# 1

**Energy production is the generation of power from raw materials – excludes extraction of those materials**

**Vaekstfonden 6** – Vaekstfonden is a Danish government backed investment fund that facilitates the supply of venture capital in terms of start-up equity and high-risk loans "THE ENERGY INDUSTRY IN DENMARK- perspectives on entrepreneurship and venture capital" No Specific Cited, Latest Data From 2006 [s3.amazonaws.com/zanran\_storage/www.siliconvalley.um.dk/ContentPages/43667201.pdf](http://s3.amazonaws.com/zanran_storage/www.siliconvalley.um.dk/ContentPages/43667201.pdf)

In all, 20 industry experts were interviewed about the composition and dynamics of the Danish energy sector. Insights from a minimum of 3 industry experts have been assigned to each of the stages in the value chain. Following is a brief description of what the different stages encompass.

Raw material extraction

This stage encompass the process before the actual production of the energy. As an example it is increasingly expensive to locate and extract oil from the North Sea. Likewise coal, gas and waste suitable for energy production can be costly to provide.

Energy production

Energy production encompasses the process, where energy sources are transformed into heat and power.
Transmission and distribution

**Violation – the plan removes a restriction on buying solar tech, not the production itself**

**Vote neg for limits – they explode the research base and make it impossible to be neg**

# 2

#### Oil prices will stabilize now – prices will stick above OPEC break-even levels without significant changes

Irina Rogovaya August 2012; writer for Oil and Gas Eurasia, Oil Price Changes: Everyone Wants Stability <http://www.oilandgaseurasia.com/articles/p/164/article/1875/>

According to the current base forecast for the Eurozone prepared by Oxford Economics, within the next two years oil prices will continue to drift lower, but not beyond the bounds of the “green” corridor for the world economy – $80-100 per barrel. This forecast coincides with the expectations of the World Bank (see Fig. 4). Meanwhile, S&P analysts presented three scenarios for the energy market in June. In the base scenario, oil will remain at $100 per barrel. S&P calculates that the likelihood of a stressful scenario in which the price of oil drops below $60 per barrel (the bottom in 2009) is 1:3. Analysts believe that given today’s state of economic and geopolitical affairs, strong political will would be needed to force the price of oil below $70-80 (the current level of effective production). So far, that will is nowhere to be seen. Recent events have shown that nobody is interested in the Eurozone breaking apart. And nobody wants a war in the Persian Gulf. Furthermore, nobody today intends to force the production of less valuable oil. At least that is what OPEC leaders promised during the recent summit. “Stability on the market should be at the center of our attention,” General Secretary Abdalla El-Badri said. Even Saudi Arabia, which consistently violates OPEC discipline in over-producing its quotas, announced at the beginning of July that it would review its margins to determine a higher price for Saudi supplies ordered on August contracts. Analysts noted that the average price of oil supplied to Europe and Asia had jumped (by $0.85 and $0.66 per barrel respectively), a fact which could be seen as proof that the collective members of the cartel will not let prices fall under $100 per barrel.

**Individual-level solar power would significantly impact oil dependence**

Dawn **Allcot** 9-8-20**11**; frequently covers energy efficiency, green living, and topics like LED lighting and whole home control systems for a number of technology trade magazines. Solar Power Reduces Our Dependency on Oil http://www.ecooutfitters.net/blog/2011/09/solar-power-reduces-our-dependency-on-oil/

Oil and the Middle East Unfortunately, **one very significant aspect of U.S. life has not changed** since the September 11 attacks, **and that is our use of foreign oil**. The entire Middle East is still a battlefield, yet we purchase one of our most crucial resources from this region. Statistics vary widely — some bloggers believe we purchase only 12 percent of our oil from the Middle East, while others guess the number is closer to 43 or even 50 percent. The U.S. Energy Administration published a table earlier this year that shows **we import about 25 percent of our oil from the Middle East**. Iraq is one of our country’s top ten crude oil sources. **Are we entirely dependent on Middle Eastern oil? No. Is it significant to us? Absolutely.** Any disruption in the supply of Middle Eastern oil, including war, tends to drive gas and home heating oil prices up. When gas prices go up, it costs more to transport our food supply and soon, grocery prices rise, too. (As an aside, this is just one reason eating locally grown food is a green and cost-effective practice.) Little Changes Make a Big Difference **But there’s good news. The fact that our country’s so-called “dependence” on Middle Eastern oil isn’t as bad as many believe means small changes can make a big difference.** **Changes like** using **solar hot water heat instead of oil** to heat your hot water, **or** using **solar PV panels** for radiant floor heating **can make a big difference in reducing the amount of oil our country needs. With only 5 percent of the world’s population, we use 27 percent of the world’s oil**. **Solar energy is one solution to reduce our oil consumption and our ties to the Middle East. It’s also cleaner than oil, easier to access, constantly renewable, and so far, the price of solar power is not connected to world politics**. The more you think about all these factors, **the case for solar power keeps getting brighter and brighter.**

**High prices are key to the Russian economy and domestic stability**

Michael **Schuman** 7-5-20**12** ; writes about Asia and global economic issues as a correspondent for TIME in Hong Kong. B.A. in Asian history and political science from the University of Pennsylvania and a master of international affairs from Columbia; “Why Vladimir Putin Needs Higher Oil Prices” http://business.time.com/2012/07/05/why-vladimir-putin-needs-higher-oil-prices/

But Vladimir Putin is not one of them. **The economy that the Russian President has built not only runs on oil, but runs on oil priced extremely high. Falling oil prices means rising problems for Russia – both for the strength of its economic performance, and possibly, the strength of Putin himself.** Despite the fact that Russia has been labeled one of the world’s most promising emerging markets, often mentioned in the same breath as China and India, the Russian economy is actually quite different from the others. While India gains growth benefits from an expanding population, Russia, like much of Europe, is aging; while economists fret over China’s excessive dependence on investment, Russia badly needs more of it. Most of all, **Russia is little more than an oil state in disguise**. **The country is the largest producer of oil in the world** (yes, bigger even than Saudi Arabia), **and Russia’s dependence on crude has been increasing**. **About a decade ago, oil and gas accounted for less than half of Russia’s exports; in recent years, that share has risen to two-thirds**. **Most of all, oil provides more than half of the federal government’s revenues. What’s more, the economic model Putin has designed in Russia relies heavily not just on oil, but high oil prices**. **Oil lubricates the Russian economy by making possible the increases in government largesse that have fueled Russian consumption**. Budget spending reached 23.6% of GDP in the first quarter of 2012, up from 15.2% four years earlier. What that means is Putin requires a higher oil price to meet his spending requirements today than he did just a few years ago. Research firm Capital Economics figures that the government budget balanced at an oil price of $55 a barrel in 2008, but that now it balances at close to $120. Oil prices today have fallen far below that, with Brent near $100 and U.S. crude less than $90. **The farther oil prices fall, the more pressure is placed on Putin’s budget, and the harder it is for him to keep spreading oil wealth to the greater population through the government**. **With a large swath of the populace angered by his re-election to the nation’s presidency in March, and protests erupting on the streets of Moscow, Putin can ill-afford a significant blow to the economy, or his ability to use government resources to firm up his popularity.** That’s why **Putin hasn’t been scaling back even as oil prices fall**. His government is earmarking $40 billion to support the economy, if necessary, over the next two years. He does have financial wiggle room, even with oil prices falling. Moscow has wisely stashed away petrodollars into a rainy day fund it can tap to fill its budget needs. But **Putin doesn’t have the flexibility he used to have. The fund has shrunk**, from almost 8% of GDP in 2008 to a touch more than 3% today. **The package**, says Capital Economics, **simply highlights the weaknesses of Russia’s economy:** This cuts to the heart of a problem we have highlighted before – namely that Russia is now much more dependent on high and rising oil prices than in the past… The fact that the share of ‘permanent’ spending (e.g. on salaries and pensions) has increased…creates additional problems should oil prices drop back (and is also a concern from the perspective of medium-term growth)…The present growth model looks unsustainable unless oil prices remain at or above $120pb.

**Russian economic collapse causes global nuclear war**

Steven **David**, January/February 19**99**;Professor of International Relations and Associate Dean of Academic Affairs at the Johns Hopkins University, FOREIGN AFFAIRS, **,** http://www.foreignaffairs.org/19990101faessay955/steven-r-david/saving-america-from-the-coming-civilwars.html

**I**f internal war does strike Russia, economic deterioration will be a prime cause. From 1989 to the present, the GDP has fallen by 50 percent. In a society where, ten years ago, unemployment scarcely existed, it reached 9.5 percent in 1997 with many economists declaring the true figure to be much higher. Twenty-two percent of Russians live below the official poverty line (earning less than $ 70 a month). Modern Russia can neither collect taxes (it gathers only half the revenue it is due) nor significantly cut spending. Reformers tout privatization as the country's cure-all, but in a land without well-defined property rights or contract law and where subsidies remain a way of life, the prospects for transition to an American-style capitalist economy look remote at best. As the massive devaluation of the ruble and the current political crisis show, Russia's condition is even worse than most analysts feared. If conditions get worse, even the stoic Russian people will soon run out of patience.  A future conflict would quickly draw in Russia's military. In the Soviet days civilian rule kept the powerful armed forces in check. But with the Communist Party out of office, what little civilian control remains relies on an exceedingly fragile foundation -- personal friendships between government leaders and military commanders. Meanwhile, the morale of Russian soldiers has fallen to a dangerous low. Drastic cuts in spending mean inadequate pay, housing, and medical care. A new emphasis on domestic missions has created an ideological split between the old and new guard in the military leadership, increasing the risk that disgruntled generals may enter the political fray and feeding the resentment of soldiers who dislike being used as a national police force. Newly enhanced ties between military units and local authorities pose another danger. Soldiers grow ever more dependent on local governments for housing, food, and wages. Draftees serve closer to home, and new laws have increased local control over the armed forces. Were a conflict to emerge between a regional power and Moscow, it is not at all clear which side the military would support.  Divining the military's allegiance is crucial, however, since the structure of the Russian Federation makes it virtually certain that regional conflicts will continue to erupt. Russia's 89 republics, krais, and oblasts grow ever more independent in a system that does little to keep them together. As the central government finds itself unable to force its will beyond Moscow (if even that far), power devolves to the periphery. With the economy collapsing, republics feel less and less incentive to pay taxes to Moscow when they receive so little in return. Three-quarters of them already have their own constitutions, nearly all of which make some claim to sovereignty. Strong ethnic bonds promoted by shortsighted Soviet policies may motivate non-Russians to secede from the Federation. Chechnya's successful revolt against Russian control inspired similar movements for autonomy and independence throughout the country. If these rebellions spread and Moscow responds with force, **civil war is likely**.  Should Russia succumb to internal war, the consequences for the United States and Europe will be severe. **A major power** like Russia -- even though in decline -- **does not suffer civil war quietly or alone**. An embattled **Russia**n Federation might provoke **opportunistic attacks from enemies such as China.** Massive flows of refugees would pour into central and western Europe. Armed struggles in Russia could easily spill into its neighbors. Damage from the fighting, particularly attacks on nuclear plants, would poison the environment of much of Europe and Asia. Within Russia, the consequences would be even worse. Just as the sheer brutality of the last Russian civil war laid the basis for the privations of Soviet communism, a second civil war might produce another horrific regime.

**High prices are key to Russian military modernization**

John T. **Bennett**, 4-3-20**12**; covers national security and foreign policy for U.S. News & World Report“Oil Prices Fueling Russia's Disruption of U.S. Foreign Policy

Russia's burgeoning oil and natural gas exports are underwriting Russian efforts to regain status as a world superpower” http://www.usnews.com/news/articles/2012/04/03/oil-prices-fueling-russias-disruption-of-us-foreign-policy

U.S.-Russian relations returned to the front pages last week after Obama urged outgoing Russian President Dmitry Medvedev to "give me space" on several issues, including a European missile defense shield that Moscow opposes. Likely GOP presidential nominee Mitt Romney soon after called Russia America's "top geopolitical enemy."¶ "**Putin still aspires for Russia to be a superpower**," says Steven Pifer, a former U.S. ambassador to Ukraine. "**There are only two ways for Russia to achieve that: nuclear weapons, and oil and natural gas sales."¶** The price of a barrel of oil was nearly $105 at midday Tuesday, steadily climbing from a 52-week low of $76.35 per barrel in October. Oil prices began to rise in late 2010, peaking at $113 per barrel in May 2011, before dipping last summer and then rising again.¶ [Whose Russia Comment Was More Damaging: Obama's or Romney's?]¶ **Russia is the world's second-largest oil exporter** at 5 million barrels a day, and its the ninth-leading natural gas exporter at 38.2 billion cubic meters a year, according to the CIA World Factbook. Russia rakes in nearly $500 billion annually in exports, with the CIA listing petroleum and natural gas as its top two commodities.¶ Frances Burwell, vice president of the Atlantic Council, says **Russia's oil revenues "give it a comfort zone" from which its leaders feel they have** the **global cache** to make things tough for Washington.¶ Burwell says she "places more weight" for Russia's recent global muscularity on "Putin's re-emergence." **The Russian once-and-soon-again president "clearly sees playing the national card as the strong guy internationally benefits him**," she says.¶ But, make no mistake, **bloated national coffers from high oil and gas prices underwrite Putin's muscle-flexing**, experts say.¶ [Who is Joe Biden to Slam Mitt Romney on Russia Policy?]¶ **Putin made a number of big domestic promises during the presidential race, including plans to usher in sweeping pension and wage hikes. He also put forth "a rather ambitious military modernization program**," Pifer says.¶ "**If oil prices remain high, he might be able to do all of those things**," Pifer says. "If prices come down, however, Putin will have some very tough decisions to make at home ... between guns versus butter."¶ **Should oil and gas prices tumble, experts say Putin would likely pick butter.¶** "**In 2007 when oil was doing well, Putin [as president] could have modernized the Russian military**," says Pifer. **Instead, Putin made a number of economic moves, such as the creation of a rainy day fund that was used during the recent global financial crisis**," Pifer notes.¶ What's more, Putin returns to power with his sharp eyes locked on his opposition, which is composed of the country's urban, middle-class populations.¶ Experts agree that Putin would be hard-pressed to break his pension and wage promises in favor of a few more missiles. But even an economically weaker Russia would likely pick its spots to block Washington's desires.¶ "**They have a very sovereigntist, non-interventionalist view of world affairs**," Burwell says. That means **Moscow fundamentally opposes Western efforts to boss around the world's strongmen,** with which Russian leaders have much in common.¶ "The Russian also have real hard-core, national, commercial and other interests in both Iran and Syria that cannot simply be ignored," Burwell says.

**Modernization is key to maintain the nuclear threshold – prevents miscalc and escalation**

Bettina **Renz and** Rod **Thornton** January 20**12**; lecturers on international security in the Faculty of Social Sciences, University of Nottingham “Russian Military Modernization Cause, Course, and Consequences” Problems of Post-Communism Volume 59, Number 1 / January / February 2012 p 44 - 54

The perceived weakness of this triad means that the Kremlin was pleased with **the START agreement** of March 2010. The **treaty limits favor Moscow in that it does not have to cut any of its own nuclear warheads** or delivery systems—the numbers of ICBMs and warheads in its own triad are actually below the negotiated caps. Only the United States has had to bring its numbers down.58 Normally, in the arranging of such international security treaties, negotiating from a position of military weakness—as Russia was—is not conducive to the ability to drive a hard bargain. Moscow has been lucky, however, in that Washington seems not to be too interested in the shape of Russia’s current and future nuclear arsenal. Rather, in terms of perceived security threats, Washington has its eye more on the terrorist ball than on the Russian one. Additionally, **under STA RT, Russia does not have to reduce the number of its tactical nuclear weapons. It has more of these than the United States. These are prized and important assets to Moscow, and they have become even more prized and important as Russia’s conventional military has become weaker. They are seen more and more as the fallback option if Russia one day faces some sort of defeat in a conventional conflict—against the likes of Georgia or China. In the largest Russian military exercise held since the end of the cold war—conducted recently in the Russian Far East—tactical nuclear weapons (i.e., mines) were notionally “exploded” as part of the exercise play.59 This fact alone seems to confirm that Russia’s conventional military weakness has led to a reduction in its nuclear-use threshold.** Conclusion The current modernization in the Russian military is long overdue. Because it is long overdue, it has to be completed in a rushed, haphazard fashion and against a backdrop of a military–industrial complex unable to fulfill its role in the process. Traditionally, military modernization is not achieved lightly, given the bureaucratic inertia and cultural norms that are always present. When, as in the current situation in Russia, such barriers to change are aided and abetted by any number of additional problems (not to mention the rampant corruption that is endemic across all levels of Russian state institutions, including the military), then it must be expected that Russia’s armed forces will be striving for some time to become truly “modern.”60 In essence, what should have been accomplished as an evolution over many years, and should have begun during the Yeltsin era, is now being attempted as a revolution in the post–Georgian war era. As with any revolutionary change, a good deal of disruption and disaffection has been created. Moreover, **the current Russian military is a weakened military. The psychology of the tsarist/Soviet/Russian military has always been that numbers counted, that mass would prevail. Numbers inspired confidence, and numbers could deter. But the current Russian military is losing numbers** while not making up for them by creating smaller, more professional forces equipped with the requisite technologies. Quality is not replacing quantity. **The military is in a state of flux. Russian politicians and military figures both now lack a genuine confidence in the armed forces’ ability to deter**. This can have two consequences. Either Russia takes large steps to avoid the possibility of military confrontation by stressing diplomatic solutions to possible threat scenarios (as the tsarist government did in 1914), or it goes the opposite way**, fearing that if any state is threatening military action against Russia then the hair trigger comes into operation** (Israeli-style). That is, **the mentality of the first, preemptive strike becomes paramount—taking advantage of surprise—and using what assets Russia now has. The alternative is to take the risk of waiting to be attacked and maybe “losing**.” What is clear is that, with its armed forces currently weakened by the process of change, the **sense of vulnerability generated has led Russia, in classic confirmation of the security dilemma concept, to magnify the threats it faces, or thinks it faces.** Conscious of its vulnerability to threats, real or imagined, **Moscow may begin to look more and more toward the inflexible tool of its tactical nuclear weapons as its principal defense mechanism**. While no one really supposes that such weapons will be used in any confrontation with the West, the same cannot be said of any possible conflict with the Chinese. Ironically, **Beijing’s military still relies on mass. The best modern military counter to mass is to employ either PGMs or tactical nuclear weapons. The Russian military has hardly any of the former but plenty of the latter. Hair triggers and tactical nuclear weapons are not comfortable bedfellows.**

# 3

#### Obama is winning but it will be close and it’s reversible – popularity is key

**Brownstein, 9/21/12** - a two-time finalist for the Pulitzer Prize for his coverage of presidential campaigns, is National Journal Group's Editorial Director, in charge of long-term editorial strategy.(Ronald, National Journal, “Heartland Monitor Poll: Obama Leads 50 Percent to 43 Percent” <http://www.nationaljournal.com/2012-presidential-campaign/heartland-monitor-poll-obama-leads-50-percent-to-43-percent-20120921?page=1>)

President Obama has opened a solid lead over Mitt Romney by largely reassembling the “coalition of the ascendant” that powered the Democrat to his landmark 2008 victory, the latest Allstate/National Journal Heartland Monitor Poll has found.

The survey found Obama leading Romney by 50 percent to 43 percent among likely voters, with key groups in the president’s coalition such as minorities, young people, and upscale white women providing him support comparable to their levels in 2008.

The survey, conducted by Ed Reilly and Jeremy Ruch of FTI Communications, a communications and strategic consulting firm, surveyed 1,055 likely voters by landline and cell phone from Sept. 15-19. It has a margin of error of plus or minus 3 percentage points. Full results from the survey, including a detailed look at Americans’ attitudes about opportunity and upward mobility, will be released in the Sept. 22 National Journal.

The Heartland Monitor’s results are in line with most other national surveys in recent days showing Obama establishing a measurable lead, including this week’s new Pew Research Center and NBC/Wall Street Journal polls. The saving grace for Republicans is that even as these surveys show Obama opening a consistent advantage, the president has not been able to push his support much past the critical 50 percent level, even after several difficult weeks for Romney that began with a poorly reviewed GOP convention. That suggests the president faces continued skepticism from many voters that could allow Romney to draw a second wind if he can stabilize his tempest-tossed campaign.

The poll found Obama benefiting from a small increase in optimism about the country’s direction. Among likely voters, 37 percent said the country was moving in the right direction. Even looking at all adults, the "right track" number now stands at 35 percent, its best showing since the April 2010 Heartland Monitor.

Obama’s approval rating in the new survey also ticked up to 50 percent, with 46 percent disapproving. That’s a slight improvement from May, when the survey of all adults found 47 percent approving and 48 percent disapproving. Among all adults, Obama’s rating improved to 49 percent approving and 45 percent disapproving, also one of his best showings since January 2010.

Those gains are critical, because as always with an incumbent president, attitudes toward Obama’s performance powerfully shape the race. Among likely voters who approve of Obama’s job performance, he leads Romney in the ballot test by 93 percent to 3 percent; those who disapprove prefer Romney by 87 percent to 5 percent.

#### Solar power is unpopular - not seen as cost competitive and perceived as trading off with other sources

**Lifsher, 5 -** LA Times Staff Writer

(Marc, June 27, “Governor's Solar Plan Is Generating Opposition,” <http://articles.latimes.com/2005/jun/27/business/fi-solar27>, d/a 7-20-12

Gov. Arnold Schwarzenegger's plan to spend billions of dollars to put electricity-producing [solar panels](http://articles.latimes.com/2005/jun/27/business/fi-solar27) on a million California rooftops could be running into stormy weather. For the second year running, the governor is sponsoring legislation that would put photovoltaic solar systems at the head of the line for the bulk of state alternative energy [funding](http://articles.latimes.com/2005/jun/27/business/fi-solar27). For Schwarzenegger and his backers in the environmental community and the solar industry, a massive push to use abundant "free power" from the sun is an easy call. "Today, in California, where we are famous for the sun, we are going to put the positive benefits of that sun to good use," Schwarzenegger said in February, announcing his personal support for SB 1, the solar power bill. Schwarzenegger is thinking big: He wants to increase the state's total solar output from about 101 megawatts to 3,000 megawatts by 2018. That's enough nonpolluting power to run about 2.25 million homes and eliminate the need to build six large natural gas-fired generating plants. The governor isn't the only Hollywood star backing sun power. Actors Edward Norton and Ed Begley Jr., both well-known environmental activists, spoke at a recent media event in South Central Los Angeles in support of SB 1. But the bill, despite such high-profile backing and a bipartisan 30-5 vote in the state Senate, is facing potential difficulties in the Assembly. Opposition from business lobbies, utilities, unions and even consumer groups is setting the stage for what could be a close vote. The first hint of how the bill will fare in the Assembly is expected to come today when it faces its first hearing in the Assembly Utilities and Commerce Committee. Most of the complaints about the governor's solar program center on its estimated 10-year, $2-billion-to-$3-billion price tag. Much of that would be paid by power users in the form of surcharges imposed by the California Public Utilities Commission. Proponents estimate that the annual rate hike would be about $15 per residential customer. But business groups -- usually among Schwarzenegger's staunchest supporters -- complain that increases for large power users such as big-box retailers and industrial operations would be much higher -- a key point in a state that already has the highest electricity rates in the continental United States. The governor's solar plan is "so expensive that it's not cost-effective," said Joseph Lyons, an energy lobbyist for the California Manufacturers and Technology Assn. "Our members need rate relief, and this goes in the other direction," Lyons said. Southern California Edison Co., the state's second-largest investor-owned utility, is also skeptical, saying the governor's bill favors rooftop solar systems over what it says are more cost-effective centralized solar generating stations. Even fans of solar power -- who view photovoltaic panels as a crucial part of the state's alternative energy mix -- question the wisdom of earmarking the bulk of funding for one source, to the detriment of less-glamorous energy efficiency and conservation programs. "Solar is not even close to competitive," said Severin Borenstein, director of the University of California Energy Institute in Berkeley. He noted that solar power's long-run, average production cost of 25 cents to 30 cents per kilowatt hour, not including government subsidies or tax [credits](http://articles.latimes.com/2005/jun/27/business/fi-solar27), is much higher than the 5 cents to 9 cents for wind power and 6 cents to 7 cents for modern, natural-gas-fired generation plants. Even a leading energy consumer advocate, the Utility Reform Network, is critical of the governor's solar dream, contending it would drive up utility bills for some lower-income residential ratepayers. "It singles out one technology ... it's not giving us the biggest bang for the buck," said Michael Florio, an attorney for the group. Meanwhile, enthusiasm among home builders is lukewarm at best. They fear that a requirement that solar be offered as an option on most new homes beginning in 2010 would be unpopular with buyers.

#### Romney would support an Israeli strike on Iran

Robert W. Merry 8-1-2012; editor of The National Interest and the author of books on American history and foreign policyRomney Edges U.S. toward War with Iran http://nationalinterest.org/commentary/romney-edges-us-toward-war-iran-7275

The major newspapers all understood that GOP presidential candidate Mitt Romney’s expressions in Jerusalem last weekend were important, which is why they played the story on page one. But only the New York Times captured the subtle significance of what he said. The paper’s coverage, by Jodi Rudoren and Ashley Parker, reported that Romney sought to adhere to the code that says candidates shouldn’t criticize the president on foreign soil. “But,” they added, “there were subtle differences between what he said—and how he said it—and the positions of his opponent.” Most significantly, while Obama talks about stopping Iran from obtaining nuclear weapons, Israel insists Tehran should be prevented from having even the capacity to develop nuclear weapons. This means no nuclear development even for peaceful purposes. Romney embraced the Israeli language. In doing so, he nudged his nation closer to war with Iran. Based on Israeli prime minister Benjamin Netanyahu’s oft-repeated expressions, he clearly seems bent on attacking Iran to destroy or delay its nuclear program and, if possible, undermine the Iranian regime. And he wants America at his side when he does it. Obama has been seeking to dissuade Israel from contemplating such an assault in order to give the president’s austere sanctions regimen a chance to work. But what does he mean by “a chance to work?” If he means a complete capitulation by Iran, he’s dreaming, of course. History tells us that nations don’t respond to this kind of pressure by accepting humiliation. That’s the lesson of Pearl Harbor, as described in my commentary in these spaces. Many close observers of the Iran drama believe there may be an opportunity for a negotiated outcome that allows Iran to enrich uranium to a limited extent—say, 5 percent—for peaceful purposes. Iran insists, and most experts agree, that the Non-Proliferation Treaty allows such enrichment for energy production. In any event, numerous signatories to the NPT do in fact maintain limited enrichment programs for peaceful ends. Obama seems torn between pursuing such an outcome and embracing the Israeli position, which demands that Iran foreswear all enrichment and any peaceful nuclear development. In last spring’s Istanbul meeting between Iran and the so-called P5+1 group (the United States, Britain, France, China, Russia and Germany), there seemed to be a genuine interest on the part of those six nations to explore an outcome that would allow for some enrichment by Iran. Five weeks later in Baghdad, the P5+1 group seemed to backtrack and insist upon zero enrichment. Talks are ongoing but only among low-level technical people; any serious negotiations are on hold pending the election. Thus Obama has managed to maintain his flexibility during the delicate campaign period. But now we have Romney in Israel essentially telling the people there that they need fear no ambivalence on his part. If elected, he will embrace the Netanyahu position, which is designed to ensure the collapse of any negotiations attending anti-Iran sanctions, which Netanyahu already has labeled a failure. “We have to be honest,” he said over the weekend, during Romney’s visit, “and say that the sanctions and diplomacy so far have not set back the Iranian program by one iota.” That’s the view that Romney subtly embraced in Jerusalem.

#### Great power war

Trabanco 2009 – Independent researcher of geopolitical and military affairs (1/13/09, José Miguel Alonso Trabanco, “The Middle Eastern Powder Keg Can Explode at Anytime,” http://www.globalresearch.ca/index.php?context=va&aid=11762)

In case of an Israeli and/or American attack against Iran, Ahmadinejad's government will certainly respond. A possible countermeasure would be to fire Persian ballistic missiles against Israel and maybe even against American military bases in the regions. Teheran will unquestionably resort to its proxies like Hamas or Hezbollah (or even some of its Shiite allies it has in Lebanon or Saudi Arabia) to carry out attacks against Israel, America and their allies, effectively setting in flames a large portion of the Middle East. The ultimate weapon at Iranian disposal is to block the Strait of Hormuz. If such chokepoint is indeed asphyxiated, that would dramatically increase the price of oil, this a very threatening retaliation because it will bring intense financial and economic havoc upon the West, which is already facing significant trouble in those respects. In short, the necessary conditions for a major war in the Middle East are given. Such conflict could rapidly spiral out of control and thus a relatively minor clash could quickly and dangerously escalate by engulfing the whole region and perhaps even beyond. There are many key players: the Israelis, the Palestinians, the Arabs, the Persians and their respective allies and some great powers could become involved in one way or another (America, Russia, Europe, China). Therefore, any miscalculation by any of the main protagonists can trigger something no one can stop. Taking into consideration that the stakes are too high, perhaps it is not wise to be playing with fire right in the middle of a powder keg.

# 4

#### The United States Supreme Court should rule that compliance orders from federal enforcement agencies regarding tariffs on solar panels produced in the People’s Republic of China unconstitutional.

#### Courts have authority to rule over energy production

Brenda Bowers April 2011 “Future Of American Energy Production At Stake In US Supreme Court – Big Government” http://brendabowers.wordpress.com/2011/04/19/%C2%BB-future-of-american-energy-production-at-stake-in-us-supreme-court-big-government/

We all know how important energy is in our lives, just as commercial energy is critical to free market capitalism and the pursuit of prosperity in America. Now, thanks to environmental activists and several states, that may all be at risk in the US Supreme Court. In 2004, unhappy that the duly elected Bush administration wasn’t restricting carbon emissions in the alleged cause of global warming, environmental activism prompted several states to file a “public nuisance” lawsuit, which would empower the courts in this regard. They lost in the lower court but that was reversed in 2007. This case is novel, and far more aggressive and disruptive than the global warming case the Court previously permitted. In a 2007 decision, Massachusetts v. EPA, a closely divided Court agreed with 12 states and several cities that the Environmental Protection Agency has authority to regulate carbon dioxide as a pollutant under the Clean Air Act. Though that case dealt with a narrow claim to enforce a federal statute, the Court’s decision emboldened what had already become a cottage industry of lawsuits designed to slow global warming by asking federal courts to enact what interest groups have been unable to secure through the democratic process: carbon caps and other limits on the way energy is produced in this country. Under the guise of “public nuisance,” the plaintiffs in these suits seek to impose enormous damages and binding emissions caps on energy companies. The plaintiffs have acknowledged that their goal is a veritable sea change in the way energy is produced, sold, and used in this country. Incredibly, they assert that these companies can make major changes to lower emissions – such as the adoption of wind and solar alternatives – “without significantly increasing the cost of electricity.” But never before has the “public nuisance” doctrine been used to set national economic and energy policy. While litigation may be therapeutic for those frustrated by political inaction, this case is at odds with this country’s legal tradition. Meanwhile, a recently elected Republican House is taking steps to go in the other direction through budget cuts to the EPA. Environmental activism in the US is, in effect, looking to up-end the democratic process – an all too common theme across the Left – by empowering the courts to make policy in perhaps the single most critical policy area for American prosperity.

#### This solves and competes – it doesn’t ‘reduce’ a legal restriction – it just makes it unenforceable

William Treanor (associate professor of law at Fordham University) and Gene Sperling (Deputy assistant to the president for economic policy University of Minnesota) 1993 “Prospective overruling and the revival of Unconstitutional statutes” JSTOR

Unlike the Supreme Court, several state courts have explicitly addressed the revival issue. The relevant state court cases have concerned the specific issue of whether a statute that has been held unconstitutional is revived when the invalidating decision is over- turned.42 With one exception, they have concluded that such statutes are immediately enforceable. The most noted instance in which the revival issue was resolved by a court involved the District of Columbia minimum wage statute pro- nounced unconstitutional in Adkins. After the Court reversed Adkins in West Coast Hotel, President Roosevelt asked Attorney General HomerCummings for an opinion on the status of the District of Columbia's statute. The Attorney General responded, The decisions are practically in accord in holding that the courts have no power to repeal or abolish a statute, and that notwithstanding a decision holding it unconstitutional a statute continues to remain on the statute books; and that if a stat- ute be declared unconstitutional and the decision so declaring it be subsequently overruled the statute will then be held valid from the date it became effective.43 Enforcement of the statute followed without congressional action.44 When this enforcement was challenged, the Municipal Court of Appeals for the District of Columbia inJawish v. Morlet 45 held that the decision in West Coast Hotel had had the effect of making the statute enforceable. The court observed that previous opinions addressing the revival issue proceed on the principle that a statute declared unconstitutional is void in the sense that it is inoperative or unenforceable, but not void in the sense that it is repealed or abolished; that so long as the decision stands the statute is dormant but not dead; and that if the decision is reversed the statute is valid from its first effective date.46 The court declared this precedent sound since the cases were "in ac- cord with the principle 'that a decision of a court of appellate jurisdic- tion overruling a former decision is retrospective in its operation, and the effect is not that the former decision is bad law but that it never was the law.' "47 Adkins was thus, and had always been, a nullity. The court acknowledged that, after Adkins, it had been thought that the District of Columbia's minimum wage statute was unconstitutional. As the court put it, "'[J]ust about everybody was fooled.' "48 Nonetheless, the court's view was that since the minimum wage law had always been valid, although for a period judicially unenforceable, there was no need to reenact it.49 Almost all other courts that have addressed the issue of whether a statute that has been found unconstitutional can be revived have reached the same result as theJawish court, using a similar formalisticanalysis.50 The sole decision in which a court adopted the nonrevival position is Jefferson v. Jeferson,51 a poorly reasoned decision of the Louisiana Supreme Court. The plaintiff in Jeferson sought child sup- port and maintenance from her husband. She prevailed at the trial level; he filed his notice of appeal one day after the end of the filing period established by the Louisiana Uniform Rules of the Court of Ap- peals. The Court of Appeals rejected his appeal as untimely, even though the Louisiana Supreme Court had previously found that the ap- plicable section of the Uniform Rules violated the state constitution. One of Ms. Jefferson's arguments before the state Supreme Court was that that court's previous ruling had been erroneous and that the rules should therefore be revived. In rejecting this claim and in finding for the husband, the Court stated: Since we have declared the uniform court rule partially unconstitutional, it appears to be somewhat dubious that we have the right to reconsider this ruling in the instant case as counsel for the respondent judges urges us to do. For a rule of court, like a statute, has the force and effect of law and, when a law is stricken as void, it no longer has existence as law; the law cannot be resurrected thereafter by a judicial de- cree changing the final judgment of unconstitutionality to con- stitutionality as this would constitute a reenactment of the law by the Court-an assumption of legislative power not dele- gated to it by the Constitution.52 The Louisiana Court thus took a mechanical approach to the revival question. According to its rationale, when a statute is found unconstitutional, it is judicially determined never to have existed. Revival there- fore entails judicial legislation and thereby violates constitutionally mandated separation of powers: because the initial legislative passage of the bill has no legitimacy, the bill's force is considered to be purely a creature of judicial decision-making. Jefferson has little analytic appeal. Its view of the separation of pow- ers doctrine is too simplistic. Contrary to the Jeferson rationale, a "re- vived" law is not the pure product of judicial decision-making. It is, instead, a law that once gained the support of a legislature and that has never been legislatively repealed. Its legitimacy rests on its initial legis- lative authorization. Moreover, the view that a statute that has been found unconstitutional should be treated as if it never existed may have had some support in the early case law, but it has been clearly rejected by the Supreme Court. Instead of treating all statutes that it has found unconstitutional as if they had never existed, the Court has recognized a range of circumstances in which people who rely on an overturned decision are protected. Indeed, as will be developed, the doctrine of prospective overruling evolved to shield from harm those who relied on subsequently overruled judicial decisions.53 In short, the one case in which there was a holding that a statute did not revive does not offer a convincing rationale for nonrevival.

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#### Text: The United States federal government should substantially increase necessary resources to improve data collection on foreign export promotion, should provide access to export finance and should provide greater investment to improve coordination within the Trade Enforcement Center division of the U.S. Trade Representative’s office. The aforementioned proposal should prioritize resource investment towards the People’s Republic of China.

#### The counterplan solves the case – improving coordination is a pre requisite to effective trade policy

Dewan, 12 [March 14th, Sabina, Director of Globalization and International Employment at the Center for American Progress, Filling in the Gaps in Our Trade Intelligence

The United States Needs Better Intelligence on Other Nations’ Industrial Policy Tools, http://www.americanprogress.org/issues/2012/03/trade\_intelligence.html

Next week’s verdict due from the U.S. Department of Commerce on whether the Chinese government is unfairly subsidizing the production of solar panels and thus driving American competitors out of the market reflects the Obama administration’s commitment to making sure our trading partners play by the rules. Indeed, President Obama’s February 28 executive order creating a beefed-up trade enforcement office means our domestic trade laws and agreements will be more aggressively enforced.¶ But the new trade enforcement office won’t ensure those rules and treaties adequately protect American workers and firms. For that to happen, we need to do more to fill in large intelligence gaps about foreign trade activities. We don’t know the full extent of subsidies, export financing, or the range of trade promotion activities in other countries, especially those with state-owned enterprises.¶ Without this crucial information, our lawmakers and trade negotiators can’t adequately safeguard American workers and companies from unfair trade practices by our competitors.¶ President Obama’s request for $26 million to create the Interagency Trade Enforcement Center, a new department within the U.S. Trade Representative’s office, will increase the number of trade lawyers and investigators available to take cases against countries that violate trade rules. Investigators will also defend America’s firms and workers from claims filed against the United States. But in order for the new Interagency Trade Enforcement Center to function effectively, we must still fill in large gaps in our intelligence in the following three areas:¶ State-owned enterprises and subsidies¶ Export finance¶ Export promotion¶ Let’s look at each in turn.¶ State-owned enterprises and subsidies¶ We need more information about state-owned enterprises in other countries, and the extent to which governments in China, Vietnam, Singapore, and elsewhere subsidize the production and export of their goods and services.¶ What we do know is that a number of countries today manage their economies through a state-capitalist model in which the government directly or indirectly controls many of the economy’s productive assets, formal financial systems, and activities. State-owned enterprises participate in commercial markets but enjoy state backing benefiting from preferred access to bank capital, below-market-rate financing, favorable tax treatment, capital injections, and other subsidies that distort the playing field.¶ What we don’t know is how deep or wide these practices run. Our efforts to date have been piecemeal. And our laws and regulations are not adequately equipped to deal with such subsidies in a state-capitalist model. And without this information, it’s hard for us to craft rules and treaties, much less enforce them, to truly protect firms and workers from unfair competition.¶ Export finance¶ We don’t have enough information on how much other governments are spending on financing their exports.¶ The U.S. Export-Import Bank—the government agency that provides loans, guarantees, and insurance products to help U.S. companies export—has some records of equivalent institutions in other countries. But in many countries these export-finance institutions operate more like commercial banks that don’t share their information publicly. And the extent of export financing that takes place in countries with state-owned enterprises is even harder to discern.¶ Our government must provide access to appropriate levels of export finance for those who need it—and at levels that are in line with the financing other governments provide their businesses. That’s hard for us to do when we don’t fully grasp the extent to which other governments are financing their country’s exports.¶ Export promotion¶ Finally, we don’t systematically keep track of the full range of activities other countries engage in to promote their exports. Our government’s trade advocacy and export-promotion efforts are largely focused on educating, training, and assisting U.S. businesses on accessing information and resources on how and where to export, especially small- and medium-sized companies.¶ But other countries have a less conventional approach to promoting their exports. Foreign governments tend to play a more active role in negotiating deals to boost their exports, while the U.S. government tends to let businesses sell their own products. We must collect data on how other countries promote their exports to be able to compete with them.¶ We must allocate people, time, and money to improving our trade intelligence in these areas in addition to improving trade enforcement. If these gaps were filled, then we would be better equipped to try to preempt violations before they occur, protecting the rights of American firms and workers.¶

#### Every 1ac claim is wrong – tariffs secure competition necessary for innovation – the effects on the industry are small, inconsistent demand and production shifts take out solvency – a refusal to maintain tariffs collapses the solar market

**Hart and Gordon, 12** [Melanie Hart is a Policy Analyst on China Energy and Climate Policy at the Center for American Progress. Kate Gordon is Vice President for Energy Policy at the Center, “The Complexities of the U.S. Decision on Chinese Solar Panel Imports” http://www.americanprogress.org/issues/2012/03/china\_solar\_panels.htm]

Everyone agrees that imposing import tariffs on Chinese solar panels should benefit the U.S. solar module [manufacturing](http://coalition4affordablesolar.org/wp-content/uploads/2012/01/TBG_Solar-Trade-Impact-Report.pdf) [industry](http://www.americansolarmanufacturing.org/news-releases/03-01-12-casm-export-report.htm). Solar-panel prices fell [50 percent](http://www.bloomberg.com/quote/SSPSMCSC%3AIND) in 2011, and that unusually steep price drop has eroded profit margins worldwide. Cheap Chinese manufacturing appears to have contributed to the price drop, so reducing the impact of Chinese prices on the U.S. market should slow the price decrease to a more sustainable rate and increase [profit margins](http://www.bloomberg.com/news/2012-03-08/solar-shipments-rise-as-prices-fall-to-unsustainable-levels.html) for U.S. manufacturers. U.S. tariffs on Chinese solar panels would also help manufacturers in other countries that do not provide these subsidies, such as some in the European Union, because those manufacturers also export to the United States and compete for U.S. market share.¶ What is less clear is how tariffs would affect the demand side in the United States. Many U.S. solar-installation companies, which purchase solar panels and therefore benefit from low Chinese prices, fear that import tariffs will erode their profit margins, slow industry growth across the value chain, and make it even harder for solar energy to compete with traditional fossil fuels. Some of these solar-installation firms are so concerned that they have formed an opposition group to push back against SolarWorld’s trade petitions. That group—the [Coalition for Affordable Solar Energy](http://coalition4affordablesolar.org/)—claims that imposing high import tariffs on Chinese-manufactured solar panels would decimate the U.S. solar installation industry and eliminate [thousands](http://www.pv-magazine.com/opinion-analysis/blogdetails/beitrag/et-tu--solarworld_100005152/#axzz1oudrmN1o) of jobs in that sector.¶ Solar energy already faces an uphill battle in the United State s. The combination of heavy [fossil-fuel subsidies](http://www.americanprogress.org/issues/2011/05/big_oil_tax_breaks.html) and weak national-level political support for policies to spur demand for renewable energy can make it hard for emerging energy technologies to compete in our country. Some [politicians](http://content.usatoday.com/communities/theoval/post/2012/02/club-for-growth-criticizes-upton-solyndra/1#.T10gQIFTBBk) have even attacked the few solar-industry development policies [we do have](https://lpo.energy.gov/?page_id=45) in an attempt to reduce federal government spending on clean energy across the board.¶ The clean energy advocates who have supported solar-industry development throughout these political battles certainly do not want to throw more obstacles in the path of the solar-installation industry. But that does not mean that the United States needs cheap Chinese solar panels so badly that we should just roll over and let a foreign government break enforceable international trade rules. If the U.S. Department of Commerce finds that the Chinese government has acted illegally, then the Chinese government and the industry it is subsidizing should pay a price for that behavior. Under the current trade system that price is tariffs.¶ If the U.S. Commerce Department finds that Chinese government dumping and subsidies artificially suppressed prices by a significant amount and that the price decreases harmed the U.S. manufacturing industry, then it is possible that the resultant tariffs could be 100 percent or above. Contrary to what the Coalition for Affordable Solar Energy is claiming, that is not a reason to panic.¶ For one thing, many different factors are contributing to declining global solar prices. Chinese manufacturing certainly plays a role, but innovation is also important. Solar panels are becoming [increasingly efficient](http://www.technologyreview.com/energy/39624/) (generating more energy per module), and manufacturers are steadily improving production processes to [bring down](http://energy.gov/articles/innovative-solar-panel-maker-scales-lowering-costs-while-creating-jobs) costs. The U.S. solar manufacturing market is already fiercely competitive, so even without discounted Chinese imports other U.S. manufacturers—and other solar-panel exporters to the United States—should still have strong incentives to keep innovating to bring down costs.¶ It is possible that imposing import tariffs may slow the price decline or even create a temporary price bump in the U.S. market if U.S. customers shift orders from Chinese to non-Chinese manufacturers and the latter cannot keep up with demand. It is important to note, however, that one of the biggest problems facing solar-module markets worldwide is [oversupply](http://www.digitimes.com/Reports/Report.asp?datepublish=2012/1/11&pages=PD&seq=205), so it should not be difficult to fill any gaps produced by a shift away from Chinese solar panels.¶ Furthermore, Chinese manufacturers would likely respond to import tariffs by [shifting production](http://www.reuters.com/article/2012/02/23/trina-idUSL2E8DN2EI20120223) to the United States or other overseas markets where the tariffs would no longer apply, so they would not be out of the game for long. They would, though, be investing in the United States or at least in countries, such as in the European Union, where trade standards are more comparable.¶ If Chinese companies do begin manufacturing here, they will find that the United States is in a strong competitive position to manufacture solar panels because of our skilled labor force, domestic supply of silicon, and strong manufacturing infrastructure. It certainly helps that China’s own labor costs are increasing: Boston Consulting Group [recently estimated](http://www.bcg.com/documents/file84471.pdf) that within five years China’s manufacturing wages will be within 25 percent of those in the lowest-wage U.S. states (South Carolina, Alabama, and Tennessee).¶ The solar-panel industry is one in which labor costs play a smaller role than they do in less advanced, lower-tech manufacturing sectors. Labor accounts for only [3 percent to 4 percent](http://www.technologyreview.com/business/37954/) of the cost of producing solar panels, meaning that higher labor-cost countries such as the United States should be in a strong position to increase solar-manufacturing capacity.¶ Given the volatility of global oil prices, the cost of transportation is currently much more important to most advanced manufacturers. High transportation costs mean that many manufacturers are looking to locate as close as possible to both their suppliers and their customers, so that they can keep costs down and maintain “just-in-time” manufacturing standards. And here is where the United States has a problem in solar.¶ We have inconsistent demand for these products, making it difficult for manufacturers to take the risk in spending the upfront capital to build new plants or expand existing ones. Demand-side policies have spurred solar growth in the past. In 2010, for example, the seven states with the strongest development policies accounted for [82 percent](http://www.seia.org/galleries/pdf/SMI-Q1-2011-ES.pdf) of new U.S. solar installations. In third-quarter 2011 that share increased to [89 percent](http://www.seia.org/galleries/pdf/SMI-Q3-2011-ES.pdf). But political attacks on state-level renewable energy standards, the expiration of many federal clean energy support programs, and the lack of federal policies that would create sustained demand for renewable energy in the United States all play a part in making demand for solar far less stable than it is in the European Union countries or even in China itself.¶ Whether the U.S. solar market [continues to grow](http://www.usatoday.com/money/industries/energy/story/2012-03-14/solar-wind-energy/53517526/1), therefore, may depend much more on demand-side policies than on access to cheap Chinese imports.¶ Overall, then, it is not clear that import tariffs would harm solar-market growth in the United States over the long term. What is clear, however, is that long-term U.S. market exposure to illegal subsidization certainly would not only harm solar-panel manufacturers but possibly also slow growth across the value chain.¶ Chinese leaders look at the United States and want what we have. They [want to become](http://www.americanprogress.org/issues/2011/08/china_energy_competitiveness.html) a global research and development powerhouse that creates and exports cutting edge technologies with big profit margins. China’s traditional command-and-control economic system was not good at creating those innovation incentives, so they are working to reform that system, but reform takes time.¶ In the meantime they are trying to fill the gap with heavy government subsidies. Problem is, that approach can actually reduce innovation, not only in China, but also in the United States. Bureaucrats are not adept at picking winning companies and winning technology standards. When Chinese officials heavily subsidize their favorite domestic solar manufacturers, those subsidies can reduce prices to levels that other firms cannot match, thus driving competitors out of the market and reducing incentives for innovation. When China exports those products to the United States, the same dynamic can play out here.¶ The long-term result is that a small number of heavily subsidized Chinese manufacturers could dominate the global solar market. That may make Chinese leaders happy, but if those firms are not producing the best solar technologies—for example, if their solar panels are not as efficient as they need to be to compete with traditional fossil fuels—that can slow solar-market development worldwide.¶ To keep this market growing, the best thing the U.S. government can do is to create a good environment for technology innovation, and that will require a combination of demand-side policies and protection from adverse price incentives.¶

# 1nc trade war

#### The plan is a drop in the bucket relative to overall disputes

**Stokes and Hatchigian, 12** [U.S.-China Relations in an Election Year Taking the Long View in a Season of Heated Rhetoric, Jacob, Research Assistant at the Center for a New American Security (CNAS), where his research focuses on U.S. national security and defense policy. His writing has appeared in CNN.com, Politico, BusinessWeek, *The Baltimore Sun*, *The Guardian* and *The American Prospect*, among other publications, Senior Fellow at American Progress.¶ <http://webcache.googleusercontent.com/search?q=cache:QG6048mP53AJ:www.americanprogressaction.org/issues/2012/03/pdf/us_china_relations.pdf+&hl=en&gl=us>]

This report examines the 10 most debated challenges in the U.S.-China relation-¶ ship in the 2012 presidential and congressional campaign season, exploring¶ differences between progressive and conservative approaches to China. We¶ detail these 10 issues in the pages that follow, but briefly, here is a summation of the top challenges and the different approaches advocated by conservatives and¶ taken by progressives.¶ • Ensuring fair trade. The Obama administration’s policy of vigorous enforce-¶ ment and results-oriented dialogue beats conservatives’ refusal to invest in¶ American competitiveness at home; empty, antagonistic rhetoric toward China;¶ and highly inconsistent positions on trade cases. The Obama administration has¶ announced a new trade-enforcement unit and has brought more major trade¶ cases against China than any of its predecessors.¶ • Progress on currency. The Obama administration’s efforts, on its own and with¶ other nations, to pressure China to deal with its undervalued currency have¶ resulted in progress, though more remains to be done. The administration is keeping the pressure on. The conservative answer is both needlessly antago-¶ nistic and ineffective.¶ • China owning U.S. debt. China owning just more than 8 percent of our federal¶ debt is not leverage China can use without unacceptably harming its own interests.¶ Conservative hysterics and fearmongering about this complex issue is misplaced.¶ • Chinese direct investment. Chinese investment in our country can be a major¶ source of capital and jobs going forward. We should allow proven national ¶ 4 Center for American Progress Action Fund | U.S.-China Relations in an Election Year¶ security processes to weed out threats to our nation and avoid excessive¶ paranoia around Chinese purchases, lest we miss investment-led growth¶ opportunities. Conservatives should take heed.¶ • Championing human rights. The Obama administration has consistently called¶ China out on human rights, speaking privately and publicly with Chinese¶ leaders, meeting with the Dalai Lama twice, and giving our diplomats new¶ forums to engage fully with their Chinese counterparts and the Chinese peo-¶ ple to improve human rights and religious freedoms in China. Conservatives’¶ only answer is even more forceful browbeating of Chinese leaders—emotion-¶ ally satisfying, but not an effective tactic to make real change.¶ • America the Pacific power. Under the Obama administration new trade part-¶ nerships, defense arrangements, and serious connections with regional orga-¶ nizations all support deeper U.S. engagement in Asia. Extremist conservative¶ rhetoric claiming the administration is not investing adequately in defense in¶ Asia is nonsense.¶ • Addressing China’s military. China’s military has grown rapidly in recent years,¶ albeit from a very low base. While some technologies are worrisome, the¶ United States retains a huge advantage over China. The Obama administration¶ is responding to China’s military buildup but is not exaggerating the threat, in¶ contrast to conservative efforts to use the “China threat” to justify unsustain-¶ able increases in military spending.¶ • Supporting regional allies. Asian nations continue to turn to America to ensure¶ peace and security. The United States is meeting that need by strengthening rela-¶ tions with our Pacific friends and allies. Relationships with Japan, South Korea,¶ and Australia are rock-solid, and the United States joined with regional players¶ to push back on Chinese belligerence. Conservatives ignore this track record in¶ desperate attempts to tag the Obama administration as abandoning our allies.¶ • A friend to Taiwan. The Obama administration has sold unprecedentedly large¶ packages of arms to Taiwan, including major fighter upgrades, while also upping¶ outreach to the island in ways that will not destabilize cross-Strait relations.¶ Conservatives are left complaining that the current administration, like the Bush¶ administration before it, did not sell Taiwan the most advanced jet fighters.¶ The Obama¶ administration¶ is responding to¶ China’s military¶ buildup but is¶ not exaggerating¶ the threat, in¶ contrast to¶ conservative efforts¶ to use the “China¶ threat” to justify¶ unsustainable¶ increases in military¶ spending.¶ 5 Center for American Progress Action Fund | U.S.-China Relations in an Election Year¶ • Tackling cybersecurity. From the start the Obama administration has identi-¶ fied cybersecurity as an issue of grave concern and mounted a comprehensive¶ response. Conservatives who condemn the administration’s response do not¶ understand its scope; they also offer little in the way of new ideas for combat-¶ ing the threat.¶ In the pages that follow, we will present in more detail these 10 challenges along-¶ side the response of the Obama administration and the misplaced criticisms and¶ hostile rhetoric of many conservatives.

#### Alt cause – EU trade war

**AFP, 7/26/12** [Chinese solar makers warn of 'trade war' with EU, Agente France Press, <http://www.google.com/hostednews/afp/article/ALeqM5ivUmnuP4DxT_q7Gn5M0iqdwRSPnw?docId=CNG.f14afb390e7dda24acd026cad5111c4b.a71>]

BEIJING — Four leading solar cell manufacturers in China on Thursday warned a possible EU anti-dumping investigation could trigger a "trade war" and urged Beijing to step in to protect their interests.¶ German cell maker SolarWorld AG has reportedly requested the European Union to probe alleged dumping by Chinese firms, said a joint statement by Yingli Green Energy, Suntech Power Holdings Co., Trina Solar and Canadian Solar, which is headquartered in Canada but manufactures in China.¶ The move came on the heels of a US decision in May to slap hefty anti-dumping duties on Chinese solar cell makers, which Beijing blasted as "protectionist".¶ The companies called on the Chinese government to block the case by opening a dialogue with the European Union to prevent a trade war.¶ "China's photovoltaic industry will suffer a deadly blow if the EU follows the United States and launches an anti-dumping probe," said the statement.¶ More than 60 percent of China's $35.8-billion-worth solar shipments were exported to the EU last year while the country imported $7.5 billion of European solar equipments and raw materials, it said.¶ "Meanwhile, (a probe) would trigger a full scale trade war between China and Europe," it said, adding the country is a big market for European products ranging from cars, aircraft, machines and luxury goods.

#### Solar tariffs aren’t key – poultry, yuan and cars – no risk of escalating trade war

**Zappone, 12** [January, Chris, Sydney Morning Herald, 'Murky protectionism' on the rise - but no trade war, <http://www.smh.com.au/business/world-business/murky-protectionism-on-the-rise--but-no-trade-war-20120110-1pt3t.html>]

At the outset of the global financial crisis, the world’s leaders pledged to resist calls to shield their local economies in order to prevent a trade war that could further damage global growth.¶ Four years on, with China slowing, Europe heading into recession and a political environment soured by successive financial crises, the question arises: how long will policymakers be able to resist those calls for more protectionism?¶ “Free trade is going to be under pressure,” said Lowy Institute international economy program director Mark Thirlwell. “Since 2007-08 the case for moving to greater trade liberalisation has got tougher and the demands for protection have increased.”¶ Only last week, China, which is grappling with a slowdown, raised the prospect of a trade war with the European Union in response to the EU's implementation of a carbon emissions tax on air travel to and from Europe. Earlier last month China imposed tariffs up to 21 per cent on US-made cars, affecting about $US4 billion imports a year.¶ Advertisement ¶ Across the Pacific, US politicians in the throes of an election year with 8.5 per cent unemployment have issued more strident calls for China to “play by the rules” and allow the yuan to appreciate faster against the US dollar. The US has also asked the World Trade Organisation to probe China's support for its solar panel industry and the restrictions Beijing has placed on US poultry imports.¶ In fact, the most recent WTO data shows that the number of trade restrictive measures enacted by members rose 53 per cent to 339 occurrences over the year to October.¶ Yet the WTO admits that the motives behind the spate of actions aren’t always simply to protect local jobs. “Not all measures categorised as trade restrictive may have been adopted with such an intention,” the body said.¶ In Brazil, for example, the steep rise in the value of its currency, the real, has sparked a torrent of car imports into the country - similar to the online-overseas shopping boom in Australia. Brazil has in turn put a one-year provisional 30 per cent increase on auto imports, to counterbalance the effects of their strong currency.¶ In the US, China and Australia, infrastructure spending measures contain “buy local” requirements to stoke domestic growth, not necessary punish foreign businesses. The federal government in September streamlined its anti-dumping system that eases the way for companies to ask for investigations into imported goods that come in below market value to Australia. Again, well within the rules.¶ “What we’ve seen is a gradual ratcheting up of trade intervention,” said Mr Thirlwell, amounting to what he calls “murky protectionism” or government intervention through support for industries or complaints to global trade authorities.¶ To date, observers such as Mr Thirlwell say most countries have remained remarkably resistant to throwing up significant trade barriers.¶ For example, in November, the US, Australia and seven other Asian-Pacific nations including Japan, outlined the plan for an ambitious multilateral Trans-Pacific Partnership trade block worth 40 per cent of the world’s trade, in an effort to increase the flow of cross-border goods and investment. Japan, China and South Korea are also in the later stages of negotiation over a free trade deal between those three nations.¶ Australian National University international trade lecturer John Tang doesn’t believe the world is on the edge a new round of protectionism.¶ “I don’t see a general sea change towards protectionism for major trading blocks but that may be because so much of the industrialised world is relying on developing countries to sustain their exports,” he said.¶ Nevertheless, a shift in the political reality of the US, China or elsewhere could change that, he said.¶ Washington DC-based Brookings Institution fellow Joshua Meltzer said that if the euro zone broke up, elevating the crisis to a new stage, nations may switch to much more protective measures.¶ ‘‘I wouldn’t go so far to say the global economy is so integrated that we could never have anything that would approach a trade war,” said Washington DC-based Brookings Institution fellow Joshua Meltzer. “But I don’t think we’re on that track.”

**Relations resilient empirically proven**

**Blackwill 2009** – former US ambassador to India and US National Security Council Deputy for Iraq, former dean of the Kennedy School of Government at Harvard (Robert D., RAND, “The Geopolitical Consequences of the World Economic Recession—A Caution”, http://www.rand.org/pubs/occasional\_papers/2009/RAND\_OP275.pdf, WEA)

Alternatively, will the current world economic crisis change relations between China and the United States in a much more positive and intimate direction, producing what some are calling a transcendent G-2? This seems improbable for seven reasons. First, the United States and China have profoundly different visions of Asian security. For Washington, maintaining U.S. alliances in Asia is the hub of its concept of Asian security, whereas, for Beijing, America’s alliance system is a destabilizing factor in Asian security and over time should wither away. These opposing concepts will be an enduring source of tension between the two sides. Second, these two countries systematically prepare for war against one another, which is reflected in their military doctrines, their weapons procurement and force modernization, and their deployments and military exercises. As long as this is the case, it will provide a formidable psychological and material barrier to much closer bilateral relations. Third, the United States is critical of China’s external resource acquisition policy, which Washington believes could threaten both American economic and security interests in the developing world. Fourth, despite their deep economic dependence on each other, U.S.-China economic relations are inherently fragile. China sells too much to the United States and buys too little, and the United States saves too little and borrows too much from China. This will inevitably lead to a backlash in the United States and a Chinese preoccupation with the value of its American investments. Fifth, Chinese environmental policy will be an increasing problem, both for U.S. policymakers who are committed to bringing China fully into global efforts to reduce climate degradation and for Chinese leaders who are just as determined to emphasize domestic economic growth over international climate regimes. Sixth, China and the United States have wholly different domestic political arrangements that make a sustained entente difficult to manage. Americans continue to care about human rights in China, and Beijing resents what it regards as U.S. interference in its domestic affairs. This will be a drag on the bilateral relationship for the foreseeable future. And seventh, any extended application by Washington of “Chimerica,” as Moritz Schularick of Berlin’s Free University has called it,23 would so alarm America’s Asian allies, beginning with Japan, that the United States would soon retreat from the concept.24

Nevertheless, these factors are unlikely to lead to a substantial downturn in U.S.-China bilateral ties. In addition to their economic interdependence, both nations have important reasons to keep their interaction more or less stable. As Washington wants to concentrate on its many problems elsewhere in the world, especially in the Greater Middle East, Beijing prefers to keep its focus on its domestic economic development and political stability. Neither wants the bilateral relationship to get out of hand. In sum, a positive strategic breakthrough in the U.S.-China relationship or a serious deterioration in bilateral interaction both seem doubtful in the period ahead. And the current economic downturn will not essentially affect the abiding primary and constraining factors on the two sides. Therefore, the U.S.-China relationship in five years will probably look pretty much as it does today—part cooperation, part competition, part suspicion—unaffected by today’s economic time of troubles, except in the increasing unlikely event of a cross-strait crisis and confrontation.

**No China war—they have every incentive for peace and act rationally under conflict situations.**

**Lee 2008** – Professor of Political Science at Wake Forest University, also teaches IR and comparative politics of East Asia, visiting faculty at Kansai Gaidai University in Japan (Wei-chin, Journal of Asian and African Studies, Volume 43, No. 5, October 2008, "Long shot and short hit", Sage journals online, WEA)

One recent debate between Brzezinski and Mearsheimer is a typical example of varying perspectives in dealing with China’s rise in military power. Brzezinski has argued that the US decision to stay in East Asia has an added advantage for China in restraining a militarily powerful, increasingly nationalistic, and potentially nuclear-capable Japan. Moreover, China’s credible nuclear credentials and strong economic performance in an interdependent global market have made Chinese leaders become more rational, calculating, and conscious than before in order to avoid any mutually disastrous policies, including its oil diplomacy, with the USA (Brzezinski and Mearsheimer, 2005). Such a ‘kinder and gentler’ view of China has been explored and elaborated by various studies indicating that China has virtually transformed into a responsible and cooperative player, in words and in deeds, in the international community, not only by vigorously embracing multilateralism, but also actively and bilaterally cultivating cooperative security partnerships with various countries (Goldstein, 2005). Given China’s insufficient military capability and the vulnerability derived from the RMA, it serves no significant security benefit for China to challenge US hegemony. In fact, China has adapted itself to be a rule-abiding status quo supporter, rather than a radical rule challenger, in the international society. **Even under provocative situations, China’s tame and cool-handed responses have been demonstrated in several presumably serious US–China tests**, including Lee Teng-hui’s abrupt announcement of the ‘two-state’ theory in 1999, the EP-3 spy plane incident in 2001, and the US war on terror and unpopular war in Iraq in recent years. China has appeared to learn, internalize, and integrate the laws, norms and rules of the international community, just as neoliberal institutionalists and constructivists had long articulated and prescribed.

**There is zero risk of a protectionist collapse**

**Anderson 9**, head of Asia-Pacific Economics for UBS, (Jonathan, “Economist: Reality Check for Prophets of Protectionism,” 8-17, http://english.caijing.com.cn/2009-08-17/110225722.html)

The short answer is **no**. We do not worry much about the protectionism issue. We think these fears are vastly overstated for four reasons.

First, conditions in the global economy are not that bad. If we look back at the Great Depression in the 1930s, we find the United States economy contracted nearly 30 percent in real terms, and more than a quarter of the entire workforce was unemployed. Up to one-third of the economy simply disappeared. In many European economies, the impact was greater still.
 How do things look today? At last count, the United States, euro zone countries, and Japan had seen a cumulative GDP contraction of 6 percent or so, with average unemployment nearing 9 percent. And this is probably as bad as it will get; the world economy is now expected to stabilize and recover in the second half of 2009. Of course, the recovery may be extremely weak. But even if developed countries don't grow at all over the next 18 months, the situation still compares favorably with the events of 75 years ago.

In other words, there's just no reason to look for the same kind of protectionist reaction today. We should add that we're not seeing it. The WTO has reported a sharp increase in various protectionist actions, claims and cases, but the overall economic impact of these measures is still small by any standard. This is likely to be the worst it will get.

Second, the effects of "plain vanilla" protectionism are highly exaggerated. Although Smoot-Hawley passed in 1930, raising tariffs on thousands of products, most economists agree the real attack on global trade didn't come until the breakup of the international monetary and exchange rate arrangements in 1931, and a corresponding collapse of global finance.

Of course, many pundits now worry about the fall of the U.S. dollar as a global invoicing and reserve currency, and that this could have a similarly negative impact on trade and financing. However, we should stress that as bad as the U.S. economy looks at present, it's still the best thing we have. The European Union is beset by crushing regional disparities and political pressures, with significant basket cases hiding inside its borders. Japan simply doesn't have the necessary dynamism or commitment to globalization. And as far as fiscal balance sheets are concerned, all three major regions have equally significant problems.

The United States stands alone in terms of how fast the Federal Reserve has expanded its monetary balance sheet, raising specific concerns about U.S. inflation and its impact on the dollar. But as one can see by looking at U.S. economic data, we are still falling into a deflation cycle for the time being, with nary a hint of inflationary pressure yet. We fully expect the Fed to be able to rein in the monetary expansion quickly if these pressures arise.

We should add that, although it's fashionable to look at China and the yuan as a rising competitor to the dollar, this is simply not a realistic theme for the next 10 years – and perhaps for much longer. China doesn't have an open capital account, which means there is little opportunity or interest in holding the yuan as a serious asset. If anything, the impact of the current global crisis is likely to convince mainland authorities to be slow in opening their borders. China also doesn't have the kind of deep, domestic financial markets required of a global reserve currency; the bond market in particular is still in its infancy. As a result, it will be a long time indeed before the yuan starts playing a real role on the global stage.

Third, even if we do see an unexpected wave of protectionism, emerging countries have less to lose than the developed world. Let's start by asking this question: When we talk about "protectionism," what exactly are we trying to protect? The answer is, of course, domestic workers and domestic jobs.

In what areas do the labor forces of the United States, Europe and Japan work? The vast majority are in services and construction, sectors that don't compete much directly on the international arena. Only 10 to 15 percent are manufacturing jobs, and these are mostly in capital intensive, high-tech industries such as autos, precision machinery and high-end electronics.

By contrast, manufactured goods that China and other emerging markets sell – toys, textiles, running shoes, sporting goods, light electronics, etc. – are barely made at all in the G3 countries. Rich countries outsourced most of these low-end, labor-intensive jobs a long time ago. A related point holds for commodities and raw materials, which make up much of the rest of the exports from the low-income world. All three major, developed regions are heavily dependent on imported resources, and this is unlikely to change in the foreseeable future.

The bottom line here is that even if we do get a big wave of protectionism in developed countries, it unlikely to be aimed specifically at low-end goods from the developed world. Rather, it makes more sense to protect the auto industry along with high-end equipment and chemical manufacturers. Moreover, any tariffs and barriers placed on toys and textiles are much more likely to raise consumer prices than crush volumes, given the absence of competitive domestic industries that could take advantage of protection to grab local market shares.

The final point concerns financial leverage. There has never been a time in recent global economic history when the developed world was so dependent on low-income countries for financial resources. For the first time, the emerging world is a net financial creditor. Given the rapid expansion of public debts, the major developed countries are extremely interested in seeing China and other low-income countries continue to buy U.S. Treasuries, Japanese Government Bonds and various European debt instruments. The impact of a big, potential pullout from global bond markets actually could be much more negative than positive in terms of protecting domestic industries. So emerging markets now are in a much better bargaining position than at any time in the past.

Protectionist fears are likely to continue to bother investors over the next year or two, and perhaps longer. But we don't think the real situation supports these fears.

**No impact—last recession proves econ doesn’t determine conflict or instability**

**Barnett 2009** – senior managing director of Enterra Solutions LLC and a contributing editor/online columnist for Esquire magazine, columnist for World Politics Review (8/25, Thomas P.M. “The New Rules: Security Remains Stable Amid Financial Crisis,” World Politics Review, <http://www.aprodex.com/the-new-rules--security-remains-stable-amid-financial-crisis-398-bl.aspx>, WEA)

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.

Do I expect to read any analyses along those lines in the blogosphere any time soon?

Absolutely not. I expect the fantastic fear-mongering to proceed apace. That's what the Internet is for.

# 1nc china pollution

#### Production shifts now and inevitable – takes out the advantage

**Castelazo, et al, 12** [China’s Solar Industry and the U.S. Anti-Dumping/Anti-Subsidy Trade Case, Molly Castelazo, Director¶ ChinaGlobalTrade.com, The Kearney Alliance, The Kearny Alliance, a nonprofit 501 (c) (3) foundation based in¶ Scottsdale, Arizona, partners with other international organizations to¶ further its mission of “Aid through Trade,” to advance international¶ development and poverty alleviation through trade-related business¶ education, training and applied research, <http://ww1.prweb.com/prfiles/2012/05/16/9517260/China%20Global%20Trade%20Solar%20Manufacturing_May%202012b.pdf>]

While manufacturing cells and modules in the U.S. is certainly one potential outcome of significant¶ subsidies against Chinese producers, they could also shift manufacturing to other countries. According to¶ Shyam Mehta, Senior Analyst at GTM Research, Chinese firms could manufacture the components in¶ Taiwan, or buy Taiwanese components, assemble the panels in Mexico, then sell them into the U.S. That¶ keeps module assembly close to the end market, avoids tariffs on modules made of Chinese cells, and¶ allows Chinese producers to maintain significant cost advantage over manufacturing in the U.S.¶ Moving production elsewhere is a step Chinese manufacturers are already gearing up to take, according to¶ one executive at a Chinese solar module manufacturer. “A lot of companies are already doing that.¶ They’re going to Malaysia, Taiwan, Mexico to see if they can outsource to companies there to ship into¶ the U.S.” She said that for her company, “the U.S. remains a very important market, it just opened.”¶ In fact, if manufacturing cells in Taiwan would allow Chinese manufacturers to keep their upstream¶ supply chains intact, that could be their best solution. They could then assemble the modules anywhere in¶ the world – in Taiwan, in China, in Mexico, in the end-use country. And if manufacturing and assembling¶ outside the U.S. allows Chinese manufacturers to keep costs down and avoid U.S. tariffs, we might see¶ that happen. There is far greater indication that this will be the route Chinese producers take – if they¶ move production anywhere – rather than move cell manufacturing into the U.S.¶ According to Jigar Shah, President of the Coalition for Affordable Solar Energy, “If the U.S. makes the¶ mistake of levying high tariffs against Chinese products, the U.S. is going to import solar modules from¶ India, Malaysia, and Taiwan. They’re not going to manufacture in the U.S. If the Chinese lose this case,¶ we’re not going to get the panels from the U.S.; we’re going to get them from other countries that have an¶ industrial policy. So we’re going to sacrifice our downstream jobs in the U.S.; we’re going to shift jobs in¶ manufacturing from China to Taiwan. Why exactly are we doing this? I get that people hate China right¶ now, but it seems like a foolish thing to do.”

#### Status quo solves – China is already shifting away from coal toward nuclear power

**Martin, 12** [May 8th, Richard, A contributing editor for Wired since 2002, he has written about energy, for Time, Fortune, The Atlantic, and the Asian Wall Street Journal, editorial director for Pike Research, the leading cleantech research and analysis firm, former Technology Producer for ABCNews.com, Technology Editor for The Industry Standard (2000-2001), and Editor-at- Large for Information Week (2005-2008), recipient of the “Excellence in Feature Writing" Award from the Society for Professional Journalists and the White Award for Investigative Reporting, Educated at Yale and the University of Hong Kong, , “SuperFuel: Thorium, the Green Energy Source for the Future”, ISBN 978—0»230-116474]

GIVEN ALL THIS, I HAD TO ASK, why bother? Blessed with large¶ thorium reserves and an existing nuclear R&D capacity that,¶ operational snafus notwithstanding, is world class, India, rather than¶ taking a laborious three-stage route to thorium-based nuclear power,¶ could start building thorium reactors—most simply and inexpensively,¶ liquid fluoride thorium reactors—tomorrow. The reasons it’s not doing¶ so have to do with institutional inertia, national pride, and supposed¶ national security concerns~such as, for instance, building its nuclear¶ arms stockpile. China, meanwhile, is taking a more catholic approach¶ to its nuclear power program, including investigating LFTRs.¶ In a development heralded by thorium advocates around the world,¶ China officially announced in February 2011 at a Shanghai scientific¶ conference that it will begin a program to develop a thorium-fueled¶ molten salt reactor (MSR), aka an LFTR. The project was first reported¶ on the mainland in the Wen Hui Baa newspaper. I broke the news in¶ the West in a story for Wired.com. I first heard about it at a conference¶ in Oak Ridge with Sorensen and other thorium activists. The phrase¶ “Sputnik moment” was used freely. The world’s most dynamic¶ economyhad thrown down the thorium gauntlet. While India chose to¶ slog up the long hill of its three-stage program, China was going straight¶ for the prize.¶ India’s three-stage program calls for gradually phasing in thorium¶ fuel rods in advanced heavy-water reactors. The Chinese program, in¶ contrast, marks the largest national initiative to pursue thorium MSRs¶ to date. One of the world’s largest consumers of coal for electricity, the¶ People’s Republic has embarked on a public campaign to shift toward¶ less noxious energy sources, including nuclear power. The massive¶ Three Gorges dam project, one of the largest public works projects in¶ history, was designed to produce 18.2 gigawatts of electricity and has¶ also engendered fierce criticism and internal protest. Electricity¶ demand is growing at nearly 10 percent a year, and Chinese officials,¶ often willing to ignore international objections to its domestic policies,¶ are committed to using nuclear power as a source of clean, inexpensive¶ energy.¶ The nuclear ambitions of India and China are similarly outsized, but¶ the cultures and capabilities of the two countries are quite different. I¶ used to live in Hong Kong, and I’ve traveled extensively in both¶ northern India and southeastern China. The differences in the¶ countries, for me, can be summed up with a glance at their railways:¶ The Indian rail system, a source of national pride since the days of the¶ raj, is known neither for its modernity nor its efficiency. In September¶ 2011 the passengers on a cross-country journey were surprised to learn¶ that their train had somehow traveled more than 600 miles in the¶ wrong direction. This was treated as a newsworthy but not completely¶ unheard-of experience. The passengers, suitably outraged, stormed the¶ depot.¶ In China the government completed the Beijing-to-Tibet railway in¶ 2006, a dream since the days of Sun Yat-sen. Totaling 2,526 miles, it¶ includes tracks, from Golmud to Lhasa, at the highest altitude of any¶ railway in the world. The two-day journey, which passes through the¶ world’s highest-altitude railway tunnel and uses many sections of¶ elevated track passing over permafrost, costs about $160, or about¶ what it costs to go from Boston to Washington, D.C., on the relatively¶ low-tech Acela train. The new Chinese line has engendered plenty of¶ criticism regarding fears of cultural hegemony and the loss of Tibetan¶ autonomy, but no reports of wrong-way trains have surfaced. In the¶ realm of public infrastructure, India is a great producer of think-tank¶ studies, government reports, and beard-stroking orations. China,¶ unimpeded by the hurly-burly of parliamentary democracy, is a better¶ place for actually accomplishing things. If you are betting on which¶ country will build a thorium power reactor first, the choice is not¶ tough. (A July 2011 crash on a high-speed rail line near Wenzhou, on¶ the southern coast, killed 39 people and sparked a level of public outcry¶ seldom seen under communist rule on the mainland. In public¶ statements after the accident, Chinese premier Wen Jibao vowed to¶ toughen safety standards in China’s rapid industrialization—but the¶ crash did little to slow China’s drive to modernize its energy and¶ transportation infrastructure.)¶ China has 14 nuclear power reactors in operation on the mainland¶ today, with more than 25 under construction and more soon to get¶ under way. For many years a consumer of reactor technology and¶ components from the West, and from Russia, China will soon be¶ building fully homegrown reactors. The development of liquid fluoride¶ thorium reactors would make China the most advanced nuclear power¶ nation on Earth—and could well give it yet another source of high-tech¶ products to pad its export surplus.¶ Comparing nuclear reactors to humble kitchen appliances, Xu¶ Hongjie, a research scientist at the Shanghai Institute of Applied¶ Physics, said, “We need a better stove that can burn more fuel.”11 It¶ was a line reminiscent of Chairman Mao’s finest exhortations.¶ Like many nuclear nations, China declared a pause to review and¶ reassess its nuclear development plans after Fukushima. This was only a breather; Chinese officials made it clear that the Japanese accident¶ would not affect their long-range plans. And they scoffed at the German¶ decision to get out of nuclear power altogether. The comments of¶ Chinese officials did not inspire confidence. Dr. Liu Changxin, vice¶ general secretary of the China Nuclear Society, remarked that such¶ natural disasters “don’t happen in China”—a startling claim given the¶ devastation wrought by the 2008 earthquake in Sichuan Province,¶ which killed 69,000 people and left nearly five million homeless.¶ The Chinese thorium program is headed by Jiang Mianheng, an¶ electrical engineer and the son of the former Chinese president Jiang¶ Zemin (see chapter 1). Jiang Mianheng, who is also a vice president of¶ the Chinese Academy of Sciences, headed a Chinese delegation that¶ visited Oak Ridge in the fall of 2010. The Chinese politely listened to the¶ research presentations, and patiently endured the facilities tour, before¶ revealing that what they were really there for was to soak up as much¶ information on thorium MSRs as they could. “They were quite open¶ about it,” a person present at those discussions told me. In early 2012¶ Western observers of the Chinese nuclear effort stated that the¶ Shanghai Institute of Applied Physics, with around 400 people and a¶ budget of $400 million, planned to build two prototype molten salt¶ reactors by 2015.¶ Like India, China needs to shift to nuclear from coal to avoid adding¶ catastrophic levels of carbon to the atmosphere. At the same time¶ many in the U.S. thorium movement regard the development of¶ Chinese LFTRs as a direct threat to U.S. economic competitiveness. The¶ specter of Chinese competitiveness with the United States is often¶ overblown; in general, China’s prosperity and the well-being of its¶ people, are good things for the world, particularly for Americans. That¶ won’t make it feel any better when we are buying LFTRs with “Made in¶ Shanghai” stamped on the side.¶ The alarmist version of China’s next-generation nuclear strategy¶ comes down to this: if you like foreign oil dependency, you’re going to¶ love foreign nuclear dependency.¶ While various international efforts, including the Gen IV nuclear R&D¶ initiative, include a thorium MSR component, China has made clear its¶ intention to go it alone. The announcement from the Chinese Academy¶ of Sciences states explicitly that the People’s Republic plans to develop¶ and control intellectual property with regard to thorium for its own¶ benefit. “This will enable China to firmly grasp the lifeline of energy in¶ its own hands,” Wen Hui Baa reported.”¶ The plans for China’s lifeline include not only thorium but also¶ critical materials that have increased in value at a startling rate since¶ 2010 and of which China now has a monopoly: rare earth elements.¶

**The Chinese renewable industry is thriving**

**Chadha 9/11**/12 – commentator for CleanTechnica (Mridul, "Renewable Energy Investment Attractiveness: China Continues at #1, US Suffers from Policy Slump, Germany Climbs to #2" http://cleantechnica.com/2012/09/11/renewable-energy-investment-attractiveness-china-continues-at-1-us-suffers-from-policy-slump-germany-climbs-to-2/)

According to the recent Global Renewable Energy Country Attractiveness Indices Report (CAI) released by Ernst & Young, China continues to dominate the global renewable energy sector. The survey grades 40 nations based on their renewable energy markets, renewable energy infrastructure, and their suitability for individual technologies.

Even though dropping by 0.2 points from the last index in May, China manages to be on the first spot of All Renewable Index (ARI) by scoring 70.2 points. Chinese government has very attractive policies for the deployment of renewable energy infrastructure. It aims to add 100 GW of wind energy capacity and 21 GW of solar power capacity by 2015.

**No impact to the Chinese economy and the response measures check**

Coonan 08 (10/25, Clifford, IrishTimes.com, “China's stalling boom has globe worried,” http://www.irishtimes.com/newspaper/opinion/2008/1025/1224838827729.html)

All of this downbeat news feeds into a growing suspicion that China has had its cake and eaten for way too long, and that there is simply no precedent for a country growing and growing without some kind of respite. Establishing what that pause will look like and what it means to the rest of the world is the latest challenge facing global analysts. A hangover is considered inevitable and the Olympics, while meaningless economically, are widely considered the psychological trigger for China to face a slowdown. Despite all this gloom, however, writing China off is premature. The Beijing government is well placed to help protect the economy from the worst ravages of a global downturn. It has spent the last two years trying to fight inflation and cool the overheating economy, so it's a lot easier for it to take the foot off the brakes than it is to put them on in the first place. The central bank has lowered its benchmark interest rate twice in the past two months, the first time in six years. The State Council is increasing spending on infrastructure, offering tax rebates for exporters and allowing state-controlled prices for agricultural products to rise. Expect significant measures to kick-start the property market to avoid house prices falling too drastically. China has a lot of plus points to help out. Chinese banks did not issue subprime loans as a rule, and the country's €1.43 trillion in hard-currency reserves is a useful war chest to call on in a downturn*.* The currency is stable and there are high liquidity levels, all of which give China the most flexibility in the world to fend off the impact of the global financial crisis, says JP Morgan economist Frank Gong. China is now a globalised economy, but its domestic market is still massively underexploited, and it is to this market that the government will most likely turn. While it is a globalised economy committed to the WTO, China is also a centralised economy run by the Communist Party, and it has no real political opposition at home to stop it acting however it sees fit to stop sliding growth. Should the economy start to worsen significantly, public anger will increase, but China has been so successful in keeping a tight leash on the internet and the media that it is difficult for opposition to organise itself in a meaningful way. Recent years of surging growth in China have certainly done a lot to keep global economic data looking rosy, but perhaps China's influence has been somewhat oversold*.* It is not a big enough economy by itself to keep the global economy ticking over, accounting for 5 per cent of the world economy, compared to the United States with a muscular 28 per cent. And whatever about slowing growth, 9 per cent is still an admirable rate, one that European leaders gathered this weekend in Beijing for the Asian-Europe Meeting would give their eye teeth to be able to present to their constituencies.

**CCP resilient—the economy won’t shake it**

**Blackwill 2009** – former US ambassador to India and US National Security Council Deputy for Iraq, former dean of the Kennedy School of Government at Harvard (Robert D., RAND, “The Geopolitical Consequences of the World Economic Recession—A Caution”, http://www.rand.org/pubs/occasional\_papers/2009/RAND\_OP275.pdf, WEA)

Next, China. Again, five years from today. Did the recession undermine the grip of the Chinese Communist Party on the People’s Republic of China (PRC)? No. Again, as Lee Kuan Yew stressed in the same recent speech, “China has proven itself to be pragmatic, resilient and adaptive. The Chinese have survived severe crises—the Great Leap Forward and the Cultural Revolution—few societies have been so stricken. These are reasons not to be pessimistic.” Did the crisis make Washington more willing to succumb to the rise of Chinese power because of PRC holdings of U.S. Treasury Bonds? No. Did it alter China’s basic external direction and especially its efforts, stemming from its own strategic analysis, to undermine the U.S. alliance system in Asia? No. Did it cause the essence of Asian security to transform? No.

**China isn’t stupid enough to attack Russia**

**Menon 2003** (Rajan, Rathbone Professor of International Relations at Lehigh University, The National Interest, Fall)

By contrast, China's military, which was quite recently a giant horde of foot soldiers, is modernizing steadily-chiefly with Russian weaponry, much of it supplied from cash-starved military industries in Khabarovsk, Komsomol'sk and Vladivostok. It may lag far behind the United States, but in force projection, speed, accuracy and lethality it is a wholly different force than it was a decade ago, thanks to Russian fighter jets, submarines, tanks and missiles, many of them built in the Russian Far East. Yet the chances that China will attempt to conquer Russia's Far East are slim. Such a brazen power play would damage China's wider interests. Taiwan might recoil in terror and treat Beijing's proposals for a negotiated reunification with even greater skepticism and wariness. The prevailing Western rationale for economic engagement with China-that commerce will transform and co-opt that country-would be shredded. China would likely face a counterbalancing, encircling coalition of the United States, India, Japan, Russia and Vietnam. Would such setbacks justify the burdens of ruling the vast, problem-infested Russian Far East? The Chinese leaders know their Sun Tzu: what they seek from the Russian Far East (access to resources and a benign northern front) can be had by means of silk-gloved hegemony. Chinese interests can be served without its formal occupation of the territory. Indeed, what may emerge could be a "reverse Manchurian" scenario, where the Russian Far East remains a titular part of Russia but is increasingly integrated into Beijing's sphere of influence. That is precisely what the conspiracy among geography, demography, power and time may create in Russia's Far East.

#### Solar power development destroys the environment – causes warming and kills biodiversity

**Pizzo 11** – JD from the University of Colorado, attorney for the National Wildlife Federation (“When Saving the Environment Hurts the Environment: Balancing Solar Energy Development with Land and Wildlife Conservation in Warming Climate,” HeinOnline legal search engine)

Land Use and Ecosystem/Habitat Disturbance¶ Development of large-scale solar projects transforms the lands on which they are constructed and precludes most other uses.69 When used to generate electricity on a commercial scale, solar energy facilities require large tracts of land.70 The land requirements for CSP systems are approximately ﬁve to ten acres of land per megawatt of capacity." Thus, a single utility-scale solar plant may occupy up to forty-ﬁve square miles, or nearly 29,000 acres." To prepare land for construction of asolar facility, the ground is scraped and, when necessary, re-contoured to produce a level building site void of all vegetation. In addition, many existing utility-scale facilities have a regular program of herbicide application to keep the area under the collection devices tree of any growth that may block sunlight from reaching the mirrors.”¶ Furthermore, due to the size of utility-scale solar project areas and the extent of landscape disturbance, restoration and reclamation of the project site may not be feasible with current technology."¶ Construction, maintenance, and operation of utility-scale solar plants can have severe impacts on wildlife through direct habitat destruction and habitat fragmentation. Habitat destruction begins when the land within the solar collection ﬁeld is scraped in preparation for construction. The site remains unsuitable for wildlife for the life of the project because the large ﬁelds of solar collectors interfere with natural sunlight, rainfall, and drainage at the facility, causing microclimate alteration." For example, mirrors shield the ground from sunlight and wind, which reduces temperature and decreases wind speed and evapotranspiration beneath the reﬂecting mirrors." As one botanist has noted, “nothing will live under the mirrors?” Construction and maintenance activities also alter the composition, structure, and microclirnate of the land adjacent to the facility." In addition, the reﬂected light in solar-collecting ﬁelds may be increased from thirty percent to ﬁfty-six percent, super-heating the air above and around solar facilities.” These effects are compounded at large facilities due to the number of mirrors that cover and cool the ground while simultaneously reﬂecting light and heating the air. These habitat alterations have direct and indirect effects on wildlife, which may cause shifts in various plant and animal populations.”¶ Ecosystem disturbance and destruction are especially signiﬁcant to local organisms that rely on a limited area for sustenance." “Such species often have access to a particular resource in only one area and unless they abandon historical breeding or wintering grounds, [they are] unlikely to ﬁnd a replacement for the resource?” In addition, construction of solar facilities, roads, and transmission corridors causes habitat fragmentation, which forces wildlife to live on ever-shrinking islands of habitat where it is more difficult for them to ﬁnd food, water, shelter, mates, and protection from predators." Solar development may also affect migratory populations by cutting off migration corridors and eliminating staging grounds.“ Habitat fragmentation and migration disruption combine to limit genetic diversity by decreasing available mates and encouraging inbreeding. As a result, wildlife populations become more susceptible to extinction in the event of catastrophic events such as wildﬁre and disease. Thus, habitat fragmentation inevitably leads to smaller populations of wildlife, and threatens biodiversity by increasing the possibility of extinction for entire populations or species.”

**Status quo solves air pollution**

**New Scientist 2004** (October 17, <http://www.newscientist.com/article.ns?id=dn6526>)

Industry has dramatically cut its emissions of pollutants, called volatile organic compounds. But those cuts have been more than offset by the amount of VOCs churned out by trees. The revelation challenges the notion that planting trees is a good way to clean up the atmosphere. When fossil fuels used in industry and automobiles fail to combust completely, they generate VOCs, which react with nitrogen oxides and sunlight to form poisonous ozone in the lower atmosphere. In the past few decades, the introduction of more efficient engines and catalytic converters has dramatically reduced these emissions. But trees also produce VOCs, which tend to be ignored by scientists modelling the effects of ozone on pollution. So a team led by Drew Purves at Princeton University investigated the impact of newly planted forests on VOC levels in the US. The researchers used the US Forest Service Industry Analysis, a database of 250,000 randomly sampled forest plots around the country, and the known VOC emission rate for each tree species for the study. They calculated that vegetal sources of monoterpenes and isoprene rose by up to 17% from the 1980s to the 1990s – equivalent to three times the industrial reductions.

**Coal is inevitable—that makes solvency impossible**

**Goo, 08 –** Climate Legislative Director Natural Resources Defense Council (Michael, CQ Congressional Testimony, “Carbon Capture and Storage”, 7/10, lexis **CCD=Carbon Capture and Disposal**

Turning to CCD, NRDC supports rapid deployment of such capture and disposal systems for sources using coal. Such support is not a statement about how dependent the U.S. or the world should be on coal and for how long. Any significant additional use of coal that vents its CO2 to the air is fundamentally in conflict with the need to keep atmospheric concentrations of CO2 from rising to levels that will produce dangerous disruption of the climate system; thus, any new coal-based facilities that would emit significant quantities of CO2 should be designed to capture their CO2 emissions and required to do so. Clearly, an immediate world- wide halt to coal use is not plausible, but analysts and advocates with a broad range of views on coal's role should be able to agree that, for all new plants, CCD should be rapidly deployed to minimize CO2 emissions from any new coal-based energy production, and applied as soon as feasible to reduce CO2 from already existing sources.

Today coal use and climate protection are on a collision course. Without rapid deployment of CCD systems, that collision will occur quickly and with spectacularly bad results. The very attribute of coal that has made it so attractive-its abundance--- magnifies the problem we face and requires us to act now, not a decade from now. Until now, in the view of some, coal's abundance has been an economic boon. But today, coal's abundance, absent corrective action, is more bane than boon. Since the dawn of the industrial age, human use of coal has released about 150 billion metric tons of carbon into the atmosphere-about half the total carbon emissions due to fossil fuel use in human history. But that contribution is the tip of the carbon iceberg. As much as another 4 trillion metric tons of carbon are contained in the remaining global coal resources. That is a carbon pool nearly seven times greater than the amount in our pre-industrial atmosphere. Using that coal without capturing and disposing of its carbon means a climate catastrophe.

What Lies Ahead?

And the die is being cast for that catastrophe today, not decades from now. Decisions being made today in corporate board rooms, government ministries, and congressional hearing rooms are determining how the next coal-fired power plants will be designed and operated. Power plant investments are enormous in scale, costing more than $1 billion per plant, and plants built today will operate for 60 years or more. The International Energy Agency (IEA) forecasts that more than $5 trillion will be spent globally on new power plants in the next 25 years. Under IEA's forecasts, over 1800 gigawatts (GW) of new coal plants will be built between now and 2030- capacity equivalent to 3000 large coal plants, or an average of ten new coal plants every month for the next quarter century. This new capacity amounts to 1.5 times the total of all the coal plants operating in the world today.

#### Warming’s irreversible

**Solomon et al ‘10** Susan Solomon et. Al, Chemical Sciences Division, Earth System Research Laboratory, National Oceanic and Atmospheric Administration, Ph.D. in Climotology University of California, Berkeley, Nobel Peace Prize Winner, Chairman of the IPCC, Gian-Kasper Plattner, Deputy Head, Director of Science, Technical Support Unit Working Group I, Intergovernmental Panel on Climate Change Affiliated Scientist, Climate and Environmental Physics, Physics Institute, University of Bern, Switzerland, John S. Daniel, research scientist at the National Oceanic and Atmospheric Administration (NOAA), Ph.D. in physics from the University of Michigan, Ann Arbor, Todd J. Sanford, Cooperative Institute for Research in Environmental Science, University of Colorado Daniel M. Murphy, Chemical Sciences Division, Earth System Research Laboratory, National Oceanic and Atmospheric Administration, Boulder Gian-Kasper Plattner, Deputy Head, Director of Science, Technical Support Unit Working Group I, Intergovernmental Panel on Climate Change, Affiliated Scientist, Climate and Environmental Physics, Physics Institute, University of Bern, Switzerland Reto Knutti, Institute for Atmospheric and Climate Science, Eidgenössiche Technische Hochschule Zurich and Pierre Friedlingstein, Chair, Mathematical Modelling of Climate Systems, member of the Science Steering Committee of the Analysis Integration and Modeling of the Earth System (AIMES) programme of IGBP and of the Global Carbon Project (GCP) of the Earth System Science Partnership (ESSP) (Proceedings of the National Academy of the Sciences of the United States of America, "Persistence of climate changes due to a range of greenhouse gases", October 26, 2010 Vol 107.43: 18354-18359)

Carbon dioxide, methane, nitrous oxide, and other greenhouse gases increased over the course of the 20th century due to human activities. The human-caused increases in these gases are the primary forcing that accounts for much of the global warming of the past fifty years, with carbon dioxide being the most important single radiative forcing agent (1). Recent studies have shown that the human-caused warming linked to carbon dioxide is nearly irreversible for more than 1,000 y, even if emissions of the gas were to cease entirely (2–5). The importance of the ocean in taking up heat and slowing the response of the climate system to radiative forcing changes has been noted in many studies (e.g., refs. 6 and 7). The key role of the ocean’s thermal lag has also been highlighted by recent approaches to proposed metrics for comparing the warming of different greenhouse gases (8, 9). Among the observations attesting to the importance of these effects are those showing that climate changes caused by transient volcanic aerosol loading persist for more than 5 y (7, 10), and a portion can be expected to last more than a century in the ocean (11–13); clearly these signals persist far longer than the radiative forcing decay timescale of about 12–18 mo for the volcanic aerosol (14, 15). Thus the observed climate response to volcanic events suggests that some persistence of climate change should be expected even for quite short-lived radiative forcing perturbations. It follows that the climate changes induced by short-lived anthropogenic greenhouse gases such as methane or hydrofluorocarbons (HFCs) may not decrease in concert with decreases in concentration if the anthropogenic emissions of those gases were to be eliminated. In this paper, our primary goal is to show how different processes and timescales contribute to determining how long the climate changes due to various greenhouse gases could be expected to remain if anthropogenic emissions were to cease. Advances in modeling have led to improved AtmosphereOcean General Circulation Models (AOGCMs) as well as to Earth Models of Intermediate Complexity (EMICs). Although a detailed representation of the climate system changes on regional scales can only be provided by AOGCMs, the simpler EMICs have been shown to be useful, particularly to examine phenomena on a global average basis. In this work, we use the Bern 2.5CC EMIC (see Materials and Methods and SI Text), which has been extensively intercompared to other EMICs and to complex AOGCMs (3, 4). It should be noted that, although the Bern 2.5CC EMIC includes a representation of the surface and deep ocean, it does not include processes such as ice sheet losses or changes in the Earth’s albedo linked to evolution of vegetation. However, it is noteworthy that this EMIC, although parameterized and simplified, includes 14 levels in the ocean; further, its global ocean heat uptake and climate sensitivity are near the mean of available complex models, and its computed timescales for uptake of tracers into the ocean have been shown to compare well to observations (16). A recent study (17) explored the response of one AOGCM to a sudden stop of all forcing, and the Bern 2.5CC EMIC shows broad similarities in computed warming to that study (see Fig. S1), although there are also differences in detail. The climate sensitivity (which characterizes the long-term absolute warming response to a doubling of atmospheric carbon dioxide concentrations) is 3 °C for the model used here. Our results should be considered illustrative and exploratory rather than fully quantitative given the limitations of the EMIC and the uncertainties in climate sensitivity. Results One Illustrative Scenario to 2050. In the absence of mitigation policy, concentrations of the three major greenhouse gases, carbon dioxide, methane, and nitrous oxide can be expected to increase in this century. If emissions were to cease, anthropogenic CO2 would be removed from the atmosphere by a series of processes operating at different timescales (18). Over timescales of decades, both the land and upper ocean are important sinks. Over centuries to millennia, deep oceanic processes become dominant and are controlled by relatively well-understood physics and chemistry that provide broad consistency across models (see, for example, Fig. S2 showing how the removal of a pulse of carbon compares across a range of models). About 20% of the emitted anthropogenic carbon **remains in the atmosphere for** many **thousands of years** (with a range across models including the Bern 2.5CC model being about 19 4% at year 1000 after a pulse emission; see ref. 19), until much slower weathering processes affect the carbonate balance in the ocean (e.g., ref. 18). Models with stronger carbon/climate feedbacks than the one considered here could display larger and more persistent warmings due to both CO2 and non-CO2 greenhouse gases, through reduced land and ocean uptake of carbon in a warmer world. Here our focus is not on the strength of carbon/climate feedbacks that can lead to differences in the carbon concentration decay, but rather on the factors that control the climate response to a given decay. The removal processes of other anthropogenic gases including methane and nitrous oxide are much more simply described by exponential decay constants of about 10 and 114 y, respectively (1), due mainly to known chemical reactions in the atmosphere. In this illustrative study, we do not include the feedback of changes in methane upon its own lifetime (20). We also do not account for potential interactions between CO2 and other gases, such as the production of carbon dioxide from methane oxidation (21), or changes to the carbon cycle through, e.g., methane/ozone chemistry (22). Fig. 1 shows the computed future global warming contributions for carbon dioxide, methane, and nitrous oxide for a midrange scenario (23) of projected future anthropogenic emissions of these gases to 2050. Radiative forcings for all three of these gases, and their spectral overlaps, are represented in this work using the expressions assessed in ref. 24. In 2050, the anthropogenic emissions are stopped entirely for illustration purposes. The figure shows nearly irreversible warming for at least 1,000 y due to the imposed carbon dioxide increases, as in previous work. **All published studies to date**, which use multiple EMICs and one AOGCM, show largely irreversible warming due to future carbon dioxide increases (to within about 0.5 °C) on a timescale of at least 1,000 y (3–5, 25, 26). Fig. 1 shows that the calculated future warmings due to anthropogenic CH4 and N2O also persist notably longer than the lifetimes of these gases. The figure illustrates that emissions of key non-CO2 greenhouse gases such as CH4 or N2O could lead to warming that both temporarily exceeds a given stabilization target (e.g., 2 °C as proposed by the G8 group of nations and in the Copenhagen goals) and remains present longer than the gas lifetimes even if emissions were to cease. A number of recent studies have underscored the important point that reductions of non-CO2 greenhouse gas emissions are an approach that can indeed reverse some past climate changes (e.g., ref. 27). Understanding how quickly such reversal could happen and why is an important policy and science question. Fig. 1 implies that the use of policy measures to reduce emissions of short-lived gases will be less effective as a rapid climate mitigation strategy than would be thought if based only upon the gas lifetime. Fig. 2 illustrates the factors influencing the warming contributions of each gas for the test case in Fig. 1 in more detail, by showing normalized values (relative to one at their peaks) of the warming along with the radiative forcings and concentrations of CO2 , N2O, and CH4 . For example, about two-thirds of the calculated warming due to N2O is still present 114 y (one atmospheric lifetime) after emissions are halted, despite the fact that its excess concentration and associated radiative forcing at that time has dropped to about one-third of the peak value.

#### No extinction – empirically denied

**Carter 11–** Robert, PhD, Adjuct Research Fellow, James Cook University, Craig Idso, PhD, Chairman at the Center for the Study of Carbon Dioxide and Global Change, Fred Singer, PhD, President of the Science and Environmental Policy Project, Susan Crockford, evolutionary biologist with a specialty in skeletal taxonomy , paleozoology and vertebrate evolution, Joseph D’Aleo, 30 years of experience in professional meteorology, former college professor of Meteorology at Lyndon State College, Indur Goklany, independent scholar, author, and co-editor of the Electronic Journal of Sustainable Development, Sherwood Idso, President of the Center for the Study of Carbon Dioxide and Global Change, Research Physicist with the US Department of Agriculture, Adjunct Professor in the Departments of Geology, Botany, and Microbiology at Arizona State University, Bachelor of Physics, Master of Science, and Doctor of Philosophy, all from the University of Minnesota, Madhav Khandekar, former research scientist from Environment Canada and is an expert reviewer for the IPCC 2007 Climate Change Panel, Anthony Lupo, Department Chair and Professor of Atmospheric Science at the University of Missouri, Willie Soon, astrophysicist at the Solar and Stellar Physics Division of the Harvard-Smithsonian Center for Astrophysics, Mitch Taylor (Canada) (March 8th, “[Surviving](file:///C%3A%5CUsers%5CMarc%5CDesktop%5CSurviving) the Unpreceented Climate Change of the IPCC” <http://www.nipccreport.org/articles/2011/mar/8mar2011a5.html>) Jacome

On the other hand, they indicate that some biologists and climatologists have pointed out that "many of the predicted increases in climate have happened before, in terms of both magnitude and rate of change (e.g. Royer, 2008; Zachos *et al*., 2008), and yet biotic communities have remained remarkably resilient (Mayle and Power, 2008) and in some cases thrived (Svenning and Condit, 2008)." But they report that those who mention these things are often "placed in the 'climate-change denier' category," although the purpose for pointing out these facts is simply to present "a sound scientific basis for understanding biotic responses to the magnitudes and rates of climate change predicted for the future through using the vast data resource that we can exploit in fossil records." Going on to do just that, Willis *et al*. focus on "intervals in time in the fossil record when atmospheric CO2 concentrations increased up to 1200 ppm, temperatures in mid- to high-latitudes increased by greater than 4°C within 60 years, and sea levels rose by up to 3 m higher than present," describing studies of past biotic responses that indicate "the scale and impact of the magnitude and rate of such climate changes on biodiversity." And what emerges from those studies, as they describe it, "is evidence for rapid community turnover, migrations, development of novel ecosystems and thresholds from one stable ecosystem state to another." And, most importantly in this regard, they report "there is very little evidence for broad-scale extinctions due to a warming world." In concluding, the Norwegian, Swedish and UK researchers say that "based on such evidence we urge some caution in assuming broad-scale extinctions of species will occur due solely to climate changes of the magnitude and rate predicted for the next century," reiterating that "the fossil record indicates remarkable biotic resilience to wide amplitude fluctuations in climate.

#### There are multiple Feedbacks:

#### First is N Screw – nitrogen from emissions checks warming – their models don’t assume this

**Carter 10–** Robert, PhD, Adjuct Research Fellow, James Cook University, Craig Idso, PhD, Chairman at the Center for the Study of Carbon Dioxide and Global Change, Fred Singer, PhD, President of the Science and Environmental Policy Project, Susan Crockford, evolutionary biologist with a specialty in skeletal taxonomy , paleozoology and vertebrate evolution, Joseph D’Aleo, 30 years of experience in professional meteorology, former college professor of Meteorology at Lyndon State College, Indur Goklany, independent scholar, author, and co-editor of the Electronic Journal of Sustainable Development, Sherwood Idso, President of the Center for the Study of Carbon Dioxide and Global Change, Research Physicist with the US Department of Agriculture, Adjunct Professor in the Departments of Geology, Botany, and Microbiology at Arizona State University, Bachelor of Physics, Master of Science, and Doctor of Philosophy, all from the University of Minnesota, Madhav Khandekar, former research scientist from Environment Canada and is an expert reviewer for the IPCC 2007 Climate Change Panel, Anthony Lupo, Department Chair and Professor of Atmospheric Science at the University of Missouri, Willie Soon, astrophysicist at the Solar and Stellar Physics Division of the Harvard-Smithsonian Center for Astrophysics, Mitch Taylor (Canada) (October 6th 2010, “[The Effect of Nitrogen Deposition on Forest Soil Respiration](http://www.nipccreport.org/articles/2010/oct/06oct2010a4.html)” <http://www.nipccreport.org/articles/2010/oct/06oct2010a4.html>) Jacome

Janssens et al. (2010) write that "atmospheric deposition of reactive nitrogen, originating mainly from fossil-fuel burning and artificial fertilizer applications, has increased three- to five-fold over the past century," and they say that "in many areas of the globe, nitrogen deposition is expected to increase further." This phenomenon stimulates plant growth and the uptake of carbon from the atmosphere, contributing to climate change mitigation; and they state that Magnani et al. (2007) demonstrated nitrogen deposition to be "the dominant driver of carbon sequestration in forest ecosystems," although there has been what they describe as "intense debate" about the magnitude and sustainability of the phenomenon and its underlying mechanisms.

In an effort designed to further explore the subject, Janssens et al. conducted "a meta-analysis of measurements in nitrogen-addition experiments, and a comparison of study sites exposed to elevated or background atmospheric nitrogen deposition."

The work of the fifteen scientists revealed, in their words, that "nitrogen deposition impedes organic matter decomposition, and thus stimulates carbon sequestration, in temperate forest soils where nitrogen is not limiting microbial growth." What is more, they find that "the concomitant reduction in soil carbon emissions is substantial," being "equivalent in magnitude to the amount of carbon taken up by trees owing to nitrogen fertilization."

For those worried about the (highly unlikely) prospect of CO2-induced global warming, these findings should be good news; for in the concluding sentence of their paper, Janssens et al. state that "the size of the nitrogen-induced inhibition of below-ground respiration is of the same order of magnitude as the forest carbon sink." And they state in the concluding sentence of their paper's introduction that "**this effect has not been included in current carbon-cycle models**," suggesting that when it is included, it will contribute much to "climate change mitigation."

#### Second is M screw – co2 solves methane emissions which cause warming

**Carter 1-10 –** Robert, PhD, Adjuct Research Fellow, James Cook University, Craig Idso, PhD, Chairman at the Center for the Study of Carbon Dioxide and Global Change, Fred Singer, PhD, President of the Science and Environmental Policy Project, Susan Crockford, evolutionary biologist with a specialty in skeletal taxonomy , paleozoology and vertebrate evolution, Joseph D’Aleo, 30 years of experience in professional meteorology, former college professor of Meteorology at Lyndon State College, Indur Goklany, independent scholar, author, and co-editor of the Electronic Journal of Sustainable Development, Sherwood Idso, President of the Center for the Study of Carbon Dioxide and Global Change, Research Physicist with the US Department of Agriculture, Adjunct Professor in the Departments of Geology, Botany, and Microbiology at Arizona State University, Bachelor of Physics, Master of Science, and Doctor of Philosophy, all from the University of Minnesota, Madhav Khandekar, former research scientist from Environment Canada and is an expert reviewer for the IPCC 2007 Climate Change Panel, Anthony Lupo, Department Chair and Professor of Atmospheric Science at the University of Missouri, Willie Soon, astrophysicist at the Solar and Stellar Physics Division of the Harvard-Smithsonian Center for Astrophysics, Mitch Taylor (Canada) (January 2012, “Environmental Stresses and Plant Methane Emissions”http://www.nipccreport.org/articles/2012/jan/10jan2012a4.html) Jacome

Concluding from a review of the scientific literature that "aerobic CH4 [methane] emissions from plants may be affected by O2 stress or any other stress leading to ROS [reactive oxygen species] production," authors Wang *et al*. (2009) sought to determine whether physical injury would also affect CH4 emissions from plants. Their work revealed that "physical injury (cutting) stimulated CH4 emissions from fresh twigs of *Artemisia* species under aerobic conditions," and that "more cutting resulted in more CH4 emissions," as did hypoxia in both cut and uncut *Artemisia frigida* twigs.

In discussing their findings, and those of previous studies that suggest, in their words, "that a variety of environmental stresses stimulate CH4 emission from a wide variety of plant species," Wang *et al*. concluded that "global change processes, including climate change, depletion of stratospheric ozone, increasing ground-level ozone, spread of plant pests, and land-use changes, could cause more stress in plants on a global scale, potentially stimulating more CH4 emission globally," while further concluding that "the role of stress in plant CH4 production in the global CH4 cycle could be important in a changing world."

Several things "could" be important in this regard, but the ongoing rise in the air's CO2 content is hard at work *countering* stress-induced CH4 emissions. Environmental stresses of all types do indeed generate highly-reactive oxygenated compounds that damage plants, but atmospheric CO2 enrichment typically boosts the production of antioxidant enzymes that *scavenge* and *detoxify* those highly-reactive oxygenated compounds. Thus, it can be appreciated that the historical rise in the air's CO2 content should have gradually been *alleviating* the level of stress experienced by Earth's plants; and this phenomenon should have been gradually *reducing* the rate at which the planet's vegetation releases CH4 to the atmosphere. In addition, it should have been doing it at *an accelerating rate* commensurate with the accelerating rate of the upward trend in the air's CO2 content.

Wang *et al*.'s way of thinking therefore suggests that the air's CH4 concentration should be *rising ever faster*, as "global change processes" lead to more plant stress, more ROS production in plants, and more CH4 emissions from Earth's vegetation, whereas a conflicting hypothesis suggests that the air's CH4 concentration should be *rising ever slower*, as higher concentrations of atmospheric CO2 lead to less plant stress, more antioxidants that scavenge and detoxify ROS in plants, and less CH4 emissions from Earth's vegetation.

So which view is winning? A quick glance at the atmosphere's recent methane history - shown below - provides the answer.

*Figure 1. Trace gas mole fractions of methane (CH4) as measured at Mauna Loa, Hawaii. Adapted from Schnell and Dlugokencky (2008).*

As can be seen from this figure, the rate of increase in atmospheric methane abundance has steadily declined since the late 1980s, with near-zero increase from 1999 through the end of the record. Is the ongoing rise in the air's CO2 content responsible for knocking its biggest greenhouse-gas competitor (other than water vapor) entirely out of the picture with respect to *future* global warming? Or, will further increases in CO2 emissions actually cause the atmosphere's methane concentration to *decline* and thereby begin to counteract its (CO2's) *own* warming effect. Only time will tell.

#### Third are Natural Aerosols

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In a contemporaneous study of aerosols, Carslaw et al. (2010) write, ―the natural environment is a major source of atmospheric aerosols, including dust, secondary organic material from terrestrial biogenic emissions, carbonaceous particles from wildfires, and sulphate from marine phytoplankton dimethyl sulphide emissions.‖ These aerosols ―have a significant effect on many components of the Earth system, such as the atmospheric radiative balance and photosynthetically available radiation entering the biosphere, the supply of nutrients to the ocean, and the albedo of snow and ice. With this background in mind, the authors reviewed ―the impact of these natural systems on atmospheric aerosols based on observations and models, including the potential for long term changes in emissions and feedbacks on climate.‖ Based on their review, the seven scientists report, ―the number of drivers of change is very large and the various systems are strongly coupled,‖ noting ―there have therefore been very few studies that integrate the various effects to estimate climate feedback factors.‖ However, they add, ―available observations and model studies suggest that the regional radiative perturbations are potentially several watts per square meter due to changes in these natural aerosol emissions in a future climate,‖ which is **equivalent to the magnitude of climate forcing projected** to result from increases in greenhouse gases but typically of the opposite sign.