbon output, encouraging noncoal sources of power**. Koraleski said that's a longer-term issue, but it bears watching closely now. **One option for railroads might be to put more of a focus on the coal export market.** It's not a huge business for U.P., but it's growing. Koraleski said 1 to 2 million tons of coal headed out of the country used to be typical in a year. In 2011, U.P. moved 5 million tons. "**If the coal isn't going to be consumed in the U.S., a lot of people in Asia and around the world would be very interested**," he said. Hatch said **that kind of flexibility will be key to railroads' ability to weather big changes in the coal industry**. U.P., he said, is positioned better than most railroads because it's not overly dependent on coal. Freight revenue from the railroad's energy division — which is primarily coal — was $4.1 billion last year, about 22 percent of the overall $18.5 billion freight revenue total. He said railroads in the eastern half of the country could be harder hit because coal from that region is seen as a bigger pollution problem. Koraleski said U.P. is seeing strong signs in other categories, from cars to lumber, which was up 12 percent in the first quarter. And he said U.P. and other railroads stand to benefit from some of the things that are contributing to the coal problem: materials associated with the natural gas coming from shale deposits.

# Squo Solves

**Railroads strong – other commodities picking up slack and will pick back up**

**Journal of Commerce 12**

[weekly magazine published in the United States that focuses on trade topics, "US Rail on Strong Track As Economy Slows," 6/11/12, http://www.joc.com/intermodal/us-rail-strong-track-economy-slows]

The **U.S. rail shippers don’t appear to heeding** the **warnings of a national economic slowdown. Intermodal volume** in May **on the major U.S. railroads hit the highest level in history** for that month, according to the Association of American Railroads. **Intermodal traffic last month was 3.5 percent higher** than the same month a year ago. **Although carload volume was down** 2.8 percent year-over-year in the same period, **the big losses were because of slumps in the major commodities of coal and grain. Sluggish grain shipments are more cyclical than a reflection of the health of the economy. And poor coal volume isn’t because utilities aren’t powering factories but because of a warmer-than-usual winter and increased federal regulatory pressure to burn natural gas rather than coal**. Besides, **most of the business categories tied to manufacturing saw healthy growth on major railroads** in May. **Petroleum and related products jumped 49.2 percent, reflecting the continued growth of the domestic energy industry. Primary metal products traffic rose 4.3 percent, and shipments of motor vehicles were up 27.7 percent from a year ago.** The only worrying decline was an 11.8 percent drop in chemical shipments.

# \*\*\*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

# Neg

# Solvency—States

**No regulations**

**MRSC 12** Dependable advice from a multidisciplinary team of professional consultants, access to the largest local government library collection in the Northwest.(Municipal Research and Services Center of Washington, 09/2012, “Planning Near Pipelines,” <http://www.mrsc.org/subjects/pubsafe/transpipes.aspx)//DR>. H

**There are no federal or state regulations concerning what land uses are appropriate on lands in the vicinity of transmission pipelines.** This is a matter of local government control. Unfortunately, even after the Bellingham tragedy, **cities and counties have avoided establishing land use development procedures and regulations that take into account the risks presented by transmission pipelines.** As urban uses and development expand into areas where existing transmission pipelines are situated, or where new pipelines are being proposed, local government officials need to acknowledge, discuss and address the risks that transmission pipelines pose to our communities, as well as the risks that increased human activities pose to the integrity of these pipelines.

**USFG models the states government**

**Monast et al 11** Director, Climate and Energy Program of the Nicholas Institute at Duke (Jonas J. Monast, Brooks Rainey Pearson, and Lincoln F. Pratson, August 1, 2011, “A Cooperative Federalism Framework for CCS Regulation,” Environmental & Energy Law & Policy Journal of the University of Houston Law Center)//DR. H

The status of state policy on CCS is important because **in the absence of federal legislation, states are setting precedents and creating a regulatory structure in which CCS will operate.** Left unaddressed, **the inconsistency of state regulations could drive up the transaction cost of CCS for industry and create an inefficient regulatory environment.** At the same time, however, these existing **state laws may provide a model for federal legislation. State actions regularly inform federal action**, as the United States has a unique history of allowing states to act as laboratories for innovation. California’s tailpipe emissions standards are a recent example of this type of collaboration designed to limit GHG emissions from vehicles. **The federal government used California’s emissions standards as an example in setting the federal standards. It is likely the federal government will exemplify the most effective CCS regulatory measures from state legislation when crafting a federal regulatory structure.**

# Solvency—Compacts

**Interstate compacts are promising for national conflicts**

**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

Over the 205 years of the nation's constitutional history, **the use of compacts, expectations for them, and evaluations of them have varied sharply.** Infrequently used for many years, early compacts were rarely concluded between states not having contiguous territory. By the 1960s, they were praised as a way for the states to protect their power in the federal system.' In the 1970s, they were similarly seen as a possible "counterbalance to federal activity."2 More **recently, in pointing to the resurgence of state governments and the moderate decentralization in the federal system**, scholars have suggested that **the interstate compact is a vehicle which shows "unusual promise for resolving national-state and interstate conflicts and problems ... in intergovernmental relations."**3

**State compacts solve**

**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 use of compacts over the years shows an uneven pattern. Although compact growth has varied notably by decade, **states have continued to propose, discuss, and enact bi-state, regional, and nationwide compacts**. Thus, even on the basis of this preliminary investigation, it is **possible to say that interstate compacts continue to be a viable instrument of cooperation and offer a potential tool for problem resolution between states in the federal system today. Many state officials** across the country seem to **see the compact as a feasible method of taking interstate actions that cover functions from environmental protection to transportation regulation**, from provision of services to criminal justice activities, and from the traditional areas of boundary resolution to regulation of rivers and river resources. In addition, **continuing cross-state metropolitanization necessitates interstate agreements, especially for transportation in those areas**

**Compact violation has severe consequences**

**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

Basically, **the compact is a legal agreement between two or more states entered into in order to deal with a problem or concern that crosses state boundaries.** Because of its contractual nature, **a compact takes precedence over prior law and over legislation** that may later be enacted by member states. Because a compact is also a contract between the participating states, it differs from other statutes. As a contract, **an interstate compact is binding on member states in the same manner as any other contract entered into by an individual or corporation.** Once entered into, **compacts cannot be unilaterally amended or repealed**; they are binding on all citizens of the signatory states. **If a state violates** or fails to honor the terms of **a compact**, an offended state or **states may sue in state or federal court.** Which judicial forum is used depends on the presence of stipulations in the document and on whether congressional approval was necessary. In the latter case, **the issue would likely be taken up in the U.S. district court for the relevant district.**

# FERC Fails/Unpopular

**FERC is atrocious**

**Lieberman 02** Senate Hearing**,** Senate Homeland Security and Governmental Affairs Chairman (Joe, November 12, 2002, “Asleep at the Switch: FERC’s Ovevrsight of Enron Corportation,” Volume 1, Government Printing Office, <http://www.gpo.gov/fdsys/pkg/CHRG-107shrg83483/html/CHRG-107shrg83483.htm)//DR>. H

In these four cases, FERC's oversight ranged from naive, at best, to negligent, at worst, and they lead me to offer the following five observations.

First, the agency more often than not trusted Enron's assertions rather than questioning them. Indeed, in some cases, FERC failed to pursue questions even after Enron had presented specific evidence of potential abuses in documents Enron submitted directly to the agency. For example, when Enron applied to FERC for special permission to charge customers higher energy rates through a number of wind farms that it had acquired, and it in its application included many details that constituted red flags, or should have, at FERC, the agency failed to subject that application to anything but a superficial review.

Under the special rate arrangement, Enron itself was not permitted to own wind farms, but in its application, Enron told FERC that it was providing the financing to the new owner of the projects, that Enron would retain a right to repurchase the projects, and that Enron would indemnify the new owner for tax liabilities incurred when it was repurchased. In other words, FERC was told many things that should have made Enron's contention that it did not own the wind farms highly suspect. Yet, despite seeing all this information which was included in Enron's application, FERC approved the ownership arrangement and the special rate status was granted to Enron, and that meant that Enron was able to charge customers higher energy rates than they were allowed to otherwise under law.

Then, when Enron sought to have the special rate status extended, it submitted a self-recertification, which, like all such self-certifications that FERC receives, was never looked at or reviewed. The folks at FERC simply filed the application away and allowed Enron thereby to claim the special status for an additional period of time. Only after this Committee's investigation raised questions about FERC's handlings of these transactions did FERC open an investigation into Enron's original claims.

Congress obviously did not create and empower and fund the Federal Energy Regulatory Commission so that it could be a filing cabinet. We created it to protect consumers, to ensure just and reasonable energy rates, and to level the playing field for all businesses and utilities. Those purposes are, of course, more crucial than ever in the newly deregulated energy markets.

Second, the agency failed to anticipate or prepare for changes occurring in the energy markets, which are among the most volatile and rapidly evolving sectors of our economy. Americans depend on our regulatory agencies to keep the economy fair and efficient, to anticipate major developments, and to stay on top of where those markets they monitor are headed.

Despite the fact that Enron Online and other electronic trading platforms had grown into a powerful force by the year 2000 and were expected to dominate energy trading, FERC failed to even complete a basic study of whether regulating those platforms was its job or the job of another governmental agency, in this case, probably the Commodity Futures Trading Commission. Without even that critical step completed, FERC and the rest of the Federal Government could not begin to develop any long-term public policy strategy about how to keep these emerging market tools fair and efficient.

Third, FERC reacted belatedly to many serious offenses, letting possible market abuses go uncorrected and unchallenged for many months. Too often, in place of effective oversight, the agency offered timid hindsight. For instance, in November 2000, a FERC staff investigation into the causes of the California energy crisis concluded that power sellers had the potential to manipulate the power market. I'm tempted to add to my prepared statement what my teenage daughter would say here, duh, right?

After coming to that obvious conclusion, which cried out for immediate follow-up, FERC took over a year to launch an investigation into the market behavior of individual companies during the California energy crisis, and that was only after Enron actually collapsed in early December of last year. Energy consumers on the West Coast should have had the Federal Government on their side during the energy crisis in 2000, not 6 months or a year later.

And the companies who may have tried to manipulate the market, or, in fact, any who may be thinking about doing it in the future, need to understand that FERC will be a sophisticated and sharp watchdog, not a listless and lackadaisical bystander.

Of course, this is made all the more clear and compelling by the recent plea of guilty by the head of trading for the Western markets for Enron in regard to--and we'll get into this in further detail--in regard to manipulation of the markets that he, as a significant employee of Enron's, was involved in.

Remember, FERC is the regulatory agency that led the movement toward widespread deregulation of the energy business. Of course, there was plenty of support for the deregulation in the private sector. But FERC was a supporter, and, therefore, it makes it particularly ironic, and I would say irresponsible, that FERC exhibited little or no vigilance to ensure that participants obeyed at least minimal rules of fair play in the deregulated marketplace.

FERC often seemed to view itself not as a regulator but as a facilitator, not as a market cop but as a market cheerleader, and that left consumers **with nothing to cheer about.**

When market players are given unprecedented latitude in a previously regulated market, there must be some effective checks and balances. No matter how passionately we believe in competition and capitalism as the best system for economic growth and opportunity, the invisible hand cannot do it all. We have seen this over our history, over and over again. The fact is that markets inherently have no conscience. To ensure the integrity of our markets, the invisible hand needs to be assisted by the fair hand of government oversight in the public interest and private sector self-regulation.

Fourth, FERC made no effort to address the gaps, flaws, and inadequacies in the regulatory structure that allowed Enron's most questionable business practices to go without scrutiny. For example, Enron had applied to the SEC requesting a special exception to the Public Utility Holding Company Act. Under FERC's rules, simply requesting such an exception allowed Enron to repurchase a number of its wind farms while retaining that special rate status I referred to earlier, and apparently allowed it to earn tens of millions of dollars above what it would otherwise have earned from those projects.

For more than 2\1/2\ years, the SEC sat on the application without reviewing it. Did anyone at FERC pick up the phone and ask the SEC about the status of those applications? Did these two lead regulatory agencies, FERC and the SEC, ever talk to each other about these applications? To the best of our staff's ability to find an answer to those questions, the answer is a disquieting one, which is no.

It's frustrating enough when major market abuses escape government regulation because perpetrators are crafty enough to fly under the government's radar, but it is really infuriating when clear signals are right there on the screen and the people manning the stations do not see them or keep their eyes closed. FERC and the SEC had the opportunity, indeed the responsibility, to close that regulatory gap and did not.

Fifth**,** FERC all too often relied on shortcuts and **cursory analysis** of the markets to come to overly optimistic conclusions about the potential effects of market manipulation.

**FERC action faces backlash—strips Obama’s power and no authority for pipes**

**Wingfield 2/10** Bloomberg’s Business Week(Brian, February 10, 2012, “Republicans Advance Bill to Push Keystone XL Over Obama’s Denial,” <http://www.businessweek.com/news/2012-02-10/republicans-advance-bill-to-push-keystone-xl-over-obama-s-denial.html)//DR>. H

Feb. 8 (Bloomberg) -- U.S. House Republicans advanced legislation stripping President Barack Obama’s power for TransCanada Corp.’s Keystone XL pipeline and giving authority to the Federal Energy Regulatory Commission.

The Energy and Commerce Committee voted 33-20 yesterday for legislation that would require FERC to approve the $7 billion project within 30 days, provided the project is deemed safe.

Republicans want to begin work on the 1,661 mile (2,673 kilometer) oil pipeline from Alberta, Canada, to the U.S. Gulf Coast. Obama in November delayed work to consider an alternate route. The House panel plans to add the bill to a measure on energy and infrastructure, with a vote planned this month.

“The president left us no choice” because the review of pushes a final decision until after the presidential election, Representative Lee Terry, a Nebraska Republican and the bill’s sponsor, said at today’s meeting.

Pipeline backers, including labor unions, have said the project may create as many as 20,000 jobs. The Keystone project threatens to contaminate drinking-water supplies in the Sand Hills region of Nebraska, environmental groups including the Sierra Club of San Francisco say.

The House measure “simply turns FERC into a yes-man” for Keystone, Representative Henry Waxman, a California Democrat and committee member, said.

Markey Defeated

The Energy and Commerce Committee defeated a proposal from Representative Edward Markey, a Massachusetts Democrat, to prevent most oil and bitumen transported by the pipeline from being exported after arriving on the Gulf Coast. The Republican- led panel also rejected an amendment by Representative Bobby Rush, an Illinois Democrat, that would have barred Calgary-based TransCanada from seizing private land for the pipeline using the government’s powers.

Terry’s bill would strip the Interior Department and U.S. Army Corps of Engineers from their oversight authority for the pipeline, officials from the two agencies told a House subcommittee Feb. 3.

The measure raises “serious questions” about legal authority, Kerri-Ann Jones, a State Department assistant secretary, said at a hearing Jan. 25. FERC doesn’t have the authority to act on the location of pipelines, and the bill’s 30-day deadline doesn’t allow enough time to review the project, Jeffrey Wright, FERC’s director of the Office of Energy Projects, said.

“What bothers me is how roughshod this is,” Representative Anna Eshoo, a California Democrat, said of Terry’s legislation. “No matter what the facts are, they don’t matter.”

**FERC is in the middle of the Keystone debate**

**Swift 5/3** Attorney, International Program(Anthony, May 3, 2012, “Understanding the Keystone XL tar sands pipeline approval provision in the transportation bill,” <http://switchboard.nrdc.org/blogs/aswift/house_puts_partisanship_and_an.html)//DR>. H

The House is once again jeopardizing an important transportation bill by attaching non-related amendments, including a measure that would approve the Keystone XL tar sands pipeline that the President rejected in January. The bill is going into conference next week and many Senators have already spoken out strongly against having Congress approve the Keystone XL tar sands pipeline. The House Keystone XL provision seems to rely on the Federal Energy Regulatory Commission (FERC), but really is a vehicle for Congress to rubber-stamp this dirty energy project without a process to assess the threat to our land, water, health, climate, economic well-being and security. Keystone XL would bring tar sands oil from Canada to the Gulf Coast for export. It would raise U.S. oil prices, put our waters and farms in jeopardy of hard to clean up tar sands oil spills, and would increase our dependence on oil – worsening climate change and undermining efforts to move to clean energy. A dirty energy project like Keystone XL has no place in the transportation bill.

So, let’s unpack what the provision to approve Keystone XL is all about: The House Federal Highway Extension bill, H.R.4348, contains a provision which would require the Federal Energy Regulatory Commission (FERC) to approve a permit for the Keystone XL tar sands pipeline. This provision is a slightly modified version of H.R. 3548, a bill introduced by Rep. Lee Terry late in 2011. While the Senate passed a bipartisan transportation bill, the House was only able to pass this ninety-day extension for transportation funding. And they used it as a place for non-related, partisan amendments such as approval of the Keystone XL tar sands pipeline.

Like the Terry bill, the Keystone XL tar sands pipeline approval provision in H.R. 4348 would:

Give FERC 30 days to approve a permit for Keystone XL without additional conditions. In absence of FERC action, the permit will be granted by Congressional authority after 30 days.

Give FERC 30 days to conduct a NEPA review and approve a route modification through Nebraska. In absence of FERC action, the Nebraska route will be automatically approved within 30 days.

Suspend the national interest determination process required for transboundary energy projects in Executive Order 13337 and any further environmental review of or public participation in the project under the National Environmental Policy Act (NEPA).

**FERC has no credibility or confidence**

**CFA 02** (The Consumer Federation of America, October 8, 2002, “Opposition to FERC proposal reflects fundamental economic characteristics, consumer report contends,” <http://www.power-eng.com/articles/2002/10/opposition-to-ferc-proposal-reflects-fundamental-economic-characteristics-consumer-report-contends.html)//DR>. H

The report argues that because deregulation of markets in the West and South would provide opportunities for transmission owners and power generators to exploit and manipulate the system, it is especially important to consumers in these regions for the FERC to have a highly developed and credible plan for preventing abuse.

Such a plan requires a clear definition of abuse, strong penalties, and a vigorous enforcement mechanism.

According to the report, in the FERC design, the agency defines market power with a complex array of potentially conflicting measures that could lead to indecisiveness. The report also said that FERC has not yet adopted a precise benchmark cost standard, based on the actual cost of production, against which overcharges should be measured. In addition, it contends that penalties are left to transmission organizations that haven't yet been formed.

The report claims that FERC's handling of the California crisis has destroyed its credibility as a consumer protection agency and it has done little to restore confidence in its abilities to enforce the law.

"FERC's own studies show that there is little to be gained from reliance on market-based regional transmission organizations," states Dr. Cooper. "This paper shows that in the South and West, there is a lot to be lost in terms of increased prices and monitoring to prevent market abuses is not the solution."

**FERC is controversial**

**Pechman 08** Economist and the founder of the energy consulting firm Power Economics (Carl, February 12, 2008, “Cleaning up FERC's mess,” <http://election.sfbg.com/2008/02/12/cleaning-fercs-mess)//DR>. H

In the late 1980s, Federal Energy Regulatory Commission member Charles Trabant warned that "the only thing that we have to fear is FERC itself." He was speaking about his agency's aggressive policy of preempting state regulatory powers — and undermining the rights of consumers — to encourage utility competition. This spring the Supreme Court will decide whether or not Trabant was right.

FERC's response to the California energy crisis was too little too late.

At the height of the crisis FERC urged the state and many utilities — desperate to reduce the immediate cost impact of the crisis — to purchase long-term power supply contracts. Energy traders call this type of transaction "blend and extend" because the contract is a mix of short- and long-term prices. During this period, California and many utilities followed FERC's advice and took advantage of this form of contract with the objective of extending the contracts long enough to keep short-term prices down. One utility, for example, tried to limit prices to a 35 percent rate increase. While the immediate effect was to reduce prices, sellers ended up gaining crisis-related scarcity profits over the longer term of the contract.

After the crisis abated FERC found that short-term prices — including those that had been used in many utilities' blended contracts — were unjust and unreasonable and ordered sellers to refund revenues that exceeded an administratively determined just price. However, FERC denied the pleas of the state of California and others for adjustments to long-term contract prices. Ironically, it did so based on a "public interest standard," a financial test that considers the welfare of sellers but not that of customers. The public interest standard evolved to enable sellers to unilaterally raise a contract price that is below cost in order to avoid financial harm. Clearly, these were not the circumstances facing those who purchased power to temper customer costs. FERC just reckoned that the price would be passed on to customers.

The federal courts overturned the FERC decision. The 9th Circuit Court of Appeals found that FERC's oversight was "fatally flawed" and "offers no protection to purchasers victimized by the abuses of sellers or dysfunctional market conditions that FERC itself only notices in hindsight."

Electricity sellers, supported by FERC, have persuaded the Supreme Court to review the 9th Circuit's ruling. Amicus briefs before the Supreme Court paint a dark picture of unwilling investors not providing the capital necessary to maintain reliable electric systems.

The merchant energy sector experienced a severe credit and liquidity crisis in 2002. According to Moody's Investors Service, the crisis was not caused by regulators' protecting customers but was due to energy trading having a flawed business model that lacked investment-grade characteristics. The market was taught an expensive lesson with the bankruptcies of Pacific Gas and Electric Co., Enron, Mirant Corp., Calpine, and NRG. During this process, however, bankrupt power generators such as Mirant, the owner of the Potrero Hill power plant in San Francisco, used bankruptcy protection to modify contracts to generate value for their creditors.

Creditors have protection in the new competitive markets. Now it is time for the Supreme Court to protect customers too, by enforcing the Federal Power Act as it was written by Congress.

**Recent events prove FERC is controversial**

**Martin 12/14** (Aaron, December 14, 2011, “Congressman Hurt hopes new bill will prevent future dock fights,” <http://www2.wsls.com/news/2011/dec/14/congressman-hurt-hopes-new-bill-will-prevent-futur-ar-1544538/)//DR>. H

SMITH MOUNTAIN LAKE, VA -- It took nearly a year and $10,000 in legal fees for Waterfront Condominium residents in Smith Mountain Lake to ensure their docks wouldn't be removed by the Federal Energy Regulatory Commission, better known as FERC.

But while their fight is over, the issue is taking a much bigger stage.

Six weeks ago FERC backed off its stance that the docks at the condominium complex had to be torn down.

But thanks in part to the noise made by several of these condominium owners this issue will now be taken up in Congress.

# Environmentalists

**FERC’s going down—Environmentalists hate MARC I pipeline**

**Needles 7/2** The Legal Intelligencer (Zack, July 2, 2012, “Ruling in pipeline case suggests Federal Energy Regulatory Commission may accept less strict review,” <http://www.post-gazette.com/stories/business/legal/ruling-in-pipeline-case-suggests-federal-energy-regulatory-commission-may-accept-less-strict-review-642885/)//DR>. H

Energy and environmental lawyers across the state said a recent ruling by the U.S. Court of Appeals for the Second Circuit giving the go-ahead to construction of a 39-mile long, 30-inch wide natural gas pipeline through northern Pennsylvania provides some guidance as to the Federal Energy Regulatory Commission's standard of review.

A number of environmental groups had opposed FERC's order granting Central New York Oil and Gas Co. permission to build the pipeline, known as the MARC I, claiming the commission did not examine closely enough the possible environmental impact of the project.

Coalition for Responsible Growth and Resource Conservation v. FERC plaintiffs alleged that the agency failed in determining an environmental impact statement was unnecessary.

**Environmentalists are key to the Agenda**

**Williams 08** Doctorate and Masters in Economics, Distinguished Professor of Economics, More than 50 of his publications have appeared in scholarly journals, Received the National Fellow at the Hoover Institute of War, Revolution, and Peace; the Ford Foundation Dissertation Fellowship; the National Service Award from the Institute for Socioeconomic Studies; and the George Washington Medal of Honor from the Valley Forge Freedom Foundation. In 1984-1985, he received the Faculty Member of the Year Award from the George Mason University Alumni. He is also a member of the American Economic Association, the Mont Pelerin Society and is a Distinguished Scholar of the Heritage Foundation, participates in many debates and conferences, is a frequent public speaker and often gives testimony before both houses of Congress (Walter, July 30, 2008, “Environmentalists' Hold on Congress,” <http://townhall.com/columnists/walterewilliams/2008/07/30/environmentalists_hold_on_congress/page/full/)//DR>. H

Let's face it. The average individual American has little or no clout with Congress and can be safely ignored. But it's a different story with groups such as Environmental Defense Fund, Sierra Club and The Nature Conservancy. When they speak, Congress listens. Unlike the average American, they are well organized, loaded with cash and well positioned to be a disobedient congressman's worse nightmare. Their political and economic success has been a near disaster for our nation.

For several decades, environmentalists have managed to get Congress to keep most of our oil resources off-limits to exploration and drilling. They've managed to have the Congress enact onerous regulations that have made refinery construction impossible. Similarly, they've used the courts and Congress to completely stymie the construction of nuclear power plants. As a result, energy prices are at historical highs and threaten our economy and national security.

What's the political response to our energy problems? It's more congressional and White House kowtowing to environmentalists, farmers and multi-billion dollar corporations such as Archer Daniels Midland. Their "solution," rather than to solve our oil supply problem by permitting drilling for the billions upon billions of barrels of oil beneath the surface of our country, is to enact the Energy Independence and Security Act of 2007 that mandates that oil companies increase the amount of ethanol mixed with gasoline. Anyone with an ounce of brains would have realized that diverting crops from food to fuel use would raise the prices of corn-fed livestock, such as pork, beef, chicken and dairy products, and products made from corn, such as cereals. Ethanol production has led to increases in other grain prices, such as soybean and wheat. Since the U.S. is the world's largest grain producer and exporter, higher grain prices have had a huge impact on food prices worldwide.

Congress and the environmentalists aren't through with us. If you're bothered by skyrocketing food and energy prices, wait until Congress re-introduces its environmentalist-inspired Climate Security Act, so-called "Cap and Trade." Cap and Trade is deceptively peddled as a free-market solution to the yet-to-be-settled issue of manmade climate change. Under its provisions, companies would be able to emit greenhouse gases only if they had a government allowance. The Congressional Budget Office estimates that a 15 percent cut in emissions would raise the annual average household's energy costs by $1,300. Since energy is an input to everything we use, we can expect everything to become more costly, resulting in a reduction in economic growth.

There's a hateful side to Cap and Trade that's revealed by asking the question: How will it be decided who received how much allowance to emit greenhouse gases? Congress could sell the allowances and/or give them away to favorite constituents. You can bet the rent money that a new army of lobbyists, with special pleadings, will descend on Washington to lobby Congress. And you can be sure that campaign contributions and favoritism will play an important role in the decision of who received what amount of allowances.

Much worse than that is the massive control government would have over our economy and our lives. Congress might decide that since tobacco use is unhealthy, it might not issue allowances to tobacco companies. While many Americans might applaud that, how many would like Congress to refuse to issue allowances to companies that produce foods that some people deem unhealthy such as French fries, sodas, canned soups and potato chips. Congress might deny, or threaten to deny, allowances to companies that in their opinion didn't hire enough women and minorities. The possibilities for control over our lives would be endless and could include nuisance-type edicts such a requiring us to buy a permit to barbeque in our backyard.

The thirst to wield massive control over our economy helps explain the near religious belief in manmade global warming and the attacks on scientists and others who offer contradictory evidence.

**Environmentalists are key to the agenda**

**Loris 08** Policy Analyst for Heritage, Studies energy, environment and regulation issues such as the economic impacts of climate change legislation (Nicolas Loris, August 4, 2008, “When Environmentalists Speak, Congress Listens,” The Foundry, <http://blog.heritage.org/2008/08/04/when-environmentalists-speak-congress-listens/)//DR>. H

The problem with environmental extremists is that they are not really pro-environment, they’re anti-energy and anti-progress, and for years these groups have been some of the most influential people in U.S. policy circles. Walter Williams reminds us that they “are well organized, loaded with cash and well positioned to be a disobedient congressman’s worse nightmare. Their political and economic success has been a near disaster for our nation.”

As Dr. Williams explains, two energy sources that we could have readily available today if not for the environmentalist movement is oil from offshore and federally restricted lands and more nuclear power.

When gas prices were near $1 a gallon around the year 2000, it was easier for Members of Congress to listen to environmental activists’ pleas to restrict domestic land that has approximately 30 years’ worth of imports from Saudi Arabia and enough natural gas to power America’s homes for 17 years. Even as prices continued to escalate, the environmentalists worked Congress over to keep the restrictions in place. And here we are today, with the national price of gas at $4 a gallon, and Nancy Pelosi is still shutting the door on the drilling debate.

The second major source of power that environmentalists have stymied is nuclear power. Although 104 reactors provide 20% of the nation’s electricity, it could have been much more. Heritage Research Fellow Jack Spencer writes,

Anti-nuclear groups used both legal intervention and civil disobedience to impede construction of new nuclear power plants and hamper the opera­tions of existing units. They legally challenged 73 percent of the nuclear license applications filed between 1970 and 1972 and formed a group called Consolidated National Interveners for the specific purpose of disrupting hearings of the Atomic Energy Commission. Today, activist organizations determined to force the closure of nuclear power plants, such as Mothers for Peace, continue to use the legal process to harass the nuclear energy industry.”

To make matters worse, Members are using the tried and failed policies of the past to make amends for conceding to the environmentalists. Then there’s the cap-and trade legislation that has been proposed to combat global warming where companies would receive allowances to emit carbon dioxide and other greenhouse gases. While it’s often marketed as the free market solution to global warming, Dr. Williams illustrates how it could be one of the largest command and control policies of our time:

Much worse than that is the massive control government would have over our economy and our lives. Congress might decide that since tobacco use is unhealthy, it might not issue allowances to tobacco companies. While many Americans might applaud that, how many would like Congress to refuse to issue allowances to companies that produce foods that some people deem unhealthy such as French fries, sodas, canned soups and potato chips. Congress might deny, or threaten to deny, allowances to companies that in their opinion didn’t hire enough women and minorities. The possibilities for control over our lives would be endless and could include nuisance-type edicts such a requiring us to buy a permit to barbeque in our backyard.”

# \*\*\*Deforestation Updates

# Neg

# Deforestation Bad—Laundry List

**Deforestation destroys biodiversity, natural resources, habitats, the economy, agriculture, and triggers warming**

**Makki 09** (Shiva, August 25, 2009, “Deforestation: Disastrous consequences for the climate and for food security,” <http://blogs.worldbank.org/climatechange/deforestation-disastrous-consequences-climate-and-food-security)//DR>. H

Deforestation devastates biodiversity and natural habitats and degrades natural resources. In the developing world, 1.6 billion people depend on forests for their food, fuel, and livelihoods. The real economic value of forests is much greater than the short-term benefits of logging or clearing land for agriculture. In the longer run, the loss of biodiversity, habitat, and natural resources will affect food production in both developed and developing countries.

But the most serious consequences of them all may be global warming. Almost 20 percent of all global carbon dioxide emissions are caused by deforestation. This harmful reinforcing sequence of deforestation and climate change not only puts the global food production system at risk but also impedes our ability to maintain a healthy society. Time is fast running out to save tropical and other forests. Only a concerted effort involving scientists, policy makers, and civil society will avoid this dangerous trend.

# Deforestation Bad—Biodiversity

**Deforestation kills biodiversity**

**ET no date** an international network of industry professionals and business leaders(Ecotourism, “CONSEQUENCES OF DEFORESTATION,” [www.ecotourism.org.hk/.../Consequences%20of%20deforestation.doc)//DR](http://www.ecotourism.org.hk/.../Consequences%20of%20deforestation.doc)//DR). H

Probably the most serious and most short-sighted consequence of deforestation is the loss of biodiversity**.** The antiseptic phrase "loss of biodiversity" masks the fact that the annual destruction of millions of hectares of tropical forests means the extinction of thousands of species and varieties of plants and animals, many of which have never been catalogued scientifically. How many species are lost each year? The exact figure is not known, a consequence of our limited knowledge of tropical forest ecosystems and our inadequate monitoring systems. Some estimates put the annual loss at 50,000 separate species but this is an educated guess at best. Fragmented stands of trees left during deforestation are usually not large enough to be self-perpetuating in terms of maintaining even an altered balance of biodiversity. Deforestation is eroding this precious resource of biodiversity.

**Extinction**

**Diner 94** (Major David, Instructor at the US Army JAG School, 143 Mil. L. Rev. 161)

The prime reason is the world's survival. Like all animal life, humans live off of other species. At some point, the number of species could decline to the point at which the ecosystem fails, and then humans also would become extinct. No one knows how many [\*171] species the world needs to support human life, and to find out -- by allowing certain species to become extinct -- would not be sound policy. In addition to food, species offer many direct and indirect benefits to mankind. 68

2. Ecological Value. -- Ecological value is the value that species have in maintaining the environment. Pest, 69 erosion, and flood control are prime benefits certain species provide to man. Plants and animals also provide additional ecological services -- pollution control, 70 oxygen production, sewage treatment, and biodegradation. 71

3. Scientific and Utilitarian Value. -- Scientific value is the use of species for research into the physical processes of the world. 72 Without plants and animals, a large portion of basic scientific research would be impossible. Utilitarian value is the direct utility humans draw from plants and animals. 73 Only a fraction of the [\*172] earth's species have been examined, and mankind may someday desperately need the species that it is exterminating today.

To accept that the snail darter, harelip sucker, or Dismal Swamp southeastern shrew 74 could save mankind may be difficult for some. Many, if not most, species are useless to man in a direct utilitarian sense. Nonetheless, they may be critical in an indirect role, because their extirpations could affect a directly useful species negatively. In a closely interconnected ecosystem, the loss of a species affects other species dependent on it. 75 Moreover, as the number of species decline, the effect of each new extinction on the remaining species increases dramatically. 76

4. Biological Diversity. -- The main premise of species preservation is that diversity is better than simplicity. 77 As the current mass extinction has progressed, the world's biological diversity generally has decreased. This trend occurs within ecosystems by reducing the number of species, and within species by reducing the number of individuals. Both trends carry serious future implications. 78

[\*173] Biologically diverse ecosystems are characterized by a large number of specialist species, filling narrow ecological niches. These ecosystems inherently are more stable than less diverse systems. "The more complex the ecosystem, the more successfully it can resist a stress. . . . [l]ike a net, in which each knot is connected to others by several strands, such a fabric can resist collapse better than a simple, unbranched circle of threads -- which if cut anywhere breaks down as a whole." 79

By causing widespread extinctions, humans have artificially simplified many ecosystems. As biologic simplicity increases, so does the risk of ecosystem failure. The spreading Sahara Desert in Africa, and the dustbowl conditions of the 1930s in the United States are relatively mild examples of what might be expected if this trend continues. Theoretically, each new animal or plant extinction, with all its dimly perceived and intertwined affects, could cause total ecosystem collapse and human extinction. Each new extinction increases the risk of disaster. Like a mechanic removing, one by one, the rivets from an aircraft's wings, 80 mankind may be edging closer to the abyss.

# Deforestation Bad—Economy

**Deforestation tanks the economy**

**ET no date** an international network of industry professionals and business leaders(Ecotourism, “CONSEQUENCES OF DEFORESTATION,” [www.ecotourism.org.hk/.../Consequences%20of%20deforestation.doc)//DR](http://www.ecotourism.org.hk/.../Consequences%20of%20deforestation.doc)//DR). H

**In economic terms, the tropical forests destroyed each year represent a loss in forest capital valued at $US 45 billion** (Hansen, 1997). **By destroying the forests, all potential future revenues and future employment that could be derived from their sustainable management for timber and non-timber products disappear.**

**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.

# Deforestation Bad—Desertification

**Deforestation causes desertification killing 900 million people**

**ET no date** an international network of industry professionals and business leaders(Ecotourism, “CONSEQUENCES OF DEFORESTATION,” [www.ecotourism.org.hk/.../Consequences%20of%20deforestation.doc)//DR](http://www.ecotourism.org.hk/.../Consequences%20of%20deforestation.doc)//DR). H

**In the dry forest zones, land degradation has become an increasingly serious problem**, resulting in extreme cases in desertification. **It affects about 3,000 to 3,500 million hectares, about one-quarter of the world's land area, and threatens the livelihoods of 900 million people** in 100 countries of the developing world. **Desertification is the consequence of extremes in climatic variation and unsustainable land use practices including overcutting of the forest cover. Growing populations are making ever-increasing demands on the land to produce more, leading to an intensification of use beyond the carrying capacity of the land.**

# Deforestation Bad—Water Wars

**Deforestation causes flooding, food insecurity, and hurts marine ecosystems**

**ET no date** an international network of industry professionals and business leaders(Ecotourism, “CONSEQUENCES OF DEFORESTATION,” [www.ecotourism.org.hk/.../Consequences%20of%20deforestation.doc)//DR](http://www.ecotourism.org.hk/.../Consequences%20of%20deforestation.doc)//DR). H

**By 2050, two billion people, or 20 per cent of the world's population, will suffer from water shortages** (WRI, 1994). **Most of these people will be living in developing countries.** Once denuded, **the same watersheds lose their capacity to regulate stream flows and experience rapid fluctuations in stream and river levels, often resulting in disastrous downstream flooding.** Water shortage is a major health risk in terms of inadequate sewage disposal, poor personal hygiene, and insufficient potable water. **Food security is threatened as irrigation water becomes scarcer. Without the protection of the tree cover, soils are exposed to the rigors of severe tropical climates and are rapidly eroded. Freshwater and coastal fisheries are devastated by the high sedimentation loads carried by the rivers, as are wildlife-rich wetlands. Sedimentation from degraded watersheds is also one of the principal causes of the decline of coastal coral reefs. The economic and environmental costs are staggering.**

**Floods cause extinction—90% certain scientific consensus**

**Durand 07** Summary of UN Board of Scientists, Journalist (Phebe, “Mass Extinction By Flooding: United Nations Climate Warning Paints Harsh Reality,”http://tinyurl.com/7udlxvo)//DR. H

**Mounting extinctions, water shortages, droughts and floods are all part of the warning** issued by the UN. As man-made emissions of greenhouse gasses continue causing the Earth to warm, these "natural" disasters will become more frequent, especially in the Arctic, sub-Saharan Africa, small island states and the big river deltas of Asia.

**"It is the poorest of the poor in the world, even the poorest in the most prosperous nations, who are going to be the worst hit and are the most vulnerable,**'' Intergovernmental Panel on Climate Change (IPCC) Chairman Rajendra Pachauri said. "We have far greater regional detail than the last IPCC report in 2001, such as the melting of glaciers, sea-level rise, impacts on agriculture and food security," he said.

There is no place in the world that will not be affected by the warnings issued in this second of four reports. The climate changes will mean **an increase in malnutrition as crops are wiped out, death and disease because of heat waves, floods, storms, fires and drought.**

A temperature rise will leave about 30 percent of the world's inhabitants at risk of extinction. In small island nations, "**sea-level rise is expected to exacerbate inundation, storm surge, erosion and other coastal hazards thus threatening vital infrastructure, settlements and facilities that support the livelihood of island communities,**'' the report reads.

**75 million to 250 million more people in Africa will be exposed to water shortages, rain-dependent agricultural yields could fall by 50 percent by 2020**, and the cost of adapting to the changes brought on by global warming could be as much as 10 percent of economic output.

**Europe can expect to see flash floods, increased erosion, and extinction of local species** of up to 60 percent in some areas.

**Latin America's Amazon will gradually change to savannah from forest.**

**How likely are these warnings? The world's top scientists**, working with the UN on this research, **have assigned it a degree of** "high" or **"very high confidence".** In other words, according to their report, **they are 80-90% certain** of their results.

# Deforestation Bad—Warming

**That triggers warming**

**Daniels 10** (Brian, January 7, “The Benefits of Supporting Global Reforestation”, http://suite101.com/article/the-benefits-of-supporting-global-reforestation-a186685)

As more people become concerned about protecting the environment, many are looking into the potential ways they can contribute to the global environmentalist movement. Among the programs that eco-friendly citizens should consider supporting are global reforestation projects. The positive impact of reforestation is substantial, providing a host of benefits to the chemical, biological, and social dimensions of the global ecosphere. Reforestation is an Effective Green House Gas/Carbon Sequestration Strategy One of the most prominent dangers of global deforestation is the accumulation of carbon-based greenhouse gases such as methane and carbon dioxide in the atmosphere, gases which have the potential to contribute to global climate change. Trees thrive on carbon gases, using carbon molecules to produce everything from sugar during photosynthesis to cellulose and wood as they grow. Planting trees, particularly young ones, effectively sequesters substantial amounts of atmospheric carbon, because, as trees grow, they transform carbon in the air into biomass (wood, foliage, glucose, etc.). Because of this, reforestation is a **very effective** strategy for decreasing the amount of carbon gas in the atmosphere, an **important step** in the fight against global climate change. Reforestation Preserves Endangered Wildlife and Shrinking Habitats Forest trees serve as habitat space for many thousands of species which use them for food, shade, and shelter. Particularly in the Amazonian rain forest, deforestation threatens the existence of many of Earth’s most spectacular plant and animal species. Reforestation projects which use indigenous tree species preserve natural habitat space for native insects, mammals, birds, and more. Replanting native forests also ensures forest corridor space which allows forest animals to move freely between sections of mature forest. This prevents animals from being trapped in dangerous or resource-depleted areas, allowing them to survive even in the midst of regional deforestation or habitat loss. Reforestation Alleviates World Hunger and Water Availability Issues Many indigenous peoples are dependent on local, native trees for sustenance, relying on fruits, nuts, and forest animal species as a primary source of food. Because of this, deforestation threatens the livelihood of villagers in many parts of the world. Reforestation, then, alleviates the loss of food resources among native forest peoples. Likewise, planting of fruit/nut bearing trees in other parts of the world afflicted by famine and food shortages provides a nutritious, renewable source of food for hungry people. Trees also help sustain food resources by protecting against erosion, thereby preserving soil quality for agriculture. In arid regions and areas experiencing drought, planting trees also has the potential to raise the water table, providing much needed water for those living in dry areas. Likewise, trees preserve soil moisture and moderate regional temperatures, preventing the spread of deserts. Ultimately, there are many compelling reasons to support reforestation projects for those looking to contribute to an environmental cause. The world’s forests are among its most important resources, and protecting them will go a **long way** towards fighting global climate change, protecting endangered species and their habitats, and addressing world hunger/ water availability issues. References and Additional Reforestation Resources One can find more detailed information about the benefits of reforestation via Plant-It 2020, a nonprofit environmental organization dedicated to reforestation projects and environmental education. More information and other reforestation projects can also be found via American Forests’ Global ReLeaf program.

**The impact is ocean acidification leading to 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.

**Deforestation triggers warming causing extinction**

**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>. H

**The negative consequences of global warming are catastrophic -- increasing drought and desertification, crop failures, melting of the polar ice caps, coastal flooding, and displacement of major vegetation regimes.** The amount of carbon currently in the atmosphere is estimated to be about 800,000 million tons and is increasing at the rate of about 1 percent annually. **Deforestation is an important contributor to global warming,** however, its contribution relative to the other factors is not precisely known. **The principal cause of global warming is the excessive discharges in industrialized countries of greenhouse gases,** mostly from the burning of fossil fuels. **Annual discharges from burning fossil fuels are estimated to be about 6,000 million tons of carbon, mostly in the form of carbon dioxide.** It is thought that an additional 2,000 million tons or about **25 percent of the total carbon dioxide emissions are a consequence of deforestation and forest fires** (WCFSD, 1997). At the regional level, **deforestation disrupts normal weather patterns, creating hotter and drier weather.** Unfortunately, efforts to find solutions to the deforestation crisis has not been as success in capturing investment money as have improvements to automotive exhaust emissions.

# Deforestation Bad—Soil

**Deforestation kills soil, triggers desertification, and leads to food insecurity causing extinction**

**ET no date** an international network of industry professionals and business leaders(Ecotourism, “CONSEQUENCES OF DEFORESTATION,” [www.ecotourism.org.hk/.../Consequences%20of%20deforestation.doc)//DR](http://www.ecotourism.org.hk/.../Consequences%20of%20deforestation.doc)//DR). H

**The long term impact of deforestation on the soil resource can be severe. Clearing the vegetative cover for slash and burn farming exposes the soil to the intensity of the tropical sun and torrential rains. This can negatively affect the soil by increasing its compaction, reducing its organic material, leeching out its few nutrients available, increasing its aluminum toxicity of soils, making it marginal for farming.** Subsequent cropping, frequent tillage, and overgrazing by livestock accelerate the degradation of the soil.

**In the dry forest zones, land degradation has become an increasingly serious problem**, resulting in extreme cases in desertification. **It affects about 3,000 to 3,500 million hectares, about one-quarter of the world's land area, and threatens the livelihoods of 900 million people** in 100 countries of the developing world. **Desertification is the consequence of extremes in climatic variation and unsustainable land use practices including overcutting of the forest cover. Growing populations are making ever-increasing demands on the land to produce more, leading to an intensification of use beyond the carrying capacity of the land.**

**By 2050, two billion people, or 20 per cent of the world's population, will suffer from water shortages** (WRI, 1994). **Most of these people will be living in developing countries.** Once denuded, **the same watersheds lose their capacity to regulate stream flows and experience rapid fluctuations in stream and river levels, often resulting in disastrous downstream flooding.** Water shortage is a major health risk in terms of inadequate sewage disposal, poor personal hygiene, and insufficient potable water. **Food security is threatened as irrigation water becomes scarcer. Without the protection of the tree cover, soils are exposed to the rigors of severe tropical climates and are rapidly eroded. Freshwater and coastal fisheries are devastated by the high sedimentation loads carried by the rivers, as are wildlife-rich wetlands. Sedimentation from degraded watersheds is also one of the principal causes of the decline of coastal coral reefs. The economic and environmental costs are staggering.**

# Soil Impact—Econ

**Soil erosion causes economic decline**

**UNEP 11** don’t question UNEP (United Nations Environment Programme, “IMPACTS ON ENVIRONMENTAL DEGRADATION ON YIELD AND AREA,” <http://www.grida.no/publications/rr/food-crisis/page/3567.aspx)//DR>. H

**Nutrient depletion as a form of land degradation has a severe economic impact at the global scale**, especially in Sub-Saharan Africa. Stoorvogel et al. (1993) estimated nutrient balances for 38 countries in Sub-Saharan Africa. Annual depletion rates of soil fertility were estimated at 22 kg nitrogen (N), 3 kg phosphorus (P), and 15 kg potassium (K) per ha. In Zimbabwe, **soil erosion alone results in an annual loss of N and P totalling US$1.5 billion. In South Asia, the annual economic loss is estimated at US$600 million for nutrient loss by erosion, and US$1,200 million from soil fertility depletion** (Stocking, 1986; UNEP, 1994).

**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.

# Soil Impact—Environment

**Land degradation collapses the environment, hurts food security and causes extinction**

**UNEP 06** Prepared by the Scientific and Technical Advisory Panel (United Nations Environmental Programme, November 15, 2006, “LAND DEGRADATION AS A GLOBAL ENVIRONMENTAL ISSUE: A SYNTHESIS OF THREE STUDIES COMMISSIONED BY THE GLOBAL ENVIRONMENT FACILITY TO STRENGTHEN THE KNOWLEDGE BASE TO SUPPORT THE LAND DEGRADATION FOCAL AREA,” <http://www.thegef.org/gef/sites/thegef.org/files/documents/C.30.Inf_.8%20STAP_Land%20Degradation%20as%20a%20Global%20Environmental%20Issue.pdf)//DR>**.** H

\*\*\*Note: LD is Land degradation

**Land degradation has multiple and complex impacts on the global environment** through a range of direct and indirect processes **affecting a wide array of ecosystem functions and services.** These impacts are captured in almost all of GEF’s focal areas of interest**. Impacts also occur on global development issues, especially food security and human health.** An analysis from the scientific literature of the severity and importance of these impacts suggests that the process linkages may be graded according to the degree of sensitivity involved and the certainty of the impacts creating a dangerous condition consequent upon land degradation. The summary table of these linkages and a matrix indicating degree of severity is attached here at Annex I.

7. **The clearest and best-researched linkage is between land degradation and climate change. Land degradation interrupts the regulating and provisioning services of ecosystems, in particular nutrient cycling, the global carbon cycle and the hydrological cycle.** SLM critically depends upon the efficient functioning of these cycles. For example, carbon pools in soil and above-ground vegetation, particularly forests, are very large but easily disturbed. They are affected by unsustainable land management practices and by the type of LD that is prevalent (e.g. water erosion; deforestation; soil compaction). **Estimates of historical contributions of agriculture to atmospheric CO2, the amounts and rates of carbon lost as a consequence of deforestation and conversion of land to agriculture and other soil-vegetation-atmosphere carbon fluxes, all suggest that LD has had a very significant impact, through raising atmospheric CO2 concentrations, on climate. Future impacts are certain.**

8. **With regard to biodiversity, ecosystems provide the habitats for all living organisms. Disruption to ecosystem functions inevitably diminishes the diversity of above- and below-ground biodiversity, as well as affecting aquatic life. The potential impact of deforestation on above-ground biodiversity is especially large and well documented**. Impacts of other forms of LD on biodiversity are less clear with effects on below-ground biodiversity likely to be the mostsevere. There are significant gaps in our knowledge here, not only in how **LD affects vegetation productivity but also how a change in productivity has knock-on effects on biodiversity.** Anecdotal evidence is common, but the science is sparse. **Variability in the sensitivity of different ecosystems to LD and the biodiversity they contain mean that many focussed studies are required to assemble an aggregate estimate of the global impact.** In SLM, an international database on the quantitative relationships between LD and vegetation production would be important. Existing information is scattered and partial.

9. In the international waters focal area, **international freshwater basins are critically linked to the status and function of terrestrial ecosystems.** **Pollution of these basins as a consequence of LD is common and the processes are well understood. In marine ecosystems, coastal zones are the most susceptible to pollution-related impacts arising from LD. There is evidence of global impacts as large stretches of coast can be affected, extending to reef and large marine ecosystems. There is growing interest in the impact and importance of land-derived dust deposits to ocean systems but this is an area of considerable uncertainty.**

10. The contamination of water, **ecosystems and food-chains by pesticides applied to or accumulating in soil is the best-verified impact linking land degradation with persistent organic pollutants. Soil erosion contributes to this contamination** but other processes, not considered as LD, are also involved: e.g. normal drainage of water through the soil, the accumulation of soil-derived POPs by growing plants destined for food or feed. Targeted research to understand the processes and most appropriate points of intervention is indicated.

# \*\*\*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>. 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**.