# Warming/Resource War Advantage – HSR

## 1AC Advantage

#### Warming’s human-caused – consensus proves. It outweighs nuclear war and slowing the rate is key.

Deibel ‘7

(Terry L, Professor of IR @ National War College, “Foreign Affairs Strategy: Logic for American Statecraft”, Conclusion: American Foreign Affairs Strategy Today – card starts on page 387 of this book)

Finally, there is one major existential threat to American security (as well as prosperity) of a nonviolent nature, which, though far in the future, demands urgent action. It is the threat of global warming to the stability of the climate upon which all earthly life depends. Scientists worldwide have been observing the gathering of this threat for three decades now, and what was once a mere possibility has passed through probability to near certainty. Indeed not one of more than 900 articles on climate change published in refereed scientific journals from 1993 to 2003 doubted that anthropogenic warming is occurring. “In legitimate scientific circles,” writes Elizabeth Kolbert, “it is virtually impossible to find evidence of disagreement over the fundamentals of global warming.” Evidence from a vast international scientific monitoring effort accumulates almost weekly, as this sample of newspaper reports shows: an international panel predicts “brutal droughts, floods and violent storms across the planet over the next century”; climate change could “literally alter ocean currents, wipe away huge portions of Alpine Snowcaps and aid the spread of cholera and malaria”; “glaciers in the Antarctic and in Greenland are melting much faster than expected, and…worldwide, plants are blooming several days earlier than a decade ago”; “rising sea temperatures have been accompanied by a significant global increase in the most destructive hurricanes”; “NASA scientists have concluded from direct temperature measurements that 2005 was the hottest year on record, with 1998 a close second”; “Earth’s warming climate is estimated to contribute to more than 150,000 deaths and 5 million illnesses each year” as disease spreads; “widespread bleaching from Texas to Trinidad…killed broad swaths of corals” due to a 2-degree rise in sea temperatures. “The world is slowly disintegrating,” concluded Inuit hunter Noah Metuq, who lives 30 miles from the Arctic Circle. “They call it climate change…but we just call it breaking up.” From the founding of the first cities some 6,000 years ago until the beginning of the industrial revolution, carbon dioxide levels in the atmosphere remained relatively constant at about 280 parts per million (ppm). At present they are accelerating toward 400 ppm, and by 2050 they will reach 500 ppm, about double pre-industrial levels. Unfortunately, atmospheric CO2 lasts about a century, so there is no way immediately to reduce levels, only to slow their increase, we are thus in for significant global warming; the only debate is how much and how serious the effects will be. As the newspaper stories quoted above show, we are already experiencing the effects of 1-2 degree warming in more violent storms, spread of disease, mass die offs of plants and animals, species extinction, and threatened inundation of low-lying countries like the Pacific nation of Kiribati and the Netherlands at a warming of 5 degrees or less the Greenland and West Antarctic ice sheets could disintegrate, leading to a sea level of rise of 20 feet that would cover North Carolina’s outer banks, swamp the southern third of Florida, and inundate Manhattan up to the middle of Greenwich Village. Another catastrophic effect would be the collapse of the Atlantic thermohaline circulation that keeps the winter weather in Europe far warmer than its latitude would otherwise allow. Economist William Cline once estimated the damage to the United States alone from moderate levels of warming at 1-6 percent of GDP annually; severe warming could cost 13-26 percent of GDP. But the most frightening scenario is runaway greenhouse warming, based on positive feedback from the buildup of water vapor in the atmosphere that is both caused by and causes hotter surface temperatures. Past ice age transitions, associated with only 5-10 degree changes in average global temperatures, took place in just decades, even though no one was then pouring ever-increasing amounts of carbon into the atmosphere. Faced with this specter, the best one can conclude is that “humankind’s continuing enhancement of the natural greenhouse effect is akin to playing Russian roulette with the earth’s climate and humanity’s life support system. At worst, says physics professor Marty Hoffert of New York University, “we’re just going to burn everything up; we’re going to heat the atmosphere to the temperature it was in the Cretaceous when there were crocodiles at the poles, and then everything will collapse.” During the Cold War, astronomer Carl Sagan popularized a theory of nuclear winter to describe how a thermonuclear war between the Untied States and the Soviet Union would not only destroy both countries but possibly end life on this planet. Global warming is the post-Cold War era’s equivalent of nuclear winter at least as serious and considerably better supported scientifically. Over the long run it puts dangers from terrorism and traditional military challenges to shame. It is a threat not only to the security and prosperity to the United States, but potentially to the continued existence of life on this planet.

#### Try-or-die – it’s inevitable absent efforts like the plan

Mazo 10

PhD in Paleoclimatology from UCLA, Jeffrey Mazo, Managing Editor, Survival and Research Fellow for Environmental Security and Science Policy at the International Institute for Strategic Studies in London, 3-2010, “Climate Conflict: How global warming threatens security and what to do about it,” pg. 122

The best estimates for global warming to the end of the century range from 2.5-4.~C above pre-industrial levels, depending on the scenario. Even in the best-case scenario, the low end of the likely range is 1.6°C, and in the worst 'business as usual' projections, which actual emissions have been matching, the range of *likely* warming runs from 3.1--7.1°C. Even keeping emissions at constant 2000 levels (which have already been exceeded), global temperature would still be expected to reach 1.2°C (O'9""1.5°C)above pre-industrial levels by the end of the century." Without early and severe reductions in emissions, the effects of climate change in the second half of the twenty-first century are likely to be catastrophic for the stability and security of countries in the developing world - not to mention the associated human tragedy. Climate change could even undermine the strength and stability of emerging and advanced economies, beyond the knock-on effects on security of widespread state failure and collapse in developing countries.' And although they have been condemned as melodramatic and alarmist, many informed observers believe that unmitigated climate change beyond the end of the century could pose an existential threat to civilisation." What is certain is that there is no precedent in human experience for such rapid change or such climatic conditions, and even in the best case adaptation to these extremes would mean profound social, cultural and political changes.

#### We really *do* solve. Plan boosts ridership and solves warming via *dedicated freight* and *green travel*.

Clubb ‘10

Oliver Clubb is a retired Syracuse University political science professor and long-time environmental activist. He is co-chair of the Syracuse, New York-based Global Warming Action Network. From the Book Global Warming Solutions – specifically from the chapter “On High-Speed Trains” – 2010 – http://globalwarmingsolutionsbook.org/read/highspeedtrains.html

My friend Larry Kinney, a Boulder-based energy expert, tells me that a fully loaded passenger train gets the equivalent of 2,000 miles a gallon per passenger-mile. By contrast, the most efficient airliners get only 30 miles a gallon per passenger mile, emitting 67 times greater amounts of greenhouse gas. Climate protection is a compelling reason but not the only one for a major upgrade of America's funding-starved passenger rail system. Take South Korea, for example, which inaugurated high-speed rail service in 2004. It did so, as James Brooke reported in the New York Times, "with sleek new French-designed trains hitting 185 miles an hour. … The new service is already reworking the face of this nation. … On the world stage, the bullet trains herald South Korea's coming of age. … South Korea's goal is to become a business and logistics hub for northeastern Asia. A crucial part of this vision is the high-speed train. … High-speed trains could triple passenger traffic on the nation's main line, between [Pusan] and Seoul, to half a million passengers daily. … And with the old tracks freed of passenger trains, rail freight to and from this port [Pusan] could increase sevenfold, to three million containers a year." If existing tracks in various regions of the United States were similarly freed of passenger trains, bringing a significant increase in rail freight haulage, it would likely produce very large additional reductions in greenhouse gas emissions and energy costs—not to mention significant reductions in traffic congestion on US highways. Writing in 1971, Barry Commoner commented on the "displacement of railroad freight haulage by trucks" since 1946: "The energy required to move one ton of freight one mile by rail now averages about 624 BTUs (British thermal units), while trucks require about 3,460 BTUs per ton-mile. This means that, for the same freight haulage trucks burn nearly six times as much fuel as railroads—and emit about six times as much environmental pollution [including greenhouse gas emissions]." Currently, the US rail freight industry reports that freight trains can move a ton of freight 436 miles on a gallon of fuel—a figure verified by the US Surface Transportation Board. In 2001, an exhibit at the Art Institute of Chicago, "Modern Trains and Splendid Stations," showed photos of high-speed trains already operating throughout much of Europe and Japan, together with elegant modern stations designed by some of the world's leading architects. The show included a map depicting America's designated high-speed rail corridors. (See Appendix.) But, apart from the medium speed Acela operating between Washington, DC and Boston, nothing in the United States had even begun to match the high-speed trains already operating elsewhere. As the news from South Korea might suggest, speed of intercity travel and reductions in greenhouse gas emissions are not the only reasons why many other countries have created high-speed rail systems. They also turn a healthy profit, spur economic growth, create thousands of new jobs, substantially reduce a country's dependence on foreign oil, relieve traffic congestion and produce cleaner air. No other man-made system produces such multiple benefits. With the climate also in crisis, the time had surely come for the United States to enter the age of high-speed rail. No help came, however, from a Bush administration bent on killing Amtrak altogether with a "zero fund" strategy. But even then there was nothing to prevent any state or consortium of states with designated high-speed rail corridors from doing what South Korea and many others have shown themselves capable of doing. Thus, California had launched America's first high-speed rail initiative as early as 1996, when it created a California High-Speed Rail Authority charged with designing, building and operating a high-speed rail system connecting California's major cities and many smaller ones with trains operating at speeds of up to 220 mph. At such speeds, the 400-mile trip between Los Angeles and San Francisco will only take 2.5 hours. The rail system is to be built as a public-private partnership, with investors attracted by the $1 billion annual surplus it is expected to generate. In a November 2008 referendum, California voters approved a $10 billion bond issue to get the project under way. The inauguration of Barack Obama as President of the United States in January 2009 brought an entirely new attitude—and vision—to the White House. On April 16, 2009, President Obama gave a speech calling for "a smart transportation system equal to the needs of the 21st century. A transportation system that reduces travel time and increases mobility. A system that reduces congestion and increases productivity. A system that reduces destructive emissions and creates jobs. "'What we're talking about is a vision for high-speed rail in America. Imagine boarding a train in the center of a city. No racing to an airport and across a terminal. No delays, no sitting on the tarmac, no lost baggage, no taking off your shoes (laughter). Imagine whisking through towns at speeds of over 100 miles per hour, walking only a few steps to public transportation and ending up just blocks from your destination … Now, all of you know this is not some fanciful, pie-in-the-sky vision of the future. It is now. It is happening right now. It's been happening for decades. The problem is it's been happening elsewhere, not here." President Obama then pointed to such examples as China, Spain, and Japan (which initiated the world's first high-speed rail service in 1964 and is now building a system that will have trains running at speeds of over 300 miles per hour). "In Spain," he said, "a high-speed line between Madrid and Seville is so successful that more people travel between those cities by rail than by car and airplane combined." Even as Obama was speaking, Spain was also inaugurating a new high-speed rail line that takes passengers from Madrid to Barcelona faster than they can make the trip by air (counting travel to and from airports and airport delays); and they can do this with far greater convenience and comfort. President Obama had additional reasons for looking to Spain for inspiration. Spain had come in a few short years from having the slowest train service In Europe to having a model high-speed rail system studied by others—among them a delegation of California legislators and transportation planners. With Spain in the economic doldrums, its high-speed rail sector is nonetheless booming—so much so that its government is planning to spend $100 billion over the next ten years to expand it into the most extensive high-speed rail system in Europe. Obama also had very good reasons for pointing in his speech, as he did, to California's high-speed rail initiative. According to Governor Arnold Schwarzenegger, California expects to create 160,000 new jobs for the system's construction phase and 450,000 permanent jobs during its operating phase. Quentin Kopp, chairman of California's High-Speed Rail Authority, stated moreover, that the one-way fare for travel between Los Angeles and San Francisco is expected to be only $55. At that price, it can hardly be doubted that, as on the Madrid-Seville line, there will be a huge shift by California travelers from other forms of transportation to high-speed rail. Schwarzenegger has called California High Speed Rail the engine that will drive the state's economic recovery. President Obama's vision for creating an American high-speed rail system could hardly have come at a needier time. The country was suffering its worst economic crisis since the Great Depression. Hundreds of billions of tax-payer dollars were being spent to prevent America's largest financial institutions and its once-dominant auto industry from going under—even as America's shrinking economy had been hemorrhaging millions of jobs with no end in sight. In these dire circumstances, the creation of a national high-speed rail network would offer prospects for millions of jobs, solid financial returns on investment, and great prospects for economic growth. For a return to prosperity—while greatly reducing America's greenhouse gas emissions—the nation could hardly be making a better investment than in a high-speed rail system. President Obama himself said: "… by making investments across the country, we'll lay a new foundation for our economic competitiveness and contribute to smart urban and rural growth. We'll create highly skilled construction and operating jobs that can't be outsourced, and generate demand for technology that gives a new generation of innovators and entrepreneurs the opportunity to step up and lead the way in the 21st century. We'll move to cleaner energy and a cleaner environment. We'll reduce our need for foreign oil by millions of barrels a year, and eliminate more than 6 billion pounds of carbon dioxide emissions annually—equal to removing a million cars from our roads." Obama asked his audience to imagine "what a great project" high-speed rail "would be to rebuild America." He concluded his speech by quoting Daniel Burnham's words spoken in Chicago: "Make no little plans." The state of California had in fact made and was moving ahead with a "big plan" for high-speed rail—and many countries already had such rail systems up and running. Unlike California, however, President Obama wouldn't seek approval for a high-speed rail authority charged with designing, building and operating a world-class high-speed rail system; he made no request to Congress for a "big plan" to create such a rail system as "a great project to rebuild America." And Congress itself showed little disposition to initiate any such project. At a Syracuse federal stimulus package symposium In the spring of 2009, Upstate New York Congressman Dan Maffei reported that the House of Representatives hadn't intended to include any money at all for high-speed rail in its stimulus bill—and only included $8 billion for rail upgrades on President Obama's insistence. In his speech, Obama called that amount, to be divided among half a dozen regions with worthy plans, "only a first step." He said he had asked Congress for an additional $5 billion for the next five years. This "first step" would only pay for upgrades of existing rail lines, with the prospect of trains reaching speeds of 100 miles per hour. This was a far cry from the high-speed rail systems already operating or being built in such countries as France, Spain, Germany, South Korea, Japan, China and Taiwan. The $100 billion Spain plans to spend on high-speed rail over the next ten years is an annual amount ten times greater than the annual amount represented by the additional $5 billion President Obama has asked Congress to allocate for the next five years. He had put forward a grand, compelling vision, but Congress had served up only enough money for a "little plan." That didn't have to be. In times past, the US Congress has appropriated the funds needed for such massive projects as the interstate highway system and the Apollo space program. Back to Top What President Obama did achieve was to excite the interest of politicians and transportation officials around the country in high-speed rail and to provide seed money for the more promising rail upgrades to get under way. On April 13, three days before the President's speech, eight Midwestern governors and Chicago's Mayor Richard Daley wrote to Transportation Secretary Ray LaHood to express their support for a Midwestern high-speed rail network with Chicago as its hub. There is no reason why such regions must limit themselves to "little plans" made possible by a meager $8 billion congressional appropriation. California, which launched its high-speed rail initiative long before there was any prospect for federal funding, is in fact proceeding with a "big plan" to create a world-class high speed rail system. They've crunched the numbers and figured out how to finance, build and operate such a system. A consortium of Midwestern states (among other regions) can surely do what California plans to do. Such a consortium can learn not only from California but from countries such as Spain. There is no need to "reinvent the wheel." "Thinking big," such regions could turn the high-speed rail vision advanced by President Obama into reality—rebuilding America while helping to save the planet. All that is needed is state and city officials and citizen groups in these regions who are determined to make it happen. Would the American public in fact support it? This year (March 2010), when I was going over my federal tax returns with my tax man, Gary, the conversation turned at one point to high-speed rail. Brightening up immediately, Gary said, "I go down to New York City [from Syracuse] occasionally to see a play or go to the symphony. I'd go twice as often if we had high-speed rail. … I don't know anyone who doesn't think it's a great idea! Meanwhile China, already acting to lead the world into the electric "cars of the future" era, is moving to seize the world high speed rail lead as well. On April 7, 2010, Keith Bradsher reported in the New York Times that China, which "is opening 1,200 miles of high-speed rail routes this year alone," had signed cooperation agreements with the State of California and General Electric to help finance and build a world-class high-speed rail system. Zheng Jiab, the Chinese rail ministry's director of high-speed rail told Bradsher that, "We are the most advanced in many fields, and we are willing to share with the United States." Bradsher himself commented that the agreements "show China's desire to become a big exporter and licensor of bullet trains traveling 215 miles an hour, an environmentally friendly technology in which China has raced past the United States in the last few years." For its part, California was clearly taking the prospect of a high-speed rail collaboration with China very seriously. David Crane, Governor Arnold Schwarzenegger's special adviser for jobs and economic growth, told Bradsher that the Governor would be traveling to China for further high-speed rail discussions later in the year. Up until this point, there had been no serious talk in Washington of embarking on a high-speed rail program anything like Spain's or China's. Despite President Obama's inspiring rhetoric, world high-speed rail leadership was still being left entirely to other countries. But California's cooperation agreements with China signaled that the time to move ahead had finally become ripe Back to Top Indeed, Bradsher further reported that, "China is not the only country interested in selling high-speed rail equipment to the United States: Japan, Germany, South Korea, Spain, France, and Italy have also approached California's High Speed Rail Authority." Such countries were not interested in only selling "green-era" equipment; they had also been investing. In a January 1, 2010 blog, Brian Marchant of Brooklyn cited a "striking" finding by the Global Association of Risk Professionals: "It appears that Japanese, Chinese and European companies are investing more vigorously in wind projects on American soil than American companies are." Whatever the downside to this, it strongly suggests that foreign capital is likely to be available as a significant source of funding for construction of American high-speed rail systems as London banks were during the first years of American railroad construction. Their rapid growth around the world attests to the fact that investment in high-speed rail systems has been bringing very great transportation, economic and environmental benefits to countries that have built them. In these promising circumstances, the time had surely come for Congress and the President to focus seriously on the question of how to get a US network of world-class high-speed rail systems up and running. How to bring this political shift about? If you look at a map of US federally-designated high-speed rail corridors (See Appendix One), you will see that high-speed trains along those corridors would serve many states and congressional districts. Why not form a congressional high-speed rail caucus, like the Congressional Bike Caucus in the present case committed to bringing high-speed rail to all those federally-designated corridors? Recall that Chicago and eight Midwestern governors have already announced their support for construction of a network of high-speed rail lines serving their region. Can it be doubted that almost every legislator whose state or congressional district stands to gain from high speed rail, if asked, would line up in support of the project? What if this large bloc of legislators, supported by their governors and local constituencies, were to call for a substantial investment of stimulus funds? This could come from still uncommitted portions of the $80 billion in stimulus funds assigned to the renewable energy sector since a large reduction of greenhouse gas emissions is as characteristic of rail travel as it is of solar and wind-power generation. And why couldn't federal funding for high-speed rail also come from billions in bail-out funds being paid back by investment banks and such corporations as General Motors? As elsewhere, millions of Americans already love trains. What if multitudes of citizens and local officials who want to see high-speed rail systems become a reality were to mobilize themselves to make it happen? Can it be doubted that Americans could do what the French, the Spaniards, the Japanese, and the Chinese have already done? A national network of high-speed train service could do much to restore America's belief in itself—and become a powerful symbol of hope for the future.

#### Plan averts resource wars and solves warming. There may be alt causes – but we swamp them.

USHSR ‘12

(United States High Speed Rail Association – an independent, nonprofit 501(c)(6) trade association “ENERGY SECURITY” – http://www.ushsr.com/benefits/energysecurity.html)

A national high speed rail system ends our oil dependency quickly & permanently Building an electrically-powered national high speed rail network across America is the single most powerful thing we can do to get the nation off oil and into a secure, sustainable form of mobility. A national network of high speed trains can be powered by a combination of renewable energy sources including wind, solar, geothermal, and ocean/tidal energy. America's dependency on oil is the most severe in the world, and inevitably pulls us into costly resource wars. It also pushes us into exploring for oil in extreme locations such as 10,000 feet deep below the Gulf of Mexico. We use 25% of the entire world's oil supply, yet we only have 5% of the world's population. We use 8-10 times more oil per person per day than Europeans, and they have faster, easier and better mobility than we do. The extremely high daily oil consumption of Americans is not due to a higher standard of living, but because of the extremely inefficient nature of our national transportation system – based on individual vehicles powered by internal combustion engines, combined with our sprawling community designs that force people into cars for every trip. As the world oil supply begins to peak and then irreversibly declines, prices will rise faster, and the situation will get far worse for America if we don't quickly reduce our national oil dependency. This dependency cuts across our entire society and affects our daily survival. Oil provides 95% of the energy to grow, process and deliver food to the nation. Our entire national transportation system is powered mostly by oil. Numerous daily products we use are made from oil. We use 20 million barrels of oil every day - just in America - 70% of it for transportation. Of the 20 million barrels we consume, we import 2/3 of this oil (13 million barrels per day) from foreign sources, many in unstable places. No combination of drilling off our coasts, hydrogen fuel cells, natural gas, biofuels, and used french fry oil will solve this and carry 300 million Americans into the future. None of these fuels can be scaled up to anywhere near the amount of liquid fuel we use daily in any practical, economical, or sustainable way. CNN: U.S. must finally end its addiction to oil High speed rail is the fastest, most comprehensive way to do this while increasing mobility and prosperity Story The U.S. Joint Forces Command, under U.S. Marine General J.N. Mattis, issued a report earlier this year stating that oil demand could outpace supply as early as 2015. The potentially devastating consequences for our economy, transportation system and national security require an urgent and important investment in high speed trains, which can be nine times more energy-efficient than cars or planes, advocates argued. Read report "America's energy posture matters for national security. Everyday choices like how we fuel our cars can bolster regimes hostile to American interests and values and feed the coffers of terrorist organizations fighting against us. Meanwhile, spikes in fuel cost and the volatility of supply lines bear the potential to wreak havoc on our economy. In the face of a national job crisis, another OPEC oil crisis would be catastrophic." -Truman National Security Project "I see our [global production] capacity as reaching perhaps as much as 95 million barrels a day at the peak in about four or five years, probably around 2015. But I think production will go very modestly above that point, if at all, and, in effect, we will reach a plateau. It will be a little bumpy in 2015, 2016, 2017, and 2018. But by 2020, the first signs will become very evident that we can't go any higher than that in production. So we will begin to settle very slowly and gradually in a world in which we need more oil each year, but we can't get more." The price "goes to $95 per barrel in 2012 and $115 in 2013. The following year, 2014, we see the price going to $140 a barrel, followed by $180 in 2015. And then, by 2020, it's at $300" -Charles T. Maxwell Goldman Sachs predicts oil will be $130 per barrel by 2013. Revolutions unfolding across the Middle East and Africa threaten U.S. oil supply, increasing the urgency of building a national high speed rail network to permanently reduce U.S. oil dependency The American economy is extremely vulnerable to oil price spikes, supply disruptions, and shortages due to our huge daily oil dependency. We use 20 million barrels of oil EVERY DAY in America, 70% of which is for transportation. We import 2/3 of our oil, much of it from unstable regions half way around the world. Current events across the Middle East and North Africa make our oil supply that much more vulnerable. The chart below shows the countries that produce oil, many of which have been steadily declining in overall production numbers - producing less and less oil each year. This is due to the fact that many of the world's leading oil fields have, or are currently maxing out and in decline. This makes it increasingly difficult to meet current American oil demand, and impossible to meet future increases in demand - expected to double over the next 20 years. Much of America was built around $10 per barrel oil - our suburbs, our highways, our aviation system, etc. were all built to operate on plentiful, cheap oil. Those days are clearly gone, as oil is currently above $100 per barrel and rising, and predicted to reach $300 per barrel within the next 8 years - by 2020! In addition to being ever more expensive, oil will be more and more difficult to obtain in the huge quantities we use daily in America. Drilling for oil off our coasts and throughout the nation's pristine wilderness areas will not solve this because together these can only produce a tiny percent of the 20 million barrels we use daily. Even with this expanded domestic drilling we would still be importing more and more oil from foreign nations each day. The events unfolding across the Middle East demonstrate how unstable the entire region is surrounding the world's remaining oil supplies, and how easily it can spiral out of control. The fact that the daily operation of America is dependent on the continuous supply of oil from this region is a wake-up call to Americans. Our oil dependency is a matter of national security. "High speed rail is the large-scale, comprehensive solution to the oil supply problem" The only viable solution is to greatly reduce the amount of oil we use in our daily lives. Since transportation is 70% of the oil use, changing transportation is job #1. Building a national network of electric high speed rail lines will cut the nation's oil consumption substantially, while also delivering a new, fast mobility option.

#### Resource wars cause extinction

Heinberg ‘4

(Richard, Senior Fellow of the Post Carbon Institute, faculty @ New College of California, “Book Excerpt: Powerdown: Options and Actions for a Port-Carbon World,” http://www.energybulletin.net/node/2291)

The notion that resource scarcity often leads to increased competition is certainly well founded. This is general true among non-human animals, among which competition for diminishing resources typically leads to aggressive behaviour. Iraq is actually the nexus of several different kinds of conflict – between consuming nations (e.g., France and the US); between western industrial nations and “terrorist” groups; and – most obviously – between a powerful consuming nation and a weaker, troublesome, producing nation. Politicians may find it easier to persuade their constituents to fight a common enemy than to conserve and share. War is always grim, but as resources become more scarce and valuable, as societies become more centralized and therefore more vulnerable, and as weaponry becomes more sophisticated and widely dispersed, warfare could become even more destructive that the case during the past century. By far the greatest concern for the future of warfare must be the proliferation of nuclear weapons. The US is conducting research into new types of nuclear weapons—bunker busters, small earth-penetrators, etc. Recent US administrations have enunciated a policy of nuclear first-strike. Chemical and biological weapons are of secondary concern, although new genetic engineering techniques may enable the creation of highly infectious and antibiotic-resistant “supergerms” cable of singling out specific ethnic groups.

#### US cars key to global emissions.

West ‘12

(Larry, 20-year professional writer and editor who has written many articles about environmental issues for leading newspapers, magazines and online publications citing from: John DeCicco, author of the report and senior fellow at Environmental Defense, “U.S. Autos Account for Half of Global Warming Linked to Cars Worldwide,” http://environment.about.com/od/globalwarming/a/autoemissions.htm)

U.S. automobiles and light trucks are responsible for nearly half of all greenhouse gases emitted by automobiles globally, according to a new study by Environmental Defense.The study, Global Warming on the Road [PDF], also found that the Big Three automakers—General Motors, Ford and DaimlerChrysler—accounted for nearly three-quarters of the carbon dioxide released by cars and pickup trucks on U.S. roads in 2004, the latest year for which statistics were available.“Cutting greenhouse gas emissions from U.S. automobiles will be critical to any strategy for slowing global warming,” said John DeCicco, author of the report and senior fellow at Environmental Defense, in a press release. “To address global warming, we’ll need a clear picture of what sources are contributing to the problem. This report details, by automaker and vehicle type, the greenhouse gas contributions from America's auto sector, for the first time.”Carbon dioxide emissions from personal vehicles in the United States equaled 314 million metric tons in 2004. That much carbon could fill a coal train 55,000 miles long—long enough to circle the Earth twice. Cars and trucks made by GM gave off 99 million metric tons of carbon dioxide or 31 percent of the total; Ford vehicles emitted 80 million metric tons or 25 percent; and Daimler Chrysler vehicles emitted 51 million metric tons or 16 percent, according to the report.

## Consoldiated Neg vs. this advantage

### Too late to solve warming – frontline

#### ( ) Even with co2 cuts, can’t prevent warming

Times Online 8[5/23, Copenhagen Consensus: global warming, http://www.timesonline.co.uk/tol/news/environment/article3992368.ece]

There is unequivocal evidence that humans are changing the planet’s climate. We are already committed to average temperature increases of about 0.6°C, even without further rises in atmospheric carbon dioxide concentration. The world has focused on mitigation — reducing carbon emissions — a close look at the costs and benefits suggests that relying on this alone is a poor approach. Option One: Continuing focus on mitigation Even if mitigation — economic measures like taxes or trading systems — succeeded in capping emissions at 2010 levels, then the world would pump out 55 billion tonnes of carbon emissions in 2100, instead of 67 billion tonnes. It is a difference of 18 per cent: the benefits would remain smaller than 0.5 per cent of the world’s GDP for more than 200 years. These benefits simply are not large enough to make the investment worthwhile.

### Too late to solve warming – backline

#### ( ) Too much co2 has already been released – can’t prevent warming

Longley 8 [Robert, as worked closely with federal agencies including the Department of Housing and Urban Development, the Environmental Protection Agency and the U.S. Census Bureau, “Global Warming Inevitable This Century, NSF Study Finds”, http://usgovinfo.about.com/od/technologyandresearch/a/climatetochange.htm]

Despite efforts to reduce greenhouse gas emissions, global warming and a greater increase in sea level are inevitable during this century, according to a new study performed by a team of climate modelers at the National Center for Atmospheric Research (NCAR) in Boulder, Colo. Indeed, say the researchers, whose work was funded by the National Science Foundation (NSF), globally averaged surface air temperatures would still rise one degree Fahrenheit (about a half degree Celsius) by the year 2100, even if no more greenhouse gases were added to the atmosphere. And the resulting transfer of heat into the oceans would cause global sea levels to rise another 4 inches (11 centimeters) from thermal expansion alone. The team's findings are published in this week's issue of the journal "Science." “This study is another in a series that employs increasingly sophisticated simulation techniques to understand the complex interactions of the Earth,” says Cliff Jacobs of NSF’s atmospheric sciences division.

### HSR boosts emissions -- frontline

#### ( ) Turn: High speed rail increases emissions—the electricity used to power the cars comes from fossil fuels:

Christopher Mahoney, 11/20/2011 (staff writer, “High-Speed Rail’s Environmental Impact,”

<http://www.railroad.net/high-speed-rails-environmental-impact-394.html>, rwg)

A recent article by CNN asked experts to discuss the positive and possible negative impacts that high-speed rail will have in the near future. According to Dr. Anthony Perl, a professor of urban studies and political science, the fact that high-speed rail does not use fossil fuels is the most important aspect of its environmental impact. With most of the world dependent on a limited resource, Perl believes that “high-speed rail offers a proven means of reducing dependence on this increasingly problematic energy source.” Perl continues to point out that alternative energy technologies are slow to develop, but high-speed rail is technology widely available today. On the opposite side of the debate, transportation expert Richard Gilbert argues that the green benefits of high-speed rail are mitigated by energy grids still powered by fossil fuels. From that perspective, Gilbert believes in some situations high-speed rail could cause more environmental harm than good and that a notable environmental impact would be better found by creating grid-connected traction on a global scale. The point was also made that unless a significant amount of passengers switch to high-speed rail and abandon automobiles, the reduction in carbon footprint will be minimal.

#### Turn: construction of high-speed rail will emit enormous volumes of greenhouse gases:

Randal O'Toole, 5/4/2009 (senior fellow with the Cato Institute, “High-Speed Rail Is No Solution,”

<http://www.cato.org/publications/commentary/highspeed-rail-is-no-solution>, rwg)

Construction of such high-speed rails will consume enormous amounts of energy and emit enormous volumes of greenhouse gases. Since future cars and planes will be more energy efficient, there are likely to be no long-term environmental benefits from investment in high-speed rail. Electricity would power the California trains. But, **because most U.S. electricity comes from coal or other fossil fuels**, these high-speed trains won't reduce emissions of greenhouse gases. As we develop more renewable sources of electricity, we would do better using it to power plug-in hybrids or electric cars than high-speed rail.

### HSR boosts emissions – backline

#### Turn: high speed rail uses more energy than the cars or airplanes they replace:

Randal O'Toole, 5/4/2009 (senior fellow with the Cato Institute, “High-Speed Rail Is No Solution,”

<http://www.cato.org/publications/commentary/highspeed-rail-is-no-solution>, rwg)

According to the Department of Energy, the average Amtrak train uses about 2,700 British thermal units (BTUs) of energy per passenger mile. This is a little better than cars (about 3,400 BTUs per passenger mile) or airplanes (about 3,300 BTUs per passenger mile). But auto and airline fuel efficiencies are improving by 2 percent to 3 percent per year (for example, a Toyota Prius uses less than 1,700 BTUs per passenger mile). By contrast, Amtrak's fuel efficiency has increased by just one-tenth of 1 percent per year in the past 10 years. This means, over the lifetime of an investment in moderate-speed trains, the trains won't save any energy at all. In fact, to achieve higher speeds, moderate-speed trains will require even more energy than conventional trains and probably much more than the average car or airplane 10 or 20 years from now.

#### Because the trains run on electricity which comes from fossil fuels, they don’t solve warming:

Mark **Tutton,** 11/18/20**11** (staff writer, “How green is high-speed rail?” Accessed July 19, 2012 at

<http://www.cnn.com/2011/11/18/world/how-green-is-hsr/index.html>, rwg)

So what's stopping high speed rail being a major part of a greener transport future in Britain? Over two thirds of the world's electricity comes from fossil fuels so until (or unless) power stations are weaned off fossil fuels, electric trains will still have a significant climate impact. First there's the electricity to power the trains. Over two thirds of the world's electricity comes from fossil fuels so until (or unless) power stations are weaned off fossil fuels, electric trains will still have a significant climate impact -- although rail travel is still better than flying or driving.

### **Alt Causes From Other Countries – Frontline**

#### **( ) Alt cause to warming: China is the number one producer of CO2 emissions**

Watson 08 (Traci, staff writer for USA Today, China now No. 1 CO2 offender, USA Today Online, <http://www.usatoday.com/weather/climate/globalwarming/2008-04-30-china-energy_N.htm>)

China has overtaken the USA to become the world's No. 1 industrial source of carbon dioxide, the most important global-warming pollutant, according to a scientific study to be published today.¶ The study and two others — one recently published and another coming — agree that China's carbon-dioxide emissions surpassed those in the USA in 2006. That's decades earlier than had been predicted by the International Energy Agency four years ago.¶ All three studies examine emissions of carbon dioxide from the burning of fossil fuels such as coal. Energy usage is the most significant man-made source of carbon dioxide, which accumulates in the atmosphere and traps heat.¶ Unless China sharply cuts its emissions, "the situation is pretty bleak," says Richard Carson of the University of California, co-author of a study in today's Journal of Environmental Economics and Management. "There's a lot less time to do something than people previously thought."¶ China's total emissions in 2006 roughly tied U.S. emissions, according to another study in the April 24 issue of Geophysical Research Letters. But China's monthly production of carbon dioxide overtook the USA's in mid-2006, the study says. "Nobody could anticipate the rate of growth that's taken place in the last six or eight years in China," says Gregg Marland of Oak Ridge National Laboratory, one of the authors of that study.¶ Predictions about when China would overtake the USA were wrong because of China's "shocking" growth in energy-hungry industries, including cement and steel production, says Lawrence Berkeley National Laboratory researcher Mark Levine.¶ Levine and a co-worker at the laboratory produced a study that will appear in July's issue of Annual Review of Environment and Resources. It is available online now.¶ Carson and Levine said they aren't aware of any similar studies published in academic journals. The Dutch government and the International Energy Agency said last year that China had surpassed the USA in carbon-dioxide emissions.¶ Each group relied on different methods and data sources, among them the United Nations, the Chinese environmental agency and the U.S. Geological Survey.¶ Earlier in his administration, President Bush cited Chinese emissions as one reason to end U.S. participation in a treaty to curb global warming by developed nations. China is not a party to the treaty.¶ The ascension of China to No. 1 polluter makes it more likely that global-warming legislation in Congress will include protection for U.S. industries, says Robert Stavins of Harvard University's Kennedy School of Government. For example, Congress could impose import penalties on nations that haven't taken steps to control emissions.¶ Such "a provision could lead to a trade war" with China, Stavins says.¶ China's new status might provide fodder to opponents of U.S. attempts to address global warming, says Rep. Ed Markey, D-Mass., chairman of the House Select Committee on Energy Independence and Global Warming.¶ Instead, he says, it should add "to the urgency of the United States becoming a leader."

### **Alt Causes From Other Countries – Backlines**

#### ( ) Alt cause to warming: India refuses to commit to emissions reductions

Lakshmi 09 (Rama, staff writer and researcher for the Washington Post, India Rejects Calls For Emissions Cuts, <http://www.washingtonpost.com/wp-dyn/content/article/2009/04/12/AR2009041202452.html>)

NEW DELHI -- Days after the Obama administration unveiled a push to combat climate change, Indian officials said it was unlikely to prompt them to agree to binding emission cuts, a position among emerging economies that many say derails effective action.¶ "If the question is whether India will take on binding emission reduction commitments, the answer is no. It is morally wrong for us to agree to reduce when 40 percent of Indians do not have access to electricity," said a member of the Indian delegation to the recently concluded U.N. conference in Bonn, Germany, which is a prelude to a Copenhagen summit in December on climate change. "Of course, everybody wants to go solar, but costs are very, very high."¶ India's position goes to the heart of the vexing international debate over how quickly nations should try to phase out carbon-spewing fuels such as coal and switch to renewable energy sources such as wind and solar. In India, the debate has been cast as a choice between pursuing urgently needed economic growth to reduce poverty and addressing climate change.¶ More than 60 percent of India's power is generated from coal. As India rapidly climbs the list of global polluters, analysts say coal will continue to fuel the economic demands of the country's 1.1 billion people for two decades. But India has repeatedly said that it will not compromise on growth by committing to emission reduction goals set by developed nations, which it deems bigger culprits when it comes to pollution.¶ President Obama's promise of a leading U.S. role in combating climate change is a clear departure from the stance of his predecessor, George W. Bush. A climate bill recently introduced by Democrats in the House calls for a 20 percent cut in carbon emissions from 2005 levels by 2020, along with a substantial increase in renewable-energy use.¶ "I am reasonably optimistic. But it is not entirely upon President Obama. He has to carry the Congress and the Senate with him," said Rajendra K. Pachauri, chairman of the Intergovernmental Panel on Climate Change. He added that India is "very unlikely" to change its official position.¶ In a policy document released in January, India calls for industrialized countries to commit to significant emission reduction targets while aiding sustainable development in developing nations with funds and technology.¶ "But it was informally made very clear to us by the developed countries that there will be no money available for developing countries because of the global economic slump," said the Indian delegate to the Bonn meeting. About 2.5 percent of India's gross domestic product is spent on measures to address climate change, including introduction of cleaner technologies, energy-efficient consumer products and renewable energy.¶ Indian officials say it is unfair to group their country with the major emitters because, per capita, India's emissions are a tenth of those in the United States. Last week, India's special envoy on climate change, Shyam Saran, told reporters in Bonn that he opposed any attempt by the European Union and the United States to impose "carbon tariffs" on exports of Indian goods produced in energy-intensive industries such as steel, aluminum, cement and fertilizer.¶ Another issue raised was the controversial carbon capture and storage technology, or CCS. The expensive, unproven and environmentally contentious technique is intended to help combat climate change by injecting carbon dioxide emissions into deep underground reservoirs. The United States recently committed money to the technology in its economic stimulus package, and more funding may be proposed in the climate bill expected to be debated later this year. In January, India joined a handful of nations gingerly experimenting with CCS.¶ Scientists at India's National Geophysical Research Institute released preliminary findings from ongoing government-funded research that seeks to inject carbon dioxide into the basalt rock formation called the Deccan Traps, which is about 60 million years old. S. Nirmal Charan, a senior scientist at the institute, said researchers wanted to determine whether carbon dioxide can be trapped for tens of thousands of years within the basalt. He said more simulated laboratory tests are underway, but initial results show the process to be "environmentally benign."¶ Critics say it is a gimmick that allows carbon-spewing industries to carry on with business as usual.¶ "The idea of CCS allows our addiction to coal to remain. It ensures that we keep burning coal," said Chandra Bhushan, associate director of the Center for Science and Environment. "Who will monitor whether there are carbon dioxide leaks from underground storage?"¶ Norway and Canada have begun implementing various carbon-storage initiatives. Last week, Germany approved a draft law to develop the technology, and China has identified two sites for storage.¶ India has not formally committed to conducting CCS field experiments. But an official in the Power Ministry said it has the "potential to be an extremely important technology."¶ "But we are unsure about how it will work," the official said. "Let the world first demonstrate. We will learn from them.

( ) Alt Cause to Warming: Fertilizer

Sanders, Journalist for the U.C. Berkely News Center, 4/2/12

(Robert,7/19/12, http://newscenter.berkeley.edu/2012/04/02/fertilizer-use-responsible-for-increase-in-nitrous-oxide-in-atmosphere/, “Fertilizer us responsible for increase in nitrous oxide in atmosphere”. bcd)

University of California, Berkeley, chemists have found a smoking gun proving that increased fertilizer use over the past 50 years is responsible for a dramatic rise in atmospheric nitrous oxide, which is a major greenhouse gas contributing to global climate change.¶ The Cape Grim Baseline Air Pollution Station in Tasmania, where air samples have been collected since 1978. These samples show a long-term trend in isotopic composition that confirms that nitrogen-based fertilizer is largely responsible for the 20 percent increase in atmospheric nitrous oxide since the Industrial Revolution. Photo courtesy of CSIRO.¶ Climate scientists have assumed that the cause of the increased nitrous oxide was nitrogen-based fertilizer, which stimulates microbes in the soil to convert nitrogen to nitrous oxide at a faster rate than normal.¶ The new study, reported in the April issue of the journal Nature Geoscience, uses nitrogen isotope data to identify the unmistakable fingerprint of fertilizer use in archived air samples from Antarctica and Tasmania.¶ “Our study is the first to show empirically from the data at hand alone that the nitrogen isotope ratio in the atmosphere and how it has changed over time is a fingerprint of fertilizer use,” said study leader Kristie Boering, a UC Berkeley professor of chemistry and of earth and planetary science.¶ “We are not vilifying fertilizer. We can’t just stop using fertilizer,” she added. “But we hope this study will contribute to changes in fertilizer use and agricultural practices that will help to mitigate the release of nitrous oxide into the atmosphere.”¶ Since the year 1750, nitrous oxide levels have risen 20 percent – from below 270 parts per billion (ppb) to more than 320 ppb. After carbon dioxide and methane, nitrous oxide (N2O) is the most potent greenhouse gas, trapping heat and contributing to global warming. It also destroys stratospheric ozone, which protects the planet from harmful ultraviolet rays.¶ Not surprisingly, a steep ramp-up in atmospheric nitrous oxide coincided with the green revolution that increased dramatically in the 1960s, when inexpensive, synthetic fertilizer and other developments boosted food production worldwide, feeding a burgeoning global population.¶ Tracking the origin of nitrous oxide in the atmosphere, however, is difficult because a molecule from a fertilized field looks identical to one from a natural forest or the ocean if you only measure total concentration. But a quirk of microbial metabolism affects the isotope ratio of the nitrogen the N2O microbes give off, producing a telltale fingerprint that can be detected with sensitive techniques.¶ Archived air from Cape Grim¶ Boering and her colleagues, including former UC Berkeley graduate students Sunyoung Park and Phillip Croteau, obtained air samples from Antarctic ice, called firn air, dating from 1940 to 2005, and from an atmospheric monitoring station at Cape Grim, Tasmania, which has archived air back to 1978.¶ Law Dome, Antarctica. Air trapped in the consolidated snow from this region provides historical air samples going back to 1940.¶ Analysis of N2O levels in the Cape Grim air samples revealed a seasonal cycle, which has been known before. But isotopic measurements by a very sensitive isotope ratio mass spectrometer also displayed a seasonal cycle, which had not been observed before. At Cape Grim, the isotopes show that the seasonal cycle is due both to the circulation of air returning from the stratosphere, where N2O is destroyed after an average lifetime of 120 years, and to seasonal changes in the ocean, most likely upwelling that releases more N2O at some times of year than at others.¶ “The fact that the isotopic composition of N2O shows a coherent signal in space and time is exciting, because now you have a way to differentiate agricultural N2O from natural ocean N2O from Amazon forest emissions from N2O returning from the stratosphere,” Boering said. “In addition, you also now have a way to check whether your international neighbors are abiding by agreements they’ve made to mitigate N2O emissions. It is a tool that, ultimately, we can use to verify whether N2O emissions by agriculture or biofuel production are in line with what they say they are.”

### Warming not real – frontline

#### Icebergs are a negative feedback – none of their evidence takes this into account

Macfarlane ‘9

(Jo, The Daily Mail Online. “Amazing discovery of green algae which could save the world from global warming” http://www.dailymail.co.uk/sciencetech/article-1104772/Amazing-discovery-green-algae-save-world-global-warming.html?ITO=1490#)

Melting icebergs, so long the iconic image of global warming, are triggering a natural process that could delay or even end climate change, British scientists have found. A team working on board the Royal Navy’s HMS Endurance off the coast of Antarctica have discovered tiny particles of iron are released into the sea as the ice melts. The iron feeds algae, which blooms and sucks up damaging carbon dioxide (CO2), then sinks, locking away the harmful greenhouse gas for hundreds of years. The team think the process could hold the key to staving off globally rising temperatures. Lead researcher Professor Rob Raiswell, from Leeds University, said: ‘The Earth itself seems to want to save us.’ As a result of the findings, a ground-breaking experiment will be held this month off the British island of South Georgia, 800 miles south east of the Falklands. It will see if the phenomenon could be harnessed to contain rising carbon emissions. Researchers will use several tons of iron sulphate to create an artificial bloom of algae. The patch will be so large it will be visible from space. Scientists already knew that releasing iron into the sea stimulates the growth of algae. But environmentalists had warned that to do so artificially might damage the planet’s fragile ecosystem. Last year, the UN banned iron fertilisation in the Great Southern Ocean. However, the new findings show the mechanism has actually been operating naturally for millions of years within the isolated southern waters. And it has led to the researchers being granted permission by the UN to move ahead with the experiment. The scientist who will lead the next stage of the study, Professor Victor Smetacek, said: ‘The gas is sure to be out of the Earth’s atmosphere for several hundred years.’ The aim is to discover whether artificially fertilising the area will create more algae in the Great Southern Ocean. That ocean is an untapped resource for soaking up CO2 because it doesn’t have much iron, unlike other seas. It covers 20million square miles, and scientists say that if this could all be treated with iron**,** the resulting algae would remove three-and-a-half gigatons of carbon dioxide. This is equivalent to one eighth of all emissions annually created by burning fossil fuels such as oil, gas and coal. It would also be equal to removing all carbon dioxide emitted from every power plant, chimney and car exhaust in the rapidly expanding industries of India and Japan. However, the experts warn it is too early to say whether it will work. The team from ice patrol ship HMS Endurance used sledgehammers to chip deep into the interior of a 33ft-long mass of polar ice from half-a-dozen house-sized icebergs that had blown ashore in Antarctica. Once back in the UK, they used a special microscope to analyse the samples, which revealed what they had been looking for – tiny iron particles, only a few millionths of a millimetre wide, embedded deep within the ice. Until now, it was thought that the only source of iron in the Southern Ocean was wind blowing in metal compounds from the deserts of nearby continents like Australia. But the research has disproved this. Prof Raiswell said: ‘These particles measure only a fraction of a millimetre, but they have great importance for the global climate.’ Rising global temperatures, particularly over the past 50 years, have increased the rate at which polar ice melts, causing sea levels to rise. Ten of the warmest years on record have been since 1991, with experts predicting that 2009 could be the hottest year yet. The climate-change effect is set to substantially increase over the coming decades, as developing industrial nations pump out more CO2. Temperatures along the Antarctic Peninsula alone have increased by 2.5C over the past 50 years.But for every percentage point increase in the amount of ice that breaks off, Prof Raiswell calculates that a further 26million tons of CO2 is removed from the atmosphere.

#### Newest studies prove that CO2 is not anthropogenic – emissions from fossil fuels only stay in the atmosphere for five years and natural forcings are more important

Marohasy ‘9

(Jennifer, senior fellow at the Australian think tank the Institute of Public Affairs, PhD in biology from the University of Queensland. Cites research from Robert H. Essenhigh, Department of Mechanical Engineering at Ohio State University, “Carbon Dioxide in Atmosphere 5-15 Years Only” 4-17-09. http://jennifermarohasy.com/blog/2009/04/carbon-dioxide-in-atmosphere-5-15-years-only/)

If carbon dioxide emissions from fossil fuels only stayed in the atmosphere a few years, say five years, then there may not be quite the urgency currently associated with anthropogenic global warming. Indeed it might be argued that the problem of elevated levels of atmospheric carbon dioxide could be easily reversed as soon as alternative fuel sources where found and/or just before a tipping point was reached. The general consensus, however, is not five years, but rather more in the range of 50 to 200 years. But in a new technical paper to be published in the journal ‘Energy and Fuels’, Robert Essenhigh from Ohio State University, throws doubt on this consensus. Using the combustion/chemical-engineering Perfectly Stirred Reactor (PSR) mixing structure, or 0-D Box, as the basis of a model for residence time in the atmosphere, he explains that carbon dioxide emissions from fossil fuels are likely to have a residence time of between 5 and 15 years. He further concludes that the current trend of rising atmospheric carbon dioxide concentrations is not from anthropogenic sources, but due to natural factors. Here’s the abstract: The driver for this study is the wide-ranging published values of the CO2 atmospheric residence time (RT), , with the values differing by more than an order of magnitude, where the significance of the difference relates to decisions on whether: (1) to attempt control of combustion-sourced (anthropogenic) CO2 emissions, if >100 years; or (2) not to attempt control, if ~10 years. This given difference is particularly evident in the IPCC First (1990) Climate Change Report where, in the opening Policymakers Summary of the Report, the RT is stated to be in the range 50 to 200 years; and, (largely) based on that, it was also concluded in the Report and from subsequent related studies that the current rising level of CO2 was due to combustion of fossil fuels, thus carrying the, now widely-accepted, rider that CO2 emissions from combustion should therefore be curbed. However, the actual data in the text of the IPCC Report separately states a value of 4 years. The differential of these two times is then clearly identified in the relevant supporting-documents of the report as being, separately: (1) a long-term (~100 years) adjustment or response time to accommodate imbalance increases in CO2 emissions from all sources; and, (2) the actual RT in the atmosphere, of ~4 years.

As check on that differentiation, and its alternative outcome, the definition and determination of RT thus defined the need for and focus of this study. In this study, using the combustion/chemical-engineering Perfectly Stirred Reactor (PSR) mixing structure, or 0-D Box, for the model-basis, as alternative to the more-commonly used Global Circulation Models (GCM’s), to define and determine the RT in the atmosphere, then, using data from the IPCC and other sources for model validation and numerical determination, the data: (1) support the validity of the PSR model-application in this context; and (2) from the analysis, provide (quasi-equilibrium) residence times for CO2 of: ~5 years carrying C12; and of ~16 years carrying C14, with both values essentially in agreement with the IPCC short-term (4-year) value, separately, in agreement with most other data sources and notably a (1998) listing by Segalstad of 36 other published values, also in the range 5 to 15 years. Additionally, the analytical results then also support the IPCC analysis and data on the longer “adjustment time” (~100 years) governing the long-term rising “quasi-equilibrium” concentration of CO2 in the atmosphere. For principal verification of the adopted PSR model, the data source used was outcome of the injection of excess 14CO2 into the atmosphere during the A-bomb tests in the 1950’s/60’s which generated an initial increase of approximately 1000% above the normal value, and which then declined substantially exponentially with time, with = 16 years, in accordance with the (unsteady-state) prediction from, and jointly providing validation for, the PSR analysis. With the short (5-15 year) RT results shown to be in quasi-equilibrium, this then supports the (independently-based) conclusion that the long-term (~100-year) rising atmospheric CO2 concentration is not from anthropogenic sources but, in accordance with conclusions from other studies, is most probably the outcome of the rising atmospheric temperature which is due to other natural factors. This further supports the conclusion that global warming is not anthropogenically driven as outcome of combustion. The economic and political significance of that conclusion will be self-evident.

### Warming not real – backline

#### Climate predictions fail – our modeling software is empirically flawed and can’t predict future climate – they fail to distinguish between feedback and forcing

Spencer and Braswell ‘11

(Roy Spencer, Former Senior Scientist for Climate Studies at NASA, and Danny Braswell, Team leader for NASA’s qua satellite, Principal Research Scientists at the Earth System Science Center at the University of Alabama, 7/25/11 “On the Misdiagnosis of Surface Temperature Feedbacks from Variations in Earth’s Radiant Energy Balance”, Remote Sensing vol 3, og 1603-1613 \*This study was funded entirely by the U.S. Department of Energy, not an oil company)

Abstract:The sensitivity of the climate system to an imposed radiative imbalance remains the largest source of uncertainty in projections of future anthropogenic climate change. Here we present further evidence that this uncertainty from an observational perspective is largely due to the masking of the radiative feedback signal by internal radiative forcing, probably due to natural cloud variations. That these internal radiative forcings exist and likely corrupt feedback diagnosis is demonstrated with lag regression analysis of satellite and coupled climate model data, interpreted with a simple forcing-feedback model. While the satellite-based metrics for the period 2000–2010 depart substantially in the direction of lower climate sensitivity from those similarly computed from coupled climate models, we find that, with traditional methods, it is not possible to accurately quantify this discrepancy in terms of the feedbacks which determine climate sensitivity. It is concluded that 1, due primarily to the inability to distinguish between radiative forcing and radiative feedback in satellite radiative budget observations.The magnitude of the surface temperature response of the climate system to an imposed radiative energy imbalance remains just as uncertain today as it was decades ago [1]. Over 20 coupled ocean-atmosphere climate models tracked by the Intergovernmental Panel on Climate Change (IPCC) produce a wide range of warming estimates in response to the infrared radiative forcing theoretically expected from anthropogenic greenhouse gas emissions [2]. From a modeling standpoint, this lack of progress is evidence of the complexity of the myriad atmospheric processes that combine to determine the sign and magnitude of feedbacks. It is also due to our inability to quantify feedbacks in the real climate system, a contentious issue with a wide range of published feedback diagnoses [1] and disagreements over the ability of existing methods to diagnose feedback [3,4]. Spencer and Braswell ([5] hereafter SB10) discussed what they believed to be the primary difficulty in diagnosing feedback from variations in the Earth’s radiative energy balance between absorbed shortwave (SW) solar radiation and thermally emitted longwave (LW) infrared (IR) radiation. SB10 attributed the difficulty to the contamination of the feedback signature by unknown levels of time-varying, internally generated radiative forcing; for example, ‘unforced’ natural variations in cloud cover. In simple terms, radiative changes resulting fromtemperature change (feedback) cannot be easily disentangled from those causing a temperature change (forcing). Much can be learned about the interaction between radiative forcing and feedback through a simple time dependent forcing-feedback model of temperature variations away from a state of energy equilibrium, *Cp d*Δ*T/dt = S(t) + N(t)* − λΔ*T* (1) Equation (1) states that time-varying sources of non-radiative forcing *S* and radiative forcing *N* cause a climate system with bulk heat capacity *Cp* to undergo a temperature change with time away from its equilibrium state (*d*Δ*T/dt*), but with a net radiative feedback ‘restoring force’ (−λΔ*T*) acting to stabilize the system. For the interannual temperature climate variability we will address here, the heat capacity *Cp* in Equation (1) is assumed to represent the oceanic mixed layer. (Note that if *Cp* is put inside the time differential term, the equation then becomes one for changes in the heat content of the system with time. While it is possible that feedback can be more accurately diagnosed by analyzing changes in the heat content of the ocean over time [6], our intent here is to examine the problems inherent in diagnosing feedback based upon surface temperature changes.) Radiative forcings (N) of temperature change could arise, for example, from natural fluctuations in cloud cover which are not the direct or indirect result of a temperature change (that is, not due to feedback) [7]. Examples of non-radiative forcing (S) would be fluctuations in the heat exchange between the mixed layer and deep ocean, or between the mixed layer and the overlying atmosphere. Importantly, satellite radiative budget instruments measure the combined influence of radiative forcing (*N*) and radiative feedback (−λΔ*T*) in unknown proportions. Although not usually considered a feedback *per se*, the most fundamental component of the net feedback parameter λ is the direct dependence of the rate of IR emission on temperature, estimated to be about 3.3 W m−2 K−1 in the global average [8]. This ‘Planck’ or ‘Stefan-Boltzmann’ response stabilizes the climate system against runaway temperature changes, and represents a baseline from which feedbacks are traditionally referenced. Positive feedbacks in the climate system reduce the net feedback parameter below 3.3, while negative feedbacks increase it above 3.3. Here we will deal with the net feedback parameter exclusively, as it includes the combined influence of all climate feedbacks, as well as the Planck effect. The larger the net feedback parameter λ, the smaller the temperature response to an imposed energy imbalance *N* will be; the smaller λ is, the greater the temperature response will be. A negative value for λ would indicate a climate system whose temperature is unstable to radiative forcing. The coupled ocean-atmosphere climate models tracked by the IPCC have diagnosed long-term net feedback parameters ranging from λ = 0.89 for the most sensitive model, MIROC-Hires, to λ = 1.89 for the least sensitive model, FGOALS [8]. Since this range is below the Planck response of 3.3 W m−2 K−1, all of the IPCC models therefore exhibit net positive feedbacks. Also, since all climate models have net feedback parameters greater than zero, none of the climate models are inherently unstable to perturbations. It is worth reiterating that satellite radiative budget instruments measure the combined effect of the radiative terms on the RHS of Equation (1), that is, the radiative forcing term *N* and the feedback term (− λΔ*T*). That the presence of *N* can have a profound impact on feedback diagnosis is easily demonstrated with a simple time dependent model based upon Equation (1). If we assume *Cp* consistent with a 25 m deep oceanic mixed layer, a net feedback parameter λ = 3, and a sinusoidal forcing with period of one year, the temperature response shown in Figure 1 will result. Figure 1.Simple forcing-feedback model demonstration that satellite radiative budget instrument measurements of Net radiative flux (forcing + feedback) are very different from what is needed to diagnose the net feedback parameter (feedback only). In response to radiative forcing, the model ocean warms, which in turn causes a net radiative feedback response. Significant to our goal of diagnosing feedback, the net feedback response to a temperature change is always smaller than the radiative forcing which caused it, owing to the heat capacity of the system, until radiative equilibrium is once again restored. At that point the radiative feedback equals the radiative forcing. Unfortunately, in the real climate system radiative forcings are continually changing, which means the feedback response will in general be smaller than the radiative forcing. The presence of this radiative forcing tends to confound the accurate determination of feedback. If the only source of radiative variability was feedback, then regression of the time series (−λΔ*T*) against the temperature time series (Δ*T*) in Figure 1 would yield an accurate feedback diagnosis with the regression slope λ = 3 W m−2 K−1. But the presence of time varying radiative forcing in Figure 1 has a very different signature than that of feedback, yet it is the sum of the two which the satellite measures. As shown by SB10, the presence of any time-varying radiative forcing decorrelates the co-variations between radiative flux and temperature. Low correlations lead to regression-diagnosed feedback parameters biased toward zero, which corresponds to a borderline unstable climate system. We believe that the low correlations associated with previous feedback diagnoses with satellite data are themselves *prima facie* evidence of the presence of radiative forcing in the data. In the real climate system, it is likely there is almost always a time-varying radiative forcing present, as various internally-generated changes in clouds and water vapor oscillate between positive and negative values faster than the resulting temperature changes can restore the system to radiative equilibrium. This means that feedback diagnosis will, in general, be contaminated by an unknown amount of time-varying internal radiative forcing *N*. If those forcings were known, they could have been subtracted from the measured radiative flux variations before diagnosing feedback, e.g., as has been done for the feedback response of the coupled climate models to transient carbon dioxide forcing [8]. Central to the difficulty of feedback diagnosis is the very different time-dependent relationships which exist between forcing and temperature, versus between feedback and temperature. While there is a substantial *time lag* between forcing and the temperature response due to the heat capacity of the ocean, the radiative feedback response to temperature is *nearly simultaneous* with the temperature change. This near-simultaneity is due to a combination of the instantaneous temperature effect on the LW portion of λ (the Planck response of 3.3 W m−2 K−1), and the relatively rapid convective coupling of the surface to the atmosphere, which causes surface temperature-dependent changes in water vapor, clouds, and the vertical profile of temperature. While SB10 provided evidence that such radiatively-induced temperature changes do exist, and in general lead to an underestimate of the net feedback parameter, this view has been challenged ([9] hereafter D10) with estimated cloud feedback from satellite observed variations in Earth’s radiative energy balance during 2000–2010. D10 used the usual regression approach. Further, D10 assumed that the temperature changes during 2000–2010 were not radiatively forced by the atmosphere, but non-radiatively forced through changes in ocean circulation associated with the El Niño/Southern Oscillation (ENSO) [10] phenomenon. If D10 is correct that radiative forcing can be neglected (*N(t)* ≈ 0), then satellite observed radiative variations would be dominated by feedback rather than forcing, and one should be able to diagnose feedback through regression of radiative variations against temperature variations. Here we will provide evidence that those temperature changes instead had a strong component of radiative forcing, with radiative accumulation preceding, and radiative loss following temperature maxima. While SB10 used phase space analysis to demonstrate the presence of radiative forcing, here we will use lag regression analysis. By examining regression coefficients between temperature and radiative flux at a variety of leads and lags, rather than at just zero time lag, we can identify behaviors of the climate system that otherwise cannot be discerned.

#### ( ) Global Warming theories incorrect- Climate satellite data proves

National Review 7/30/11

(<http://www.nationalreview.com/planet-gore/273239/nasa-study-shatters-climate-alarmists-assumptions-mario-loyola> “NASA Study Shatters Climate Alarmists’ Assumptions”)

Still, I assumed that at least the climate scientists had some firm idea of how much heat a certain amount of carbon dioxide would trap directly and indirectly through increased humidity and cloud cover. Well now it turns out that even on this most essential assumption of all their claims, they didn’t know what they were talking about. An explosive study based on NASA satellite data collected over the past decade shows that the planet’s atmosphere traps far less heat than any of the most frequently cited models presumed. The study, by Dr. Roy Spencer and Dr. William Braswell of the University of Alabama, was published in the peer-reviewed journal Remote Sensing. This is from the press release: “The satellite observations suggest there is much more energy lost to space during and after warming than the climate models show,” Spencer said. “There is a huge discrepancy between the data and the forecasts that is especially big over the oceans.” Not only does the atmosphere release more energy than previously thought, it starts releasing it earlier in a warming cycle. The models forecast that the climate should continue to absorb solar energy until a warming event peaks. Instead, the satellite data shows the climate system starting to shed energy more than three months before the typical warming event reaches its peak. “At the peak, satellites show energy being lost while climate models show energy still being gained,” Spencer said. This is the first time scientists have looked at radiative balances during the months before and after these transient temperature peaks. Applied to long-term climate change, the research might indicate that the climate is less sensitive to warming due to increased carbon dioxide concentrations in the atmosphere than climate modelers have theorized. A major underpinning of global warming theory is that the slight warming caused by enhanced greenhouse gases should change cloud cover in ways that cause additional warming, which would be a positive feedback cycle.

#### Warming is false—Earth is in a cooling trend:

Vancouver Sun, frontrunner in reliable Canadian news, 5/29

(5-29-12, http://www.vancouversun.com/technology/Climate+change+hoax/6693283/story.html#ixzz215BDthme, “Climate Change is a Hoax”, TVB)

Why is The Sun still pushing global warming hysteria on the public when the Earth's climate is in a cooling trend, as verified by temperature readings around the globe? There has been no global warming for a decade, and even a slight decline in temperature, despite increasing carbon emissions.¶ If carbon emissions were causing global warming the dire predictions of alarmist climatologists a decade ago would be borne out. Their highly speculative climate models are constantly being disproven by temperature readings around the globe.¶ This is a hoax of monumental pro-portions that benefits certain political and academic interests at the expense of the Canadian economy and our standard of living.¶ Polls consistently show most Canadians haven't been taken in by this hoax in spite of all the false propaganda leveled at them.

#### Climate change not anthropogenic and isn’t real

Newsmax, major American news provider, 3/27

(3-27-12, http://www.newsmax.com/Newsfront/Global-Warming-Journal-Happer/2012/03/27/id/433983, “Global Warming Models Are Wrong Again”, TVB)

World temperatures have remained virtually unchanged in the past 10 years despite predictions of global warming and America’s mildest winter in decades, Princeton physics professor William Happer contends.¶ Weather patterns worldwide over the past few months were very similar to those in 1942 when the continental United States basked in a warm winter at the same time that Alaska and Asia were slammed with severe weather and “General Frost” stalled the German army’s advance into Russia, Happer wrote in a Wall Street Journal Op-Ed.¶ And any changes that have occurred should not be attributed to a rise in carbon dioxide in the atmosphere, Happer, a prominent opponent of climate change theory, wrote in an article headlined “Global Warming Models Are Wrong Again.”¶ “CO2 is not a pollutant,” he wrote. “Life on earth flourished for hundreds of millions of years at much higher CO2 levels than we see today. Increasing CO2 levels will be a net benefit because cultivated plants grow better and are more resistant to drought at higher CO2 levels, and because warming and other supposedly harmful effects of CO2 have been greatly exaggerated.”¶ Global temperatures have increased by around four-fifths of one degree Celsius since the “Little Ice Age” of the early 1800s, he wrote. “Some of that warming has probably come from increased amounts of CO2, but the timing of the warming — much of it before CO2 levels had increased appreciably — suggests that a substantial fraction of the warming is from natural causes that have nothing to do with mankind.”¶ Recent severe tornadoes in the United States also prove nothing, Happer wrote. “Like winter temperatures, the numbers, severity and geographical locations of tornadoes fluctuate from year-to-year in ways that are correlated with the complicated fluid flow patterns of the oceans and atmosphere, the location of the jet stream, El Niño or La Niña conditions of the tropical Pacific Oceans, etc.¶ “As long as the laws of nature exist, we will have tornadoes,” he added. “But we can save many more lives by addressing the threat of tornadoes directly — for example, with improved and more widely dispersed weather radars, and with better means for warning the people of endangered areas — than by credulous support of schemes to reduce ‘carbon footprints,’ or by funding even more computer centers to predict global warming.”¶ Happer has become one of the most outspoken skeptics of global warming. He told Congress in 2009 that the increase in carbon dioxide “will be good for mankind.” The same year, he likened those who believe carbon dioxide is causing climate change to Nazis. “This is George Orwell. This is the ‘Germans are the master race. The Jews are the scum of the earth.’ It’s that kind of propaganda,” he said.¶ “What used to be science has turned into a cult.”

#### 50% of Global Waming is false, and overhyped

Duhamel 7-18

(Jonathan, Reporter for the Tuscon Citizen 7-18-12 <http://tucsoncitizen.com/wryheat/2012/07/18/new-study-shows-that-50-of-warming-claimed-by-ipcc-is-fake/>, VN)

“The IPCC reports global warming to have increased from +0.7°C to +0.8°C over the past century. But a new peer reviewed study determines that real global warming was closer to +0.4°C, with the remaining IPCC amount claimed to be a result of man-made adjustments.”

#### Norwegian research shows that current warming is not unusual

Duhamel 7-18

(Jonathan, Reporter for the Tuscon Citizen 7-18-12 <http://tucsoncitizen.com/wryheat/2012/07/18/new-study-shows-that-50-of-warming-claimed-by-ipcc-is-fake/>, VN) .

Researchers from the University of Bergen and the University of Colorado studied marine sediment cores from the Norwegian continental margin. They were able to get accurate dates from lead isotope dating of interspersed volcanic rocks in the core. They examined oxygen-18 isotopes from the calcium carbonate in the shells of planktonic foraminifera to reconstruct temperature. (Oxygen-18 is a proxy for temperature, see NASA’s Earth Observatory explanation of the method here.)? This allowed the researchers to come up with what they call “”near surface water summer temperature.” for the past 2,000 years. The following graph depicts their temperature reconstruction:? The graph shows that the current warm period is cooler than the Medieval and Roman warm periods. The researchers report a statistically significant correlation with the Gleissberg solar cycle. This is more evidence that the forces of natural variability overcome the effect, if any, of anthropogenic carbon dioxide emissions, and it shows that current warming is neither unprecedented nor unusual.

#### Global warming false, 97% occurs naturally

Cubby 12

(Ben, Reporter for the Great Lakes Advocate 7-2-12, <http://www.greatlakesadvocate.com.au/news/national/national/general/climate-change-a-hoax-jones-tells-tax-protesters/2609378.aspx>, VN)

About 2000 people marched from Hyde Park to Belmore Park to hear Bronwyn Bishop speak against the government's Clean Energy Bill, while a much smaller group in Melbourne heard the broadcaster Alan Jones refer to climate change science as ''propaganda''.? ''The notion of global warming is a hoax,'' Jones told a group of about 150 people on the steps of the Victorian Parliament. ''This is witchcraft. Commonsense will tell you it's rubbish; 97 per cent of all carbon dioxide occurs naturally … 3 per cent around the world is created by human beings.''

#### Global Warming is a Hoax

**Caruba 12** (Alan, member of the Society of Professional Journalists, the American Society of Journalists and Authors, and the National Association of Science Writers “The Mother of All Hoaxes” <http://www.canadafreepress.com/index.php/article/48129>)

There was a brief flurry of stories in the media at the beginning of what has become a historic summer of hot weather across the U.S. that global warming was to blame. They faded swiftly because the public has concluded that global warming is the mother of all hoaxes, because we are in the midst of a failing economy and the political campaigns that will decide if the nation literally lives or dies.¶ Recently, my friend Joseph L. Bast, the president of The Heartland Institute, wrote an article, “IPCC Admits Its Past Reports Were Junk”, posted on AmericanThinker.com.¶ It struck me that very few people even know that IPCC is the acronym for the United Nations Intergovernmental Panel on Climate Change. Few people know that the entire global warming hoax was generated by the IPCC, let alone know what it is.¶ Most people associate global warming with Al Gore who has been among its most prominent advocates, warning that “the Earth has a fever” and that we were doomed if we didn’t stop generating carbon dioxide. Gore and his collaborators wanted to sell “carbon credits” in exchanges around the world and for a while he greatly enriched himself.¶ In Australia, the government has imposed a tax on carbon dioxide which it likely to destroy its manufacturing base along with the extraction of coal and other minerals.¶ Here in the U.S. the Environmental Protection Agency continues to assert that carbon dioxide must be regulated as a “pollutant” under the Clean Air Act and, if successful, will likewise destroy what is left of our manufacturing base and all other industries that generate or use energy to function.¶ And the man in the street remains completely clueless about the impending ruin of the nation based on the reports of the IPCC which the Inter-Academy Council (IAC), a group created by the world’s science academies to provide advice to international bodies, has long since concluded were utterly false and baseless.¶ On June 27, the IPCC issued a statement saying it had completed the process of implementation of the recommendations that an August 2010 IAC analysis had made after examining who was contributing to their reports, who was reviewing their content (the same people!), and the astonishing, utterly false, claim of “a consensus” that global warming was happening.¶ As Bast points out, “It means that all of the ‘endorsements’ of the climate consensus made by the world’s national academies of science—which invariably refer to the reports of the IPCC as their scientific basis—were based on false or unreliable data and therefore should be disregarded or revised.”¶ “It means that the EPA’s ‘endangerment finding’—with its claim that carbon dioxide is a pollutant and threat to human health—was wrong and should be overturned.”¶ The poles are not melting, the glaciers are growing, the oceans rise mere millimeters over centuries, and right now planet Earth is cooling.

#### **Global Warming isn’t happening, Climate change natural and CO2 levels not to blame**

Elliot 12

(Tony Elliot 7-3-12, http://www.international.to/index.php?option=com\_content&view=article&id=6350:global-warming-climate-change-fraud&catid=66:oped&Itemid=151 “Global warming climate change fraud” International News Magazine, tas)

¶ ¶ USA 3 July 2012. Aside from the fact that no one is qualified at any of the United Nations climate organizations to present anything in the genre of climate, weather or atmospheric physics. The daily dose of disinformation is getting easier to dispute every time it comes out.¶ ¶ The term global warming had to be changed to climate change since no actual physical evidence exists proving it. The term climate change was re-titled global climate disruption when no actual proof of the world's climate in flux could be found. GCD will also invariably have to be changed as well, because no massive disruption in climate will be found either.¶ ¶ Every claim ever made by these "enviroclowns" masquerading as climate scientists can be proven false when actual recorded temperatures, weather data, and climate records are examined.¶ ¶ All the hype about rising CO2 levels is a joke when one takes into consideration that the total amount of carbon dioxide in all the earth's atmosphere is less than 1% of 1% of the entire volume of gasses in it. At this percentage level there isn't enough CO2 in the atmosphere to create a greenhouse effect.¶ ¶ There is absolutely no scientific evidence in existence proving that CO2 levels in the atmosphere have in the past or presently contributed to an overall warming of the planet. Ice cores supposedly show six Global Warming periods, which have occurred over the past half a million years. Yet, these same ice cores show temperatures rose some 800 years before any rise in CO2 levels took place.¶ ¶ The planet Mars is a prime example of a world where the atmosphere consists of over 95% CO2. Although Mars has an average distance from the Sun of 142 million miles, compared to Earth’s 93 million miles atmospheric comparisons can be made on the effects of a completely CO2 based atmosphere.¶ ¶ Mars has an overall cold climate with the warmest temperature estimated to be around 80 degrees Fahrenheit in the height of summer during the day. Overall, the planet has temperatures well below zero in most areas and experiences sub zero temperatures every night of the year on all areas of the planet.¶ ¶ Although the planet is very far from the Sun as compared to earth, it should be much warmer than it is, given its atmosphere is almost entirely made of CO2. Taking into consideration the differences in size and overall atmosphere of Mars as compared to Earth, the distance from the Sun, the void of plant life and differences in gravity; the overall temperatures on the Martian surface should be much warmer than they actually are.¶ ¶ Since the Martian surface is primarily rocky, which would absorb more heat energy from the Sun than a surface made of mainly soil or one having plant life, the opportunity for a Greenhouse effect is very great.¶ ¶ All the ingredients and opportunities are there even, the thin layer of dust covering the planet, which is responsible for the reddish color of the atmosphere. Yet, it isn’t happening and the amount of energy from the Sun is almost completely radiated back into space very quickly.¶ ¶ The reality is water vapor is the only true atmospheric gas here on earth that has a high enough percentage in the overall atmosphere to act as a greenhouse gas.¶ ¶ Their claim that the decade of 2000 to 2010 as being the hottest on record which was based on manipulated data had to be revised to the 1930s simply because actual recorded temperatures proved otherwise.¶ ¶ The claim that the hottest year on record occurred in the decade of 2000 to 2010 (they named several years during this time so one actual year cannot be indicated) had to be revised due to the fact that actual weather records proved 1934 to be the hottest year ever since weather records were kept.¶ ¶ The decade old warning of glacier melt in the Himalayan Mountains in particular was proven false when a team of scientists recently examined the ice for thickness and area using actual data as well as physical observations and found the glaciers to be unchanged. The claims of glaciers melting the world over have been proven false as well, since most in question have regained the ice today that was lost in recent years. What this means in reality is glaciers will decline and advance over many years, all part of a natural cycle.¶ ¶ The claims of polar ice melting can be seen as false when actual physical evidence showed more ice in both area and thickness at both poles in NASA's own images in 2011.¶ ¶ Polar ice also grows and declines in cycles as seen with the surfacing of war ships in the North Pole by both the United States and the USSR in the late 1950s and early 1960s during a time of very thin ice where normally this would have been impossible.¶ ¶ Absolutely no sea level rise has been recorded anywhere in the world, flying in the face of the false claims it is. Al Gore buying a multimillion dollar beach home in southern California is a prime example that he doesn't think sea levels are rising anytime soon.¶ ¶ Recently, an attempt has been made to make 2011 the hottest year on record in Oklahoma, citing overall average temperatures. This is absurdly false when the mid 1930s was actually the hottest for this state in general and 1934 was the hottest in particular. As usual, in getting to say that 2011 was Oklahoma's hottest year, they are using overall average temperatures to come up with a number. However, even using average temperatures over a year's time or averaging the temperatures during the summer months still doesn't even come close to the heat experienced in Oklahoma in 1934 in particular, and the 1930s in general.¶ ¶ What we do not hear anything about is the abnormally cold winter experienced in Europe and most of the rest of the world. While we were warm here in many parts of the US in the winter of 2011 most of the rest of the world was setting records for cold temperatures and extreme winter weather conditions.¶ ¶ I could fill books with information proving global warming/climate change to be a total lie. Suffice to say that everything we have ever been told from the GW/CC fanatics is a total farce.¶ ¶ What is really at play here is globalists with a political agenda who desire to use climate as a tool to frighten the masses into accepting their vision of a New World Order to assure their success in green investments and carbon stocks.

Natural Causes Contribute to Climate Change

Godoy, Journalist for the Guatemala Times, 7/9/12,

(Julio, 7/19/12, http://www.guatemala-times.com/science-environment/environment/3180--norwegian-study-calls-for-research-on-natural-causes-of-climate-change.html, “Norwegian Study Calls for Research on Natural Causes of Climate Change”. bcd)

While there is no doubt that global warming is primarily a consequence of human activities, it is also true that there are natural phenomena contributing to climate change as well. ¶ These natural causes include terrestrial events such as volcanic activity, orogenesis, variations in ocean and air currents, and continental drift, which all play a part in raising average global temperatures. ¶ There are also extraterrestrial factors, such as variations in the solar constant, which is the total radiation energy received from the sun per unit of time per unit of area.¶ These causes, particularly solar constant variations, are stressed by those who deny that climate change is an anthropogenic or “man-made” problem and insist that if global warming exists, it is due to natural causes, which means that any environmental policies aimed at mitigating it are doomed to failure. ¶ But some of these phenomena, including solar constant variability, are cyclical, and their effects on the average temperature of the earth’s atmosphere are marginal and cannot explain the changes that take place over long periods, according to Stefan Brönnimann, a professor of climatology at the University of Bern. ¶ “Thanks to satellite observations, we know that the variability of the solar constant during the 11-year sunspot cycle is too small to account for the dimensions of terrestrial climate change,” Brönnimann told Tierramérica.¶ The climatologist commented that another natural phenomenon, the circulation of the oceans, also contributes to the movement of heat in the earth’s climate system. “Unfortunately, scientific observation of this circulation is relatively recent, which means it is not possible to formulate reliable predictions of its future effects,” he said.¶ Correcting this shortage of data on the natural causes of climate change is one of the recommendations of an evaluation report commissioned by the Research Council of Norway, which appointed a committee of international experts to evaluate the climate research conducted to date by scientists in this northern European country. ¶ The evaluation report, released in June in Oslo, observes that less effort has been devoted to studying and explaining the natural causes of climate change because these have been regarded as having a relatively minor impact on the earth’s climate system as compared to anthropogenic causes. ¶ These anthropogenic causes include greenhouse gas emissions from the burning of fossil fuels, industry, deforestation and agriculture. ¶ But the report, “Norwegian Climate Research: An Evaluation”, stresses that a good understanding of the climate system cannot be reached without a dedicated effort to understand the contribution of natural processes to climate change.¶ Geological history very clearly documents a strong climate forcing associated with solar variability, although the exact mechanism has not been identified, the report notes.¶ These circumstances should have led to an international effort to study these natural processes, the report continues, “but surprisingly, the worldwide scientific effort to increase our understanding of the natural variations is very limited, and this is most probably related to the limited funding available for basic, not agenda-driven research.”¶ While the report’s authors do not specify the “agenda” to which they are referring, the wording chosen could be interpreted as an attempt to discredit scientific research on the human causes of climate change, as well as a denunciation of a supposed international refusal to study the natural causes of the phenomenon. ¶ The European scientific sources consulted by Tierramérica did not wish to comment on the report, although they were clearly suprised by its tone and the reference to an alleged research “agenda”. ¶ Norwegian climate researchers are well known and collaborate with their European peers on the Intergovernmental Panel on Climate Change (IPCC).¶ The evaluation report recognized that Norwegian climate research has been in harmony with the mainstream of international climate science, but recommends “an increased effort” in research on the natural causes of climate change, in particular “the activity variations of the sun, the mechanism of cloud formation, and the multi-decadal variations in ocean current systems.”¶ Such criticisms appear to ignore the scientific evidence that the amount of solar energy received by the earth since 1750 has remained almost constant. Yet during this same period, and particularly since 1850, coinciding with the Industrial Revolution and the growing use of fossil fuels, there has been a continuous increase in global average temperatures and the concentration of carbon dioxide, methane and other greenhouse gases in the earth’s atmosphere. ¶ Moreover, if global warming were caused by a higher solar constant, the average temperatures in all the layers of the atmosphere would be higher. However, while temperatures in the exosphere and ionosphere are lower today than in the last 150 years, the warming of the troposphere has been extensively documented. ¶ This difference in temperature in the different layers of the atmosphere is a result of the greenhouse effect: gases like carbon dioxide trap the heat of the sun’s rays in the layer closest to the earth’s surface. ¶ This is why, according to Brönnimann, “climate models based on the solar constant cannot reproduce the real increase in the earth’s temperature observed over the last 50 years if they do not take into account the greenhouse gas emissions caused by humans.”

### A-to Resource Wars

#### ( ) Resource war thesis is false

Victor ‘8

David Victor is Director of the Laboratory on International Law and Regulation (ILAR) at UC-San Diego. Looking across a wide array of issues from environment and energy to human rights, trade and security, the Laboratory explores when (and why) international laws actually work.

National Interest – Jan-Feb 2008 –

http://nationalinterest.org/article/smoke-and-mirrors-1924

MY ARGUMENT is that classic resource wars-hot conflicts driven by a struggle to grab resources-are increasingly rare. Even where resources play a role, they are rarely the root cause of bloodshed. Rather, the root cause usually lies in various failures of governance. That argument-in both its classic form and in its more nuanced incarnation-is hardly a straw man, as Thomas Homer-Dixon asserts. Setting aside hyperbole, the punditry increasingly points to resources as a cause of war. And so do social scientists and policy analysts, even with their more nuanced views. I've triggered this debate because conventional wisdom puts too much emphasis on resources as a cause of conflict. Getting the story right has big implications for social scientists trying to unravel cause-and-effect and often even larger implications for public policy.

#### ( ) No resource wars on the horizon – the thesis is inaccurate

Victor ‘7

David Victor is Director of the Laboratory on International Law and Regulation (ILAR) at UC-San Diego. Looking across a wide array of issues from environment and energy to human rights, trade and security, the Laboratory explores when (and why) international laws actually work. National Interest –Nov-Dec 2007 – http://nationalinterest.org/article/what-resource-wars-1851

RISING ENERGY prices and mounting concerns about environmental depletion have animated fears that the world may be headed for a spate of "resource wars"-hot conflicts triggered by a struggle to grab valuable resources. Such fears come in many stripes, but the threat industry has sounded the alarm bells especially loudly in three areas. First is the rise of China, which is poorly endowed with many of the resources it needs-such as oil, gas, timber and most minerals-and has already "gone out" to the world with the goal of securing what it wants. Violent conflicts may follow as the country shunts others aside. A second potential path down the road to resource wars starts with all the money now flowing into poorly governed but resource-rich countries. Money can fund civil wars and other hostilities, even leaking into the hands of terrorists. And third is global climate change, which could multiply stresses on natural resources and trigger water wars, catalyze the spread of disease or bring about mass migrations. Most of this is bunk, and nearly all of it has focused on the wrong lessons for policy. Classic resource wars are good material for Hollywood screenwriters. They rarely occur in the real world. To be sure, resource money can magnify and prolong some conflicts, but the root causes of those hostilities usually lie elsewhere. Fixing them requires focusing on the underlying institutions that govern how resources are used and largely determine whether stress explodes into violence. When conflicts do arise, the weak link isn't a dearth in resources but a dearth in governance.

## Aff – backlines

### A-to HSR construction = more emissions

#### ( ) O’Toole is a tool – total bias. Prefer our ev.

Reutter 10 — Mark Reutter, Fellow at the Progressive Policy Institute, former reporter for the *Baltimore Sun*, 2010 ("The Strange Logic of Samuelson’s High-Speed Rail Critique," Progressive Policy Institute, November 7th, Available Online at http://progressivepolicy.org/the-strange-logic-of-samuelson%E2%80%99s-high-speed-rail-critique, Accessed 06-10-2012)

Give Washington Post columnist Robert J. Samuelson credit – he’s a strong believer in recycling. Last year, he loudly derided the “mirage” of high-speed rail as “the triumph of fantasy over fact.” Yesterday, he denounced the “absurdity” of fast trains as “a triumph of politically expedient fiction over logic and evidence.” OK, he’s gotten a bit wordier, but you can see that once his mind is made up, it’s fixed in stone.

The same kind of thinking comes from nearly all critics of high-speed rail who bunker at the Heritage Foundation, Cato Institute, and other right-leaning groups – they have a curiously static view of transportation. To them, investing in future high-speed rail is an extravagant and illogical expenditure of public money because the lack of prior investment in high-speed rail has done little to change our travel patterns.

By that logic, America should never have built a transcontinental railroad. Consider that only a handful of wagon trains made it to California in 1862. Had Samuelson been writing then, he probably would have criticized President Lincoln’s proposal to spend taxpayer money on a steam railroad to San Francisco as a plan that “would subsidize a tiny group of travelers and do little else” – to borrow a phrase from yesterday’s column.

What’s missing from Samuelson’s worldview is that major advances in transportation drive economic growth. They have throughout human history. The joining of the Union Pacific and Central Pacific railroads in 1869 ushered in what economic historian Walt Rostow called the “takeoff period” of American industry.

Likewise, President Dwight Eisenhower did not justify interstate highways on the basis of established transportation patterns. U.S. railroads – not roads – carried the bulk of interstate freight, military personnel, and civilians during World War II. Instead, he warned that our national security in the Cold War 1950s depended on our ability to establish fast new highways to transport supplies throughout the country.

So when Samuelson denounces high-speed rail by citing today’s Amtrak ridership levels, he’s forgetting that rail traffic is far below what it would be if our passenger trains were remotely up to world standards. When we begin opening 200-mph railroads, a new level of traffic will appear very rapidly. It’s been dormant, waiting for a chance to move.

It is impossible to predict how much dormant traffic is waiting for a truly modernized rail system. Economic models don’t tell us, and Samuelson fails to even pose the question amid his attacks on high-speed rail as government “pork barrel.”

What’s remarkable (though not surprising, if one reads Cato’s Randal O’Toole and other rail critics) is Samuelson’s utter blindness to the fact that highways and airports require massive government “pork” to build and maintain. They don’t pay for themselves through fuel or ticket taxes, as their backers like to assert.

A Texas Department of Transportation study found that a new section of highway in Houston would generate only 16 percent of its total lifecycle cost from gas taxes. Texas DOT estimated a gas tax of $2.22 per gallon – nearly six times the present state and federal tax of 38.4 cents – reflected the actual cost of building and maintaining the highway.

Constructing 800 miles of high-speed rail in California is liable to cost more than $40 billion. Constructing and operating all 13 corridors proposed by the Obama administration could easily approach $200 billion. But these dramatic headline figures need context. The current transportation act allots $300 billion to highways – not for new construction since the interstate system is completed, but just for maintenance and rebuilding.

Huge costs loom as America’s highways reach the end of their productive life. Replacing the Tappan Zee Bridge in New York State is estimated to cost $17 billion. That figure is guaranteed to rise.

If interstate thoroughfares and vital bridges paid their way, private investors would be clamoring to commit funds to refinance them. They aren’t.

All modes of transporting people require subsidies. Amtrak’s direct subsidies of about $1.5 billion a year are transparent and highly publicized. Subsidies for cars and airlines are hidden in trust fund appropriations, user tax breaks, and local and state programs paid for by all taxpayers, including those who rarely drive and never fly.

In portraying himself as a hard-nosed realist free of the “fashionable make-believe” of rail advocates, Samuelson would do well to explain how he’d fix congestion, advance mobility, lessen pollution, and reduce our dependence on foreign oil by jettisoning an infrastructure program that directly addresses these issues.

#### ( ) Continual improvement disproves their link turns.

Archdeacon ‘11

Kate works on a range of projects, co-designing workshops, publications, and exhibitions, and sharing ideas with design students at Melbourne Uni, Kate is currently undertaking an MPhil in urban agriculture at the University of Melbourne. February 2nd, 2011

http://www.sustainablecitiesnet.com/research/high-speed-rail-a-catalyst-for-sustainable-city-development/

High-speed rail saves energy and protects the environment. In the United States, high-speed rail could cut our dependence on oil while helping to reduce air pollution and curb global warming. Continual improvement – Japan’s Shinkansen system is estimated to use one quarter the energy of air travel or one sixth the energy of automobile travel per passenger. The energy efficiency of Shinkansen trains has continually improved over time, such that today’s trains use nearly a third less energy, while traveling significantly faster, than the trains introduced in the mid-sixties. More efficient – On Europe’s highspeed lines, a typical Monday morning business trip from London to Paris via high-speed rail uses approximately a third as much energy as a car or plane trip. Similar energy savings are achieved on other European highspeed rail lines Replacing oil with electricity makes zero emissions possible – Energy savings translate into reduced emissions of pollutants that cause global warming or respiratory problems – particularly when railroads power their trains with renewable energy. In Sweden, the country’s high-speed trains are powered entirely with renewable energy, cutting emissions of global warming pollutants by 99 percent.

#### ( ) Neg Turns don’t assume the tech and electricity generation we’d use

Mooney ‘10

Gerry Mooney – General Manager, Global Government & Education, IBM – Environmental Leader – November 10, 2010

http://www.environmentalleader.com/2010/11/10/making-transportation-more-sustainable/

One of the best new ideas in transportation is a mode that’s been around for more than 150 years – rail. Railroads are enjoying a renaissance worldwide as countries look for more sustainable transportation solutions. Modern rail has come a long way from the smoke-belching iron horses of the 19th and early 20th centuries – today’s trains are faster, lighter, cleaner, and more efficient. Even better, rail travel is a relatively green mode of transportation. Traveling by train produces three to 10 times less CO2 compared to road or air transport, according to the UIC, an international railroad organization. And trains can even generate electricity on their own. Many modern electric trains are equipped with regenerative braking that slows the train by using traction motors as generators, which produces electricity that’s returned to the grid. Here in the U.S., Congress has authorized about $13 billion to kick-start 13 new high-speed rail corridors across the United States. Florida is on track to open America’s first high speed rail service as early as 2015, with a line that connects Tampa and Orlando. Trains are expected to reach speeds of about 170 mph, and Florida has plans to extend the service down to Miami. Technology will play an increasing role in making rail transportation even more sustainable. New Zealand’s Kiwi Rail is currently installing an advanced software system designed to improve the management of its tracks, bridges and other assets to improve the speed, safety, and reliability of its rail service. The software will deliver information on the condition of nearly 2,500 miles of railway track and thousands of pieces of rail equipment, as well as the signals that control the movement of trains around New Zealand. Maintenance crews will have access to up-to-date information about job plans, work-order tracking, and service requests across the lines, speeding repairs before they impact operations.

#### ( ) HSR dramatically reduces greenhouse gas emissions.

Todorovich et al. 11 — Petra Todorovich, Director of America 2050—a national urban planning initiative to develop an infrastructure and growth strategy for the United States, Assistant Visiting Professor at the Pratt Institute Graduate Center for Planning and the Environment, Member of the Board of Advisors of the Eno Transportation Foundation, holds an M.A. in City and Regional Planning from the Bloustein School of Planning and Public Policy at Rutgers University, et al., with Daniel Schned, Associate Planner for America 2050, Lecturer at the Edward J. Bloustein School of Planning and Public Policy at Rutgers University, holds an M.A. in City and Regional Planning and a Certificate in Geographic Information Systems from Rutgers University, and Robert Lane, Senior Fellow for Urban Design at Regional Plan Association, Founding Principal of Plan & Process LLP, former Loeb Fellow at the Harvard Graduate School of Design, holds an M.A. in Architecture from Columbia University, 2011 (“Chapter 2: Potential Benefits of High-Speed Rail,” *High-Speed Rail: International Lessons for U.S. Policy Makers*, Policy Focus Report of the Lincoln Institute of Land Policy, ISBN 9781558442221, Available Online at https://www.lincolninst.edu/pubs/dl/1948\_1268\_High-Speed%20Rail%20PFR\_Webster.pdf, Accessed 06-08-2012, p. 19-20)

Energy mix: High-speed rail is the only available mode of long-distance travel that currently is not dependent on motor fuels. High-speed rail is powered by electricity, which is not without environmental problems depending on its source (see table 2). If it is powered by electricity generated from fossil fuels, such as coal or natural gas that discharge harmful greenhouse gas emissions, then its environmental benefits are limited. However, electricity is generally considered an improvement over petroleum- [end page 19] generated power and provides a crucial advantage as the United States aims to reduce its dependence on foreign oil. Amtrak’s Northeast Corridor and parts of the Keystone Corridor (connecting Harrisburg, Pennsylvania to Philadelphia) are electrified. Most other conventional passenger trains in America operate on freight rail lines and are powered by diesel fuel.

Energy planning needs to be a part of the planning for high-speed rail to ensure the reduction of greenhouse gases and other harmful pollutants. Even with the current energy mix that includes fossil fuel sources, however, high-speed rail can yield significant environmental benefits. A recent study by the University of Pennsylvania (2011) found that a new high-speed line in the Northeast Corridor, powered by electricity from the current energy mix, would divert nearly 30 million riders from cars and planes, attract 6 million new riders, and still reduce car emissions of carbon monoxide by more than 3 million tons annually. The system would also result in a reduction of carbon dioxide emissions if the energy mix were shifted to low carbon emitting sources.

#### ( ) HSR massively increases energy efficiency.

Todorovich et al. 11 — Petra Todorovich, Director of America 2050—a national urban planning initiative to develop an infrastructure and growth strategy for the United States, Assistant Visiting Professor at the Pratt Institute Graduate Center for Planning and the Environment, Member of the Board of Advisors of the Eno Transportation Foundation, holds an M.A. in City and Regional Planning from the Bloustein School of Planning and Public Policy at Rutgers University, et al., with Daniel Schned, Associate Planner for America 2050, Lecturer at the Edward J. Bloustein School of Planning and Public Policy at Rutgers University, holds an M.A. in City and Regional Planning and a Certificate in Geographic Information Systems from Rutgers University, and Robert Lane, Senior Fellow for Urban Design at Regional Plan Association, Founding Principal of Plan & Process LLP, former Loeb Fellow at the Harvard Graduate School of Design, holds an M.A. in Architecture from Columbia University, 2011 (“Chapter 2: Potential Benefits of High-Speed Rail,” *High-Speed Rail: International Lessons for U.S. Policy Makers*, Policy Focus Report of the Lincoln Institute of Land Policy, ISBN 9781558442221, Available Online at https://www.lincolninst.edu/pubs/dl/1948\_1268\_High-Speed%20Rail%20PFR\_Webster.pdf, Accessed 06-08-2012, p. 19)

High-speed rail has the potential to provide greater environmental benefits and energy efficiencies than other modes of long distance travel. However, several conditions must be met to obtain these benefits.

Energy efficiency and ridership: High-speed rail offers greater operating efficiency on a per passenger mile basis than competing modes, such as single-occupancy automobiles or airplanes that require significant amounts of fuel to get off the ground. For example, Shinkansen trains are estimated to use one-quarter the energy of airplanes and one-sixth that of private automobiles per passenger mile (JR Central 2011a).

To achieve environmental benefits, high-speed trains must maximize load factors to realize the greatest efficiencies. As high-speed rail ridership increases, so does its relative energy efficiency, whereas a high-speed train carrying no passengers ceases to be efficient in any sense.

In regions where the number of total trips is not growing, high-speed rail can bring about a net reduction of energy use through mode shift by capturing passengers from automobile or airplane trips. In regions like California where population and trips are projected to keep growing, high-speed rail can help reduce the energy and climate impacts on a per passenger basis through a combination of mode shift and attracting new passengers to high-speed rail.

### A-to Warming = Not Real

#### ( ) New studies have proven that warming DOES exist – errors in the atmospheric records have been corrected

Scientific American ‘7

(Scientific American, scientific magazine, July 15 2007, “Clarifying some important issues about climate change”, http://www.sciam.com/article.cfm?articleid=C053EDAB-E7F2-99DF-356454A74454CBEB&chanId=sa028)

The third assessment report (2001) noted an apparent mismatch between the instrumental surface temperature record (which showed significant warming over recent decades, consistent with a human impact) and the balloon and satellite atmospheric record (which showed little of the expected warming). This discrepancy is now largely resolved-with consistent warming now found between surface and atmosphere-following several new studies of the satellite- and balloon-derived atmospheric temperature record. These have corrected some significant biases and errors in the record, such as that caused by the "decay" of satellite orbits with time.

#### ( ) VAST SCIENTIFIC CONSENSUS PROVES WARMING REAL AND ANTHROPOGENIC.

MONBIOT ‘7.

[George, Prof @ Oxford Brookes U, Heat: How to Stop the Planet from Burning p 5]

But the link has also been established directly. A study of ocean warming over the past forty years, for example, published in the journal *Science* in 2005, records a precise match between the distribution of heat and the intensity of manmade carbon dioxide emissions. Its lead author described his findings thus: The evidence is so strong it should put an end to any debate about whether humanity is causing global warming. This sounds like a strong statement, but he is not alone. In 2004, another article in *Science* reported the results of a survey of scientific papers containing the words ‘global climate change’. The author found 928 of them on the database she searched. None of the papers, she discovered, disagreed with the consensus position… Politicians, economists, journalists and others may have the impression of confusion, disagreement, or discord among climate scientists, but that impression is incorrect. In 2001 the Royal Society, the United Kingdom’s pre-eminent scientific institution, published the following statement: Despite increasing consensus on the science underpinning predictions of global climate change, doubts have been expressed recently about the need to mitigate the risks posed by global climate change. We do not consider such doubts justified. It was also signed by the equivalent organizations in fifteen other countries. Similar statements have been published by the US National Academy of Sciences, the American Meteorological Society, the American Geophysical Union and the American Association for the Advancement of Science.

#### ( ) Their skeptics are biased – tied to oil

Hunt ‘11

Christian Hunt, Editor for the Carbon Brief, The Carbon Brief Clear on Climate, “Analysing the ‘900 papers supporting climate scepticism’: 9 out of top 10 authors linked to ExxonMobil”, http://www.carbonbrief.org/blog/2011/04/900-papers-supporting-climate-scepticism-exxon-links, 15 Apr 2011

The "900+ papers" list is supposed to be proof that a large number of different scientists reject the scientific consensus on climate change. Climate sceptics do like big numbers: ' More than 500 scientists dispute global warming' was the story a few years ago. In December it was ' more Than 1000 International Scientists Dissent Over Man-Made Global Warming Claims'. Once you crunch the numbers, however, you find a good proportion of this new list is made up of a small network of individuals who co-author papers and share funding ties to the oil industry. There are numerous other names on the list with links to oil-industry funded climate sceptic think-tanks, including more from the International Policy Network (IPN) and the Marshall Institute. Compiling these lists is dramatically different to the process of producing IPCC reports, which reference thousands of scientific papers. The reports are thoroughly reviewed to make sure that the scientific work included is relevant and diverse. Sceptic organisations have been successful in dumping large lists into the public domain to suggest that there is significant scientific divergence from the consensus. This is partly due to the fact it is time consuming analysing such lists.

### Not Too Late to solve Warming

#### Not too late – but must act soon

Brod ‘7

Andrew Brod is the Director of UNCG’s Office of Business and Economic Research. Greensboro News & Record, April 29, 2007 – https://web.uncg.edu/bae/documents/cber/article8iPhAsrpnO.pdf

It’s Not Too Late—Yet—to Counteract Global Warming After years on the back burner of public policy, global warming is suddenly being taken seriously. The steady drumbeat of news stories about shrinking glaciers, migrating maple trees, and stranded polar bears is finally registering with people. The news media pay less attention to global-warming skeptics than before. The Weather Channel has regular reports and a special website (http://climate.weather.com) devoted to news about climate change. And Al Gore won an Oscar for his documentary film on the subject. The result can be seen in surveys like a recent Time/ABC News poll, which found that only 19 percent of Americans believe that human actions bear no responsibility for global warming. Each new report by the Intergovernmental Panel on Climate Change (http://www.ipcc.ch) reconfirms the broad consensus among climate scientists that humans are causing global warming. But the scientific consensus hasn’t convinced everyone. The hold-outs cling to their claim that the science is still uncertain, with a stubbornness reminiscent of those Japanese soldiers who defended tropical islands long after World War II ended. Prominent among the hold-outs are Republican lawmakers. Senator James Inhofe of Oklahoma, who bases much of his understanding of climate change on the writings of novelist Michael Crichton, is one of the leaders of this new breed of flat-earthers. According to one survey, 87 percent of the Republicans in the U.S. Congress believe that nothing’s been proven yet regarding global warming. Republican skepticism has actually increased since last year, when the same survey found 77 percent doubting the science. But when even President Bush acknowledges that climate change is happening and is at least partly the result of human actions, you know the tide has turned. The first column I ever wrote for the News & Record was about global warming. That was 12 years ago, and even then it was hard to ignore the growing evidence that climate change was being spurred by human actions. But I wrote that waiting for absolute proof would be unwise. Instead, the sensible approach is to take precautions. I wrote, “there’s no scientific evidence that my house will catch on fire next week, but I think I’ll buy homeowner’s insurance anyway.” I discussed small policy steps that would make sense even if the scientists were wrong about global warming. Fortunately, people finally seem to understand the fallacy of requiring proof. Nearly twothirds of the respondents to that Time/ABC News poll believe (inaccurately) that there is “a lot of disagreement” among scientists on global warming. Even so, they see climate change as a serious problem and they believe that government should be doing more to deal with it. This is quite encouraging, and it represents an important step for the American public. As with a personal addiction, no solution is possible until the problem is acknowledged. But are Americans ready for the solution? After all, there is much wishful thinking on this subject. For example, the Bush administration believes that new technologies are the answer. (Crossing its fingers for new technologies is also the administration’s solution to what the president has called our addiction to oil.) Unfortunately, investing in technology isn’t a magic wand, and most experts believe that new technologies are unlikely to make a significant dent in our greenhouse-gas emissions for a few decades. According to the Time/ABC News poll, the public appears to share the fantasy that technology will be our savior. Of various policy options mentioned in the poll, the most popular, favored by 87 percent of the respondents, was government grants to promote the development of alternative energy sources. Relatively few respondents agreed that taxes should be used to reduce consumption of electricity or gasoline. Apparently, the public believes that taxes won’t be needed to finance those grants. Whether we like it or not, dealing with climate change will involve real trade-offs and real costs. But according to a recent study by the British government, which recommended an array of taxes and emission controls, the costs may be moderate, on the order of 1 percent of global income per year. For the median U.S. household, this would currently imply a reduction in income of a few hundred dollars per year. In contrast, the study found that by 2050, the economic costs of unimpeded climate change will be between five and 20 percent of the world’s income. In spite of the uncertainty inherent in these projections, this is a striking result. The study factored in the likelihood that some people, such as wheat farmers in Manitoba, will benefit from climate change. It also addressed the potentially dire effects on poorer countries. Not all economists have embraced the British study. Some argue that for rich countries, the costs of trying to stop global warming are as great as the costs of letting it run its course. But at least the debate is moving in the right direction. Instead of pointless arguments about whether we have proof of global warming, we’ve started arguing about the costs and benefits of particular policies. Should we impose a carbon tax? Will moderate cuts in emissions suffice? How do we balance the welfare of current and future generations? I concluded my 1995 column by saying that it wasn’t too late to “buy insurance” against the future costs of global warming. It’s still not too late. But it will be soon.

#### ( ) Warming is still reversible.

Sanders, 7

Bernie Sanders writer for The Nation, Global Warming is Reversible, <http://www.thenation.com/article/global-warming-reversible>

Scientists now tell us that the crisis of global warming is even worse than their earlier projections. Daily front-page headlines of environmental disasters give an inkling of what we can expect in the future, multiplied many times over: droughts, floods, severe weather disturbances, loss of drinking water and farmland and conflicts over declining natural resources. Yet the situation is by no means hopeless. Major advances and technological breakthroughs are being made in the United States and throughout the world that are giving us the tools to cut carbon emissions dramatically, break our dependency on fossil fuels and move to energy efficiency and sustainable energy. In fact, the truth rarely uttered in Washington is that with strong governmental leadership the crisis of global warming is not only solvable; it can be done while improving the standard of living of the people of this country and others around the world. And it can be done with the knowledge and technology that we have today; future advances will only make the task easier. What should we be doing now? First, we need strong legislation that dramatically cuts back on carbon emissions. The [Global Warming Pollution Reduction Act](http://www.sanders.senate.gov/news/record.cfm?id=267552) (S. 309), a bill that I introduced with Senator Barbara Boxer and that now has eighteen co-sponsors, would reduce greenhouse gas emissions by 80 percent by the year 2050. Second, if the federal government begins the process of transforming our energy system by investing heavily in energy efficiency and sustainable energy, we can accomplish the 80 percent carbon reduction level and, at the same time, create millions of high-paying jobs. Energy efficiency is the easiest, quickest and least expensive path toward the lowering of carbon emissions. My hometown of Burlington, Vermont, despite strong economic growth, consumes no more electricity today than it did sixteen years ago because of a successful effort to make our homes, offices, schools and other buildings more energy-efficient. In California, which has a growing economy, electric consumption per person has remained steady over the past twenty years because of that state's commitment to energy efficiency. Numerous studies tell us that retrofitting older buildings and establishing strong efficiency standards for new construction can cut fuel and energy consumption by at least 40 percent. Those savings would increase with the adoption of new technologies such as [LED light bulbs](http://www.msnbc.msn.com/id/9399209), which consume as little as 10 percent of the electricity that incandescent bulbs do and last twenty years. Transportation must also be addressed in a serious manner. It is insane that we are driving cars today that get the same twenty-five miles per gallon that US cars did twenty years ago. If Europe and Japan can engineer their vehicles to average more than forty-four miles per gallon, we can do at least as well. Simply raising fuel-efficiency standards to forty miles per gallon would save roughly the same amount of oil as we import from Saudi Arabia and would dramatically lower carbon emissions. We should also rebuild and expand our decaying rail and subway systems and provide energy-efficient buses in rural America so that travelers have an alternative to the automobile. Sustainable energies such as wind, solar and geothermal have tremendous potential and often cost no more than fossil fuels (and, in some cases, even less). Increased production and research should cause sustainable energy prices to decline steeply in the future. Wind power is the fastest growing source of new energy in the world and in the United States, but we have barely begun to tap its potential. Denmark, for example, generates 20 percent of its electricity from wind. We should be supporting wind energy not only through the creation of large wind farms in the appropriate areas but through the use of small, inexpensive wind turbines available today that can be used in homes and farms throughout rural America. These small turbines can produce, depending on location, more than half the electricity that an average home consumes while saving consumers money on their electric bills. Solar energy is another rapidly expanding technology. In Germany, a quarter of a million homes are now producing electricity through rooftop photovoltaic units, and the cost of that technology is expected to decline steeply. California is providing strong incentives so that 1 million homes will have solar units in the next ten years. The potential of solar energy, however, goes far beyond rooftop photovoltaic units. Right now, in Nevada, a solar plant is generating fifty-six megawatts of electricity. According to the National Renewable Energy Laboratory of the US Energy Department, "Solar energy represents a huge domestic energy resource for the United States, particularly in the Southwest where the deserts have some of the best solar resource levels in the world. For example, an area approximately 12 percent the size of Nevada has the potential to supply all of the electric needs of the United States." As a strong indication of what the future holds, Pacific Gas and Electric, the largest electric utility in the country, has recently signed a contract to build a 535-megawatt solar thermal plant in the Mojave Desert. This plant, which should be operating in about four years, will have an output equivalent to a small nuclear power plant and will produce electricity for about 400,000 homes. Most important, the price of the electricity generated by this plant, about 10 cents per kilowatt hour, is competitive with other fuels today and will be much cheaper than other fuels by the end of the twenty-five-year contract. Experts in the industry say that dozens of these plants can be built within the next twenty years. Geothermal energy, the heat from deep inside the earth, is another overlooked resource with real potential. It is free, renewable and can be used for electricity generation and direct heating. A recent report for the US Energy Department by the Massachusetts Institute of Technology suggests that geothermal could supply 100,000 megawatts of new carbon-free electricity at less than 10 cents per kilowatt hour, the going rate today. It is estimated that electricity from geothermal sources could provide 10 percent of the US baseload energy needs in 2050. As the nation at last confronts global warming, it is no time for denial, greed, cynicism or pessimism. It is a time for vision and international leadership. It is a time for transforming our energy system from the polluting and carbon-emitting technologies of the nineteenth century into the unlimited and extraordinary energy possibilities of the twenty-first. When we do that we will not only solve the global warming crisis; we will open up unimaginable opportunities for improving life all over the planet.

### A-to Neg’s Resource War takeouts

#### ( ) Victor’s indicts are wrong

Homer-Dixon ‘8

Thomas Homer-Dixon currently holds the Centre for International Governance Innovation Chair of Global Systems at the Balsillie School of International Affairs in Waterloo, Ontario. National Interest – Jan-Feb 2008 – http://nationalinterest.org/article/straw-man-in-the-wind-1921

PUNDITS, JOURNALISTS and Sunday morning news show commentators sometimes say silly things about the links between resources and war. "Iraq is all about oil" or "Global warming caused the Darfur genocide." And, sometimes, NGO leaders and policymakers say similar silly things when they want the media to pay attention to a particular region or issue. It's easy to criticize these statements. But thoughtful commentators, of whom David Victor is normally one, know they contribute little by doing so. Yet, in this case, he's pulled together several oft-heard arguments about why threats from resource wars are overblown. Some of the skeptical positions have merit, but many are deeply misleading. No serious scholar of this issue says that resource stress causes violence by itself; almost none asserts that the causal links between resource stress and violence are direct; and very few argue that interstate war is the most likely outcome. Resource stresses are security dangers, though they are one among many. They will not be the only cause of conflict, but they will add to the risk of war. If you listen to Victor, though, you might just get lulled into a false sense of security. He beats down straw-man arguments, in the end offering nothing but false reassurances about the security risks posed by resource stress. If the author had been willing to take on nuance, he wouldn't have been able to write the kind of simplistic and ideologically charged article that appeared in these pages. That's because serious scholars who have spent years studying the links between resources and mass violence-and I count myself in that group-rarely, if ever, make the kinds of arguments Victor so boldly attacks.

#### ( ) Resource war thesis is accurate – history’s with us.

Klare ‘8

Michael Klare is a professor of peace and world security studies at Hampshire College – National Interest – Jan-Feb 2008 – http://nationalinterest.org/article/clearing-the-air-1922

Victor's missteps are partly methodological. He too narrowly defines "resource wars" as "hot conflicts triggered by a struggle to grab valuable resources." This classification severely underestimates the number of worldwide resource-driven battles. What's more, the sort of wars he depicts-the staple of European imperialism-may have become less frequent in the modern era, but they have hardly disappeared. Surely Saddam Hussein's August 1990 invasion of Kuwait fits his definition-a resource "grab" that was only reversed after intervention by a half-million U.S. troops. But this is not the type of resource conflict that has most troubled the planet in recent times. By failing to address the role of resource revenues as a motive for war, Victor leaves out a large share of the armed violence now racking the planet. In reality, we have experienced a spate of internal conflicts over control of valuable oil fields, copper mines and what Paul Collier has called "lootable resources"-diamonds, old-growth timber and other valuable commodities that can be smuggled out of the country and sold on lucrative foreign markets. Conflicts of this sort typically pit corrupt central governments against warlords, ethnic militias, separatist groups, criminal organizations and other non-state actors. Ultimately, each group seeks to garner the rents generated by ownership of the mines or oil fields in question or to monopolize the illicit trade in lootable commodities.

### A-to Ridership

#### ( ) Ridership isn’t a problem

Todorovich et al. 11

Petra Todorovich, Director of America 2050—a national urban planning initiative to develop an infrastructure and growth strategy for the United States, Assistant Visiting Professor at the Pratt Institute Graduate Center for Planning and the Environment, Member of the Board of Advisors of the Eno Transportation Foundation, holds an M.A. in City and Regional Planning from the Bloustein School of Planning and Public Policy at Rutgers University, et al., with Daniel Schned, Associate Planner for America 2050, Lecturer at the Edward J. Bloustein School of Planning and Public Policy at Rutgers University, holds an M.A. in City and Regional Planning and a Certificate in Geographic Information Systems from Rutgers University, and Robert Lane, Senior Fellow for Urban Design at Regional Plan Association, Founding Principal of Plan & Process LLP, former Loeb Fellow at the Harvard Graduate School of Design, holds an M.A. in Architecture from Columbia University, 2011 (“Chapter 2: Potential Benefits of High-Speed Rail,” *High-Speed Rail: International Lessons for U.S. Policy Makers*, Policy Focus Report of the Lincoln Institute of Land Policy, ISBN 9781558442221, Available Online at https://www.lincolninst.edu/pubs/dl/1948\_1268\_High-Speed%20Rail%20PFR\_Webster.pdf, Accessed 06-08-2012, p. 19-20)

Energy mix: High-speed rail is the only available mode of long-distance travel that currently is not dependent on motor fuels. High-speed rail is powered by electricity, which is not without environmental problems depending on its source (see table 2). If it is powered by electricity generated from fossil fuels, such as coal or natural gas that discharge harmful greenhouse gas emissions, then its environmental benefits are limited. However, electricity is generally considered an improvement over petroleum- [end page 19] generated power and provides a crucial advantage as the United States aims to reduce its dependence on foreign oil. Amtrak’s Northeast Corridor and parts of the Keystone Corridor (connecting Harrisburg, Pennsylvania to Philadelphia) are electrified. Most other conventional passenger trains in America operate on freight rail lines and are powered by diesel fuel.¶ Energy planning needs to be a part of the planning for high-speed rail to ensure the reduction of greenhouse gases and other harmful pollutants. Even with the current energy mix that includes fossil fuel sources, however, high-speed rail can yield significant environmental benefits. A recent study by the University of Pennsylvania (2011) found that a new high-speed line in the Northeast Corridor, powered by electricity from the current energy mix, would divert nearly 30 million riders from cars and planes, attract 6 million new riders, and still reduce car emissions of carbon monoxide by more than 3 million tons annually. The system would also result in a reduction of carbon dioxide emissions if the energy mix were shifted to low carbon emitting sources.

### Additional Aff impact ev

#### Warming = extinction – 4 degree distinction

**Tickell 08** [Oliver, “On a planet 4C hotter, all we can prepare for is extinction]

We need to get prepared for four degrees of global warming**,** *Bob Watson told the Gurdian last week. At first sight this looks like wise counsel from the climate science adviser to Defra*. But the idea that we could adapt to a 4C rise is absurd and dangerous. Global warming on this scale would be a catastrophe that would mean*, in the immortal words that Chief Seattle probably never spoke*, "the end *of living and the beginning of survival"* for humankind. Or perhaps the beginning of ourextinction***.*** The collapse of the polar ice caps would become inevitable, bringing long-term sea level rises of 70-80 metres. All the world's coastal plains would be lost, complete with ports, cities, transport and industrial infrastructure, and much of the world's most productive farmland***.*** *The world's geography would be transformed much as it was at the end of the last ice age, when sea levels rose by about 120 metres to create the Channel, the North Sea and Cardigan Bay out of dry land*.Weather would become extreme and unpredictable, with more frequent and severe droughts, floods and hurricanes. The Earth's carrying capacity would be hugely reduced. Billions would undoubtedly die.

#### Warming causes huge death tolls

Lea ‘7

(Michael – political correspondent for The Sun – he is internally quoting the IPCC – April 7th http://www.thesun.co.uk/sol/homepage/news/article24343.ece)

BILLIONS face death from hunger, drought, disease and natural disasters, the world’s climate change experts warned yesterday. Years of rising sea levels will also destroy coastal cities like New York and Tokyo. And a third of the planet’s animals and plants could be wiped out. The doomsday scenario is the bleakest yet from scientists, who blamed man-made greenhouse gases. The shock report from the influential United Nations’ Intergovernmental Panel on Climate Change – the leading world authority on the subject – said up to 3.2billion people will face water shortages within 80 years. A further 600million could be left starving. Millions more will die in heatwaves, wildfires, droughts and storms triggered by global warming. The IPCC report, using research by 2,500 scientists in 130 countries, was approved unanimously by governments meeting in Brussels. IPCC chairman Rajendra Pachauri urged the world to “pay attention” to the findings, saying: “It is a global responsibility.”

### A-to “CO2 helps Ag”

#### ( ) CO2 will have some positive effect – but this is more than outweighed by the effect of adaptation, bugs, and weather conditions

National Academy of Sciences ‘1

(society of the most distinguished scientists in the country, “Climate Change Science: An Analysis of Some Key Questions”, 2001, from chapter 6, http://books.nap.edu/html/climatechange/5.html)

In the near term, agriculture and forestry are likely to benefit from CO2 fertilization effects and the increased water efficiency of many plants at higher atmospheric CO2 concentrations. Many crop distributions will change, thus requiring significant regional adaptations. Given their resource base, the Assessment concludes that such changes will be costlier for small farmers than for large corporate farms. However, the combination of the geographic and climatic breadth of the United States, possibly augmented by advances in genetics, increases the nation's robustness to climate change. These conclusions depend on the climate scenario, with hotter and drier conditions increasing the potential for declines in both agriculture and forestry. In addition, the response of insects and plant diseases to warming is poorly understood. On the regional scale and in the longer term, there is much more uncertainty.

### Resource War – we can solve

#### ( ) Reversing economic decline and solve resource wars

Cairns, ‘4

(John Cairns Jr, Distinguished Professor of Environmental Biology Emeritus, Department of Biology and Director Emeritus, University Center for Environmental and Hazardous Materials Studies @ Virginia Polytechnic Institute and State University – “Eco-Ethics and Sustainability Ethics,” Ethics in Science and Environmental Politics, http://ottokinne.de/esepbooks/EB2Pt2.pdf#page=66)

Wars between humans are devastating, but the human war being waged on the environment will have a far greater effect on humankind. Peace for humankind is a superb vision. However, if humankind does not cease making war (i.e., destroying) on Earth’s ecological life support system and the species that comprise it, peace will be built on a foundation of sand. Paul R. Ehrlich (Pro- fessor of population studies at Stanford University, Stanford, CA, USA) notes: “We’re waging a war on the environment, a very successful one” (quoted in The Guardian, Friday, October 24, 2003). If natural capital is destroyed or impaired, ecosystem services will be lost (e.g., maintaining atmos- pheric gas balance). This loss will reduce the planet’s carrying capacity for humans and per capita resources. The inevitable result is resource wars. Exponential population growth reduces per capita resources such as water, forests, croplands, etc. Another cause for concern is mass migration from countries that have exceeded their carrying capacity to countries where resources appear to be more abundant.

Individuals who believe that humankind is immune from natural law need only become informed about the recent effects when Hurricane Isabel hit the 100+ miles of barrier islands (the “Outer Banks”) on the east coast of North Carolina, USA. The hurricane washed out much of the main road for the islands, destroyed motels and million dollar houses, and even divided one island into several islets. A whole town, Hatteras Village, was cut off, temporarily at least, from the mainland.

One persistent belief, especially in the United States, is that nature can be vanquished. At the core of this belief is a conviction that there are no limits to growth. Proponents of unlimited growth consider certain ideas subversive: that limits exist, that finite limits exist on a finite planet, and that humans are subject to a finite carrying capacity (as with any other species). Peace is more than the absence of war. The probability of peace will be dramatically increased if Earth’s life support systems are nurtured and natural capital is not squandered, thus markedly reducing the likelihood of resource wars. If humankind’s war on nature continues, humankind will suffer grievous harm.