### **No Solvency**

#### Compressed gas not efficient or sustainable to replace fossil fuels

Allen (Senior Editor for Automotive Hearst Magazines (Popular Mechanics), Staff writer at Sandy Corporation, Writer at Freelance, Media Supervisor at Michigan State University) 2006 (Mike “Crunching the Numbers on Alternative Fuels” <http://www.popularmechanics.com/cars/alternative-fuel/news/2690341> )

Compressed Natural Gas¶ Natural gas can be used to fuel internal-combustion engines. The most practical strategy is to handle it as compressed natural gas (CNG). Natural gas is typically found in underground deposits, often with petroleum, and is obtained by drilling. To use natural gas, the methane component—which makes up 50 to 100 percent of natural gas—must be processed to remove contaminants as well as other useful fuels such as butane and propane.¶ Case For: With an octane rating of up to 130, CNG has the potential to optimize an engine's thermodynamic efficiency through a high compression ratio. However, many CNG vehicles are able to run on either CNG or gasoline, which obviates the octane advantage. According to the DOE, a CNG-fueled Honda Civic GX—the sole widely available CNG-only vehicle in the United States—produces 90 percent less CO and 60 percent less nitrogen oxides (NOx) than its gas-powered counterpart. And, CO2 is reduced by 30 to 40 percent. According to the company, the car's exhaust is cleaner than the air in some high-pollution areas.¶ Case Against: For a vehicle to carry enough CNG to travel a reasonable distance, the gas has to be compressed to 3000 to 3600 psi. At 3600 psi, CNG has about one-third as much energy as gasoline—about 44,000 BTU per unit volume—and the tank must be far larger, heavier and more expensive than a conventional one.¶ In addition, energy is consumed during the compression process. Currently available in nine states to Civic GX owners is a compressor/refueler called Phill that uses 2 kilowatt-hours (kwh) of electricity to compress the equivalent of 1 gal. of gasoline. With electricity averaging 10 cents per kwh nationwide, the price of CNG goes up 20 cents per gallon over the cost of the natural gas itself. Still, CNG is a bargain compared to gasoline. A gallon of gas equivalent (GGE) costs about $1.20, including the cost of compression—thanks in part to the lack of taxes added to gasoline.¶ Outlook: Limited. Even though 85 percent of our natural gas is produced domestically, and there's already a distribution network in place, CNG faces a limited future as a gasoline or diesel replacement. For one thing, like petroleum, it is nonrenewable. More critically, perhaps, there's already a great demand for natural gas—and CNG requires major retooling of both cars and fuel-station infrastructure.¶

#### Electric cars too inconvenient to replace gasoline

Allen (Senior Editor for Automotive Hearst Magazines (Popular Mechanics), Staff writer at Sandy Corporation, Writer at Freelance, Media Supervisor at Michigan State University) 2006 (Mike “Crunching the Numbers on Alternative Fuels” <http://www.popularmechanics.com/cars/alternative-fuel/news/2690341> )

Electricity¶ The same flow of electrons that powers your television and iPod can provide the energy needed to move a vehicle. Electricity from a power source, typically a rechargeable battery pack, energizes a large electric motor that propels the car. When slowing or stopping, the braking energy reverses the power flow, turning the electric motor into a generator to help recharge the battery pack. Under normal circumstances, however, the batteries must be recharged for several hours at a stationary charging station.¶ Case For: Vehicles that operate only on electricity require no warmup, run almost silently and have excellent performance up to the limit of their range. Also, electric cars are cheap to "refuel." At the average price of 10 cents per kwh, it costs around 2 cents per mile. Electric cars can be recharged at night, when generating plants are under-utilized. Vehicles that run on electricity only part of the time and on internal-combustion power at other times—hybrids—have even greater promise. As hybrids gain in popularity, there is a growing interest in plug-in hybrids that allow owners to fully recharge the vehicle's batteries overnight.¶ A strong appeal of the electric car—and of a hybrid when it's running on electricity—is that it produces no tailpipe emissions. Even when emissions created by power plants are factored in, electric vehicles emit less than 10 percent of the pollution of an internal-combustion car.¶ Case Against: Pure electric cars still have limited range, typically no more than 100 to 120 miles. In addition, electrics suffer from slow charging, which, in effect, reduces their usability. When connected to a dedicated, high-capacity recharger, some can be recharged in as little as an hour, but otherwise such cars are essentially not driveable while they sit overnight for charging.¶ Outlook: Mixed. While interest in plug-in hybrids grows, the long-term future of pure electrics depends on breakthroughs in longer-lasting, cheaper batteries and drastically lower production costs for the vehicles themselves. And then there's the environmental cost. Only 2.3 percent of the nation's electricity comes from renewable resources; about half is generated in coal-burning plants.¶

#### Can’t solve – not commercially available until 2020 and expensive

Allen (Senior Editor for Automotive Hearst Magazines (Popular Mechanics), Staff writer at Sandy Corporation, Writer at Freelance, Media Supervisor at Michigan State University) 2006 (Mike “Crunching the Numbers on Alternative Fuels” <http://www.popularmechanics.com/cars/alternative-fuel/news/2690341> )

Hydrogen¶ Hydrogen is the most abundant element on Earth, forming part of many chemical compounds. Pure hydrogen can be made by electrolysis—passing electricity through water. This liberates the oxygen, which can be used for many industrial purposes. Most hydrogen currently is made from petroleum.¶ Case For: Though hydrogen can fuel a modified internal-combustion engine, most see hydrogen as a way to power fuel cells to move cars electrically. The only byproduct of a hydrogen fuel cell is water.¶ Case Against: Most energy and industry experts agree that hydrogen fuel cell vehicles won't be widely available until 2020. The industry still needs to develop a manufacturing and distribution system. And, despite the chemical simplicity of electrolysis, producing hydrogen is expensive and energy consuming. It takes about 17 kwh of electricity, which costs about $1.70, to make just 100 cu. ft. of hydrogen. That amount would power a fuel cell vehicle for about 20 miles.¶ Although hydrogen has the highest energy-to-weight ratio of possible energy sources, it's necessary to expend a tremendous amount of energy to compress sufficient hydrogen into an expensive, 5000-plus-psi storage tank in a vehicle.

#### No solvency – lack of public interest

Nearing (Time Unions environmental and science reporter) 3/21/12 (Brian “No drive for natural gas cars” <http://www.timesunion.com/business/article/No-drive-for-natural-gas-cars-3425691.php> )

NISKAYUNA — When Joe Darling tells people he can fill his 2006 Honda Civic for about $6.40 and drive 250 miles, many want to know more. "Whenever I am stopped at a station somewhere, people are always asking me about it," the retired state worker said.¶ But turning that initial interest in Darling's vehicle — which runs on compressed natural gas equivalent to eight gallons of gasoline — into an ultimate purchase happens very, very infrequently.¶ As the price of gasoline rises to $4 a gallon and natural gas prices continue falling, the public seems largely uninterested in compressed natural gas cars, also known as CNG vehicles. The vehicles have been touted as a way to reduce greenhouse gas emissions, because natural gas burns cleaner than gasoline, and reduces America's dependence on imported oil by replacing it with American-produced natural gas.¶ The United States currently has about 112,000 CNG vehicles of all types, ranking it 14th in the world, behind the leader, Pakistan, with more than 2.8 million, Argentina (2 million) India (1.1 million) Thailand (238,000) and one of the world's poorest countries, Bangladesh, which has about 200,000.¶ Darling was the first private citizen in the state to buy a CNG Civic in 2006 when they became available to consumers.¶ Six years later, the Civic remains the only CNG passenger car available for sale in the United States. It has been sold only in New York, California, Oklahoma and Utah, but this year, Honda plans to ship cars to 35 states.¶ As of March 1, there were just 410 CNG Civics in private hands in New York state, according to the Department of Motor Vehicles. The vast majority of the 4,022 registered CNG vehicles, which also includes vans and trucks, are owned either by the state or by businesses like National Grid.¶ Capital Region Honda dealers say issues like a small number of fueling stations — there are just 34 public stations in the state, including three in the Capital Region — and the $8,000 extra cost for a CNG Civic, make it a hard sell.¶ "We might sell three or four a year. We don't keep one on the lot. We sell them to order, which means you can get one in 60 days," said Rich Dockrell, general sales manager at Rensselaer Honda in Troy.¶ Dockrell said average buyer tends to be older, and willing and able to pay extra, like Darling did, to install necessary gas piping to fuel their car at home, which offers the best price on natural gas. State law exempts compressed natural gas from state fuel taxes, and state and local sales taxes.¶ "A lot of our buyers work for the utility, or have access to natural gas filling station through their work," said Dockrell. "I think if the car was cheaper, and if the natural gas filling stations were more widespread, more buyers would be open to the car. But we are a convenience society. As soon as it starts crimping their lifestyle, most people aren't interested in being an environmentalist."¶

#### **Environmental regulations block the production of CNG cars**

Dlouhy (Washington D.C reporter covering energy and other issues for The Houston Chronicle and other Hearst newspapers) 7/24/12 (Jennifer “Manufacturers alarmed about surging natural gas demand” <http://fuelfix.com/blog/2012/07/24/manufacturers-alarmed-about-surging-natural-gas-demand/> )

Manufacturers warned Congress today that they are worried the nationwide push to use more natural gas to generate electricity and fuel cars will leave them paying more for the fossil fuel they use to power plants and create other products.¶ Paul Cicio, president of the Industrial Energy Consumers of America, said the group “is becoming very alarmed at the ever-increasing potential demand and over reliance on natural gas.”¶ Energy companies are taking advantage of technological advances in drilling to harvest natural gas from dense rock formations across the U.S., potentially tapping what analysts widely describe as a 100-year supply of the fossil fuel.¶ But Cicio warned that natural gas’ potential abundance could be illusory and is jeopardized by environmental regulations that could encourage utilities to abandon coal in some plants and new mandates on drilling. Additionally, at least eight companies have asked the federal government for approval to begin exporting liquefied natural gas.¶ “While we have an abundant supply, it appears that we also have explosive potential demand due to the suite of EPA regulations on the electric utility generators that could shut down 81,000 megawatts of coal-fired power generation,” Cicio told the Senate Energy and Natural Resources Committee. “Manufacturing is also concerned about the growing threats to continued robust and economic production of natural gas.”¶ Critics worry that all of those factors threaten to send natural gas prices upward and could put the fossil fuel on the same price roller coaster it has ridden for decades. Manufacturers that use natural gas to fuel their plants and as a building block to make other products were hit hard by volatile swings in prices over the last two decades, which last peaked over $15.00 in 2005.¶ In its hearing today, the Energy and Natural Resources Committee was studying the use of natural gas as a transportation fuel, amid questions about the federal government’s role in propelling new technologies and establishing infrastructure to support the transition.¶ Sen. Ron Wyden, D-Ore., a critic of proposed natural gas exports, said it is important for the U.S. to find “that sweet spot where companies really do have that sense of stability in order to make these long-term changes.”¶ But natural gas boosters said manufacturers’ concerns are overblown.¶ Dave McCurdy, CEO of the American Gas Association, said a steady ramp-up in cars using natural gas instead of petroleum-based fuels is not likely to cause a huge spike in demand and runup in prices for industrial consumers.¶ Some major fleet operators, including Verizon and Waste Management, already are switching to natural gas vehicles. Separately, 13 governors are coordinating a multi-state purchase program to make natural gas vehicles part of their state fleets.¶ A major challenge in adopting cars powered by natural gas — especially when it is liquefied — is the lack of fueling stations and other infrastructure to keep those vehicles on the road.¶ Sen. Jeff Bingaman, D-N.M., noted that there’s a “chicken and egg problem” standing in the way of big natural gas vehicle adoption.¶ “Vehicle manufacturers have historically been reluctant to develop and sell natural gas vehicles if the fueling infrastructure is not in place, and infrastructure developers have been wary of building fueling stations without demonstrated demand from consumers with natural gas vehicles,” Bingaman said.¶ One alternative to cars running on liquefied natural gas is using compressed natural gas to power the vehicles. Earlier this month, the Energy Department awarded $30 million in grants aimed at giving a boost to technology for using CNG in light passenger vehicles.¶ The development of lightweight, inexpensive equipment for storing compressed natural gas in vehicles could open the door for convenient, home-based refueling of cars.¶ McCurdy noted that gas utilities that belong to the AGA maintain more than 2 million miles of natural gas distribution pipelines nationwide. And there are more than 1,000 compressed natural gas stations in the U.S. already.¶ “This distribution network means that we can place compressed natural gas fueling stations around the country without the need to truck in fuel,” he said. “We believe that in the next few years, home refueling for natural gas vehicles will become increasingly available and attractive to residential consumers.”

#### **No solvency – prices unsustainable**

Greene (Corporate fellow, Oak Ridge National Laboratory Senior Fellow) 7/24/12 (David “Committee: Senate Energy And Natural Resources” <http://www.utilityproducts.com/news/2012/07/24/use-of-natural-gas-as-a-transportation-fuel-nl-committee-senate-energy-and-natural-resources.html> )

Statement of David L. Greene Corporate Fellow, Oak Ridge National Laboratory Senior Fellow, Howard H. Baker, Jr. Center for Public Policy The University of Tennessee¶ Committee on Senate Energy and Natural Resources¶ July 24, 2012¶ Good morning Chairman Bingaman, distinguished senators, staff and guests. Thank you for the opportunity to comment on the potential for natural gas to contribute to solving America's energy problems through greater use in our transportation sector.¶ My first two observations may seem obvious but I think they are important. First, advanced recovery methods have greatly increased our economical natural gas resources, yet not enough to transform our energy system to one based on natural gas. There is now much more gas available but not nearly enough to satisfy all our energy needs.¶ Second, today's low natural gas prices are not likely to last. More likely, they will rise over time to levels consistent with the world price for LNG adjusted for the costs of liquefaction and transport. Energy markets respond slowly due to the time required for energy using capital stocks and capital-intensive resource development to adjust. But the domestic gas market is competitive and prices will adjust to reflect the long-run market value of natural gas (Figure 1).¶ I believe that increased natural gas use in transportation can and should make a relatively moderate but important contribution to reducing our dependence on petroleum for the following reasons:¶ 1. The recent increase in natural gas resources is indeed "game changing" but market forces are likely to allocate the increased domestic production to the traditional natural gas using sectors. The new gas resources are game changing in the sense that, as the Energy Information Administration (EIA) projects, they will transform the US from a net importer to a net exporter of natural gas and keep natural gas reasonably priced for decades.¶ 2. Electric utilities' natural gas consumption is likely to increase even more than projected if responsible efforts are undertaken to reduce greenhouse gas (GHG) emissions from electricity production.¶ 3. Natural gas prices are almost certain to rise from their currently depressed levels to levels similar to those seen in the recent past when natural gas use in transportation was limited to niche markets.¶ 4. Although increased use of natural gas in transportation would reduce US oil dependence and probably GHG emissions in the near term, methane is not a suitable fuel for achieving the kinds of reductions in GHG emissions likely to be necessary by 2050.¶ 5. While substituting natural gas for gasoline or diesel fuel in motor vehicles will help reduce our dependence on petroleum, so will substituting natural gas for distillate fuel for heating buildings. This is another important opportunity to improve our energy security.¶ Outlook¶ Expansion of America's natural gas and oil resources thanks to the technologies of hydro-fracturing and directional drilling is already producing benefits to our economy and energy security and will do even more in the future. The Energy Information Administration (EIA, 2012) estimates that production of natural gas will increase from 20.6 TCF in 2010 to 27.9 TCF in 2035, with the contribution from shale gas increasing from 23% to 49% of U.S. production (Figure 2). Yet our shale gas resources are not unlimited. The EIA's 2012 Reference Case puts U.S. proved and unproved shale gas resources at 542 trillion cubic feet (TCF) out of total natural gas resources of 2,203 TCF. Production of shale oil and natural gas liquids (NGL) (typically considered to be petroleum) is now projected to increase domestic petroleum supply from 7.3 million barrels per day (mmbd) in 2010 to 10.4 in 2020 and 9.5 by 2035, in contrast to previous expectations of continued decline and increasing imports.¶

#### **Can’t solve until 2035**

Greene (Corporate fellow, Oak Ridge National Laboratory Senior Fellow) 7/24/12 (David “Committee: Senate Energy And Natural Resources” <http://www.utilityproducts.com/news/2012/07/24/use-of-natural-gas-as-a-transportation-fuel-nl-committee-senate-energy-and-natural-resources.html> )

Given present policies, the EIA projects that by 2035 natural gas use by transportation vehicles will quadruple to 0.16 quads. Natural gas use by electric utilities is expected to increase by 2.12 quads, use in buildings by 0.35 quads, and industrial use by 0.86 quads. From importing 2.68 quads of natural gas in 2010 the US is projected to become a net exporter of 1.36 quads by 2035. There are good reasons for the transportation sector's preference for liquid over gaseous fuels. The first is energy density: a gallon of liquefied natural gas contains about 65% of the energy of a gallon of gasoline and the energy density of compressed natural gas (CNG) is only 30% to 35% of that of gasoline, depending on the storage pressure (AFDC, 2012a). The second is the cost of storage on-board a vehicle. The EIA has estimated that storing the energy equivalent of a gallon of diesel fuel on board a heavy-duty vehicle costs $350 for CNG and $475 for LNG. These costs are an order of magnitude greater than the costs of storing diesel fuel or gasoline.¶ Natural gas can be converted to liquid fuels including diesel, gasoline and methanol. Depending on the process, 35% to 45% of the energy content is spent in the conversion process, much more than in traditional petroleum refining. Widespread use of methanol would require that vehicles either be adapted to flexibly accept methanol (at a cost on the order of $100 per vehicle) or designed specifically for dedicated methanol use. Methanol compatible flexibly fueled vehicles (FFV) would have only about half the range when running on methanol in comparison to gasoline, would require deployment of new refueling infrastructure, and would introduce new safety issues due to the different toxicity of methanol. Natural gas to drop-in fuels does not face these barriers. However, the EIA's 2012 Annual Energy Outlook Reference Case projection foresees no production of liquid fuels from natural gas through 2035 under current policies.¶

#### **Can’t solve warming – too long of a time frame**

Greene (Corporate fellow, Oak Ridge National Laboratory Senior Fellow) 7/24/12 (David “Committee: Senate Energy And Natural Resources” <http://www.utilityproducts.com/news/2012/07/24/use-of-natural-gas-as-a-transportation-fuel-nl-committee-senate-energy-and-natural-resources.html> )

There are reasons to proceed with caution, however, and to rely as much as possible on market-based decision-making. The technology of natural gas fueled internal combustion engines is relatively mature. Vehicles running on compressed or liquefied natural gas have been in the U.S. and other countries for decades and their pros and cons are relatively well understood. For both heavy and light duty vehicles, the benefits of switching to natural gas are lower energy costs in comparison to petroleum, approximately a 20% reduction in tailpipe greenhouse gas emissions and the substitution of a domestic, competitively priced energy resource for petroleum. The downsides are 1) increased vehicle cost mainly due to the greater cost of compressed gas storage tanks, 2) reduced range and therefore increased frequency of refueling and 3) diminished cargo space due to the lower energy density of compressed natural gas. CNG, LNG and methanol additionally face the "chicken or egg" problem of developing an adequate refueling infrastructure and producing a range of vehicle makes and models that can satisfy the needs and preferences of most motorists. Since 2002, the number of natural gas vehicles in operation has remained stable at just under 120,000, according to the latest data available from the EIA (Figure 5; Davis et al., 2011, table 6.1). CNG vehicles far outnumber LNG vehicles, largely due to the lack of LNG refueling infrastructure and the greater cost of on-board storage.¶ Existing studies indicate that a minimally acceptable refueling infrastructure for passenger cars and light trucks would require the equivalent of 10% to 20% of the over 150,000 gasoline stations in existence today. The EIA and DOE's alternative fuel data center report that there are about 1,000 natural gas refueling stations in the U.S. today of which only about half are open to the public (table 1). Although much remains to be learned about the value of fuel availability to consumers, there is little doubt that it is important, particularly for vehicles with limited range, and that the existing low level of fuel availability is an enormous barrier to market acceptance of natural gas vehicles.¶ It would probably not be worthwhile to deploy a full-scale natural gas refueling infrastructure. While shale gas provides an enormously important new resource for the U.S., it is not large enough to supply even a large fraction of transportation's energy use in addition to expanding traditional uses in other sectors. And although natural gas produces lower tailpipe GHG emissions than petroleum, those emissions are not low enough to meet the reductions that will be required in the future to protect the global climate. If a large-scale national natural gas infrastructure were deployed by, say, 2030 it would need to be substantially dismantled by 2050 to achieve overall reductions in GHG emissions on the order of 60% to 80%. On a well-to-wheel basis, future compressed natural gas vehicles are expected to generate 80% of the emissions of an advanced gasoline powered vehicle (Davis et al., 2012, figure 11.3). But such estimates are highly dependent on assumptions about upstream methane emissions. Alvarez et al. (2012) note the very large uncertainty about emissions from methane infrastructure, citing estimates ranging from 1% to 9% of gross production. According to their estimates, upstream emissions must be 1% or less for heavy-duty vehicles and 1.6% or less for light-duty vehicles if there are to be any GHG benefits from a switch to natural gas.

#### **Can’t solve – not cost competitive or environmentally better**

Economides and Lewis (Editor-in-Chief and one of Americas leading energy analysts) (VaasaEtt, CEO and Founder, a leading international specialist in energy and utility competition) 7/23/12 (Michael J. and Philip E. “Energy and Transportation” <http://fuelfix.com/blog/2012/07/23/energy-and-transportation/> )

Conversely, many have predicted that alternative and renewable fuels will face headwinds brought on by an abundance of natural gas. Last October, the share prices of a number of alternative fuels companies swooned to the drumbeat of multiple National Academy of Sciences findings(1) that renewable fuels are neither competitive with conventional fuels, nor are they necessarily environmentally superior.¶ However, it is true that increased oil and gas production and lower prices can boost unconventional options as well. Oil and gas are in fact major, probably dominant, cost components in the production of biofuels. Some have suggested that corn ethanol production is essentially a natural gas to ethanol conversion process, albeit a low efficiency one. Cheap conventional fuels support expensive, exotic fuels analogously to the way reliable, boring conventional power plants backstop the use of unpredictable and erratic wind generated power.

### AT: Oil Advantage

#### U.S oil dependency is inevitable

Doggett (Reuters reporter covering energy issues. Writer about the Obama Administrations U.S Energy Policy) 2011 (Tom “U.S Oil Dependency Drops Below 50 Percent, Energy Department Reports” <http://www.huffingtonpost.com/2011/05/25/us-oil-dependency-drops-energy-department_n_867131.html> )

WASHINGTON (Reuters/Tom Doggett) - U.S. dependence on imported oil fell below 50 percent in 2010 for the first time in more than a decade, thanks in part to the weak economy and more fuel efficient vehicles, the Energy Department said on Wednesday.¶ The department's Energy Information Administration said it expected the moderating trend in U.S. oil-import dependency to continue through the next decade due to improvements in energy efficiency and even higher fuel economy standards.¶ The new data could undercut efforts by Republican lawmakers to expand offshore oil drilling to reduce oil imports, and support the position of the Obama administration and environmental groups that higher mileage requirements for cars and trucks would help cut dependence on foreign oil.¶ Imports of crude and petroleum products accounted for 49.3 percent of U.S. oil demand last year, down from the recent high of 60.3 percent in 2005. It also marked the first time since 1997 that America's foreign oil addiction fell under the 50 percent threshold.¶ "This decline partly reflects the downturn in the underlying economy after the financial crisis of 2008," the EIA said in its weekly review of the oil market.¶ Increased domestic production of ethanol and other biofuels that are blended with gasoline and consumer purchases of more fuel efficient vehicles also slashed the need for oil imports, according to the EIA.¶ Crude oil production, especially in the deep waters of the Gulf of Mexico, increased by 334,000 barrels per day (bpd) between 2005 and 2010, which also cut into foreign oil purchases.¶ U.S. demand for gasoline, jet fuel, heating oil and other petroleum products that were processed from crude oil dropped by 1.7 million bpd to 19.1 million bpd in 2010 from 20.8 million bpd in 2005.¶ At the same time, U.S. exports of petroleum products more than doubled to a record 2.3 million bpd last year from 1.1 million bpd in 2005.¶ "Nowhere have U.S. product exports increased more than in the Americas, including Mexico, Canada, Central and South America and the Caribbean, thanks to economic and population growth and inadequate refining capacity in those countries," the EIA said.¶ As a result, U.S. net imports of refined petroleum products fell last year to their lowest level since 1973, when the government began collecting such data.

#### U.S Oil dependence inevitable – a global market ensures that

Bryce (Institute for Energy Research Fellow) 2008 (Robert “5 Myths About Breaking From Our Foreign Oil Habit” <http://www.washingtonpost.com/wp-dyn/content/article/2008/01/10/AR2008011002452.html> )

With oil prices still flirting with $100 a barrel, everyone is talking about the need for "energy independence." Late last year, President Bush signed the Energy Independence and Security Act of 2007; Sen. John McCain has declared, "We need energy independence"; and Sen. Barack Obama has called for "serious leadership to get us started down the path of energy independence."¶ This may all be good politics. But the idea that the United States, the world's single largest energy consumer, can be independent of the $5 trillion-per-year energy business -- the world's single biggest industry -- is ludicrous on its face. The push for energy independence is based on a series of false premises . Here are a few of the most pernicious ones.¶ 1 Energy independence will reduce or eliminate terrorism.¶ In a speech last year, former CIA director R. James Woolsey Jr. had some advice for American motorists: "The next time you pull into a gas station to fill your car with gas, bend down a little and take a glance in the side-door mirror. . . . What you will see is a contributor to terrorism against the United States." Woolsey is known as a conservative, but plenty of liberals have also eagerly adopted the mantra that America's foreign oil purchases are funding terrorism.¶ But the hype doesn't match reality. Remember, the two largest suppliers of crude to the U.S. market are Canada and Mexico -- neither exactly known as a belligerent terrorist haven.¶ Moreover, terrorism is an ancient tactic that predates the oil era. It does not depend on petrodollars. And even small amounts of money can underwrite spectacular plots; as the 9/11 Commission Report noted, "The 9/11 plotters eventually spent somewhere between $400,000 and $500,000 to plan and conduct their attack." G.I. Wilson, a retired Marine Corps colonel who has fought in Iraq and written extensively on terrorism and asymmetric warfare, calls the conflation of oil and terrorism a "contrivance." Support for terrorism "doesn't come from oil," he says. "It comes from drugs, crime, human trafficking and the weapons trade."¶ 2 A big push for alternative fuels will break our oil addiction.¶ The new energy bill requires that the country produce 36 billion gallons of biofuels per year by 2022. That sounds like a lot of fuel, but put it in perspective: The United States uses more than 320 billion gallons of oil per year, of which nearly 200 billion gallons are imported.¶ So biofuels alone cannot wean the United States off oil. Let's say the country converted all the soybeans grown by American farmers into biodiesel; that would provide only about 1.5 percent of total annual U.S. oil needs. And if the United States devoted its entire corn crop to producing ethanol, it would supply only about 6 percent of U.S. oil needs.¶ So what about cellulosic ethanol, the much-hyped biofuel that can be produced from grass, wood and other plant sources? Many in Congress believe that it will ride to the rescue. But the commercial viability of cellulosic ethanol is a bit like the tooth fairy: Many believe in it, but no one ever actually sees it. After all, even with heavy federal subsidies, it took 13 years before the corn-ethanol sector was able to produce 1 billion gallons of fuel per year. Two and a half decades elapsed before annual corn-ethanol production reached 5 billion gallons, as it did in 2006. But now Congress is demanding that the cellulosic-ethanol business magically produce many times that volume of fuel in just 15 years. It's not going to happen.¶ 3 Energy independence will let America choke off the flow of money to nasty countries.¶ Fans of energy independence argue that if the United States stops buying foreign energy, it will deny funds to petro-states such as Iran, Saudi Arabia and Hugo Ch¿vez's Venezuela. But the world marketplace doesn't work like that. Oil is a global commodity. Its price is set globally, not locally. Oil buyers are always seeking the lowest-cost supplier. So any Saudi crude being loaded at the Red Sea port of Yanbu that doesn't get purchased by a refinery in Corpus Christi or Houston will instead wind up in Singapore or Shanghai.4 Energy independence will mean reform in the Muslim world.¶ The most vocal proponent of this one is New York Times columnist Thomas L. Friedman, who argues that the United States should build "a wall of energy independence" around itself and thereby lower global oil prices: "Shrink the oil revenue and they will have to open up their economies and their schools and liberate their women so that their people can compete. It is that simple." When the petro-states are effectively bankrupt, Friedman argues, we'll see "political and economic reform from Algeria to Iran."¶ If only it were that easy. Between about 1986 and 2000, oil prices generally stayed below $20 per barrel; by the end of 1998, they were as low as $11 per barrel. As Alan Reynolds pointed out in May 2005 in the conservative National Review Online, this prolonged period of "cheap oil did nothing to promote economic or political liberty in Algeria, Iran, or anywhere else. This theory has been tested -- and it failed completely."¶ 5 Energy independence will mean a more secure U.S. energy supply.¶ To see why this is a myth, think back to 2005. After hurricanes ravaged the Gulf Coast, chewing up refineries as they went, several cities in the southeastern United States were hit with gasoline shortages. Thankfully, they were short-lived. The reason? Imported gasoline, from refineries in Venezuela, the Netherlands and elsewhere. Throughout the first nine months of 2005, the United States imported about 1 million barrels of gasoline per day. By mid-October 2005, just six weeks after Hurricane Katrina, those imports soared to 1.5 million barrels per day.¶ So we're woven in with the rest of the world -- and going to stay that way. Today, in addition to gasoline imports, the United States is buying crude oil from Angola, jet fuel from South Korea, natural gas from Trinidad, coal from Colombia and uranium from Australia. Those imports show that the global energy market is just that: global. Anyone who argues that the United States will be more secure by going it alone on energy hasn't done the homework.

#### **No Brink to Oil Peaks**

#### No brink to peak oil. Studies prove

MacDonald (Researcher and investigator in energy. Focuses on global fossil fuel supply) 2010 (Gregor “Here’s Why Peak Demand For Oil Is Still Very Far Away” <http://articles.businessinsider.com/2010-03-11/markets/30042503_1_btu-oil-products-heating-oil> )

EIA Washington produces a ton of energy data that’s very current and detailed on global energy production. But what’s harder to come by is Non-OECD oil and oil product consumption. As the calendar turns to March, alot of the annual data starts to complete for the prior years, and I found my way deep into some EIA caverns tonight, and drew up the following chart:¶ The chart shows total oil product use for Brazil, India, and California in quadrillion BTU. Oil products are best measured in BTU–not barrels–as it strips out the vagaries of different products like Jet Fuel, Gasoline, Diesel, and Heating Oil. Also, BTU can be a better way to compare countries that import barrels, with states that generally import oil products. Here, I wanted to compare California with fast growing Brazil and India over a twenty year period. The trajectories are fairly unsurprising. Fuel efficiency standards have helped to keep California consumption relatively in check, in its path from 3.543 quadrillion BTU in 1988 to 2007’s 3.946 quadrillion BTU.¶ With regards to Brazil and India, a friend chatting to me from China tonight remarked that Brazil’s consumption growth might have been somewhat restrained by its ethanol program. If that’s true, it’s intriguing to conjecture what Brazil’s demand would look like without ethanol’s roughly 17% contribution to total Brazilian liquid fuel use. And in regards to India, one can’t help but note the big spike from 2004 -2007 as demand moved from 4.950 to 5.869 quadrillion BTU and not recall India’s push to complete their Quadrilateral Highway.¶ An ongoing project of mine relates to per capita consumption of energy in the developing world–yet another difficult area where data can be hard to secure on a current basis. There are a number of issues at play on that topic. Not least of which is the very different marginal utility of liquid energy in the developing world, compared to the developed world. As I look at today’s chart, however, I am struck by something simpler: the differences in population. India’s population is 1.139 billion, and Brazil’s 191.9 million. California is lilliputian by comparison, at 36 million. But it’s oil consumption is not. This only confirms my view that we (continue to) underestimate the demand reduction for oil that’s inevitable in the developed world, and the awesome potential for further demand increases in the developing world

#### Peak oil not coming for at least a decade – statistics prove

Perry (Professor of economics and finance in the School of Management at the Flint campus of the University of Michigan. Perry holds two graduate degrees in economics (M.A. and Ph.D.) from George Mason University in Washington, D.C. In addition, he holds an MBA degree in finance from the Curtis L. Carlson School of Management at the University of Minnesota. Since 1997, Professor Perry has been a member of the Board of Scholars for the Mackinac Center for Public Policy, a nonpartisan research and public policy institute in Michigan.) 6//26/12 (Mark “No Peak Oil In Sight: We’ve Got An Unprecedented Upsurge In Global Oil Production Underway” <http://www.dailymarkets.com/economy/2012/06/26/no-peak-oil-in-sight-weve-got-an-unprecedented-upsurge-in-global-oil-production-underway/> )

In the tradition of resource economist Julian Simon, here are some of the conclusions and predictions from new research just published by Harvard Research Fellow Leonardo Maugeri, titled “Oil: The Next Revolution; The Unprecedented Upsurge of Oil Production Capacity”"¶ 1. Contrary to what most people believe, oil is not in short supply and oil supply capacity is growing worldwide at such an unprecedented level that it might outpace consumption. From a purely physical point of view, there are huge volumes of conventional and unconventional oils still to be developed, with no “peak-oil” in sight. The full deployment of the world’s oil potential depends only on price, technology, and political factors. More than 80 percent of the additional production under development globally appears to be profitable with a price of oil higher than $70 per barrel.¶ 2. The shale/tight oil boom in the United States is not a temporary bubble, but the most important revolution in the oil sector in decades. It will probably trigger worldwide emulation, although the U.S. boom is difficult to be replicated given the unique features of the U.S. oil (and gas) arena. Whatever the timing, emulation over the next decades might bear surprising results, given the fact that most shale/tight oil resources in the world are still unknown and untapped. China appears to be the first country to follow the U.S. example. Moreover, the extension of horizontal drilling and hydraulic fracturing combined to conventional oil fields might dramatically increase world’s oil production and revive mature, declining oilfields.¶ 3. In the aggregate, conventional oil production is also growing throughout the world, although some areas (e.g. the North Sea), face an apparently irreversible decline of the production capacity. In most traditional producing countries, old oilfields go through a production revival thanks to better techniques and knowledge, or advanced exploration and production technologies, so far used only in the U.S. and in the North Sea. Huge parts of the world are still relatively unexplored for conventional oil (for example, the Arctic Sea or most of sub-Saharan Africa).¶ 4. Over the next decades, the growing role of unconventional oils will make the Western hemisphere the new center of gravity of oil exploration and production.¶ 5. Based on original, bottom-up, field-by-field analysis of most oil exploration and development projects in the world, this paper suggests that an unrestricted, additional production of more than 49 million barrels per day (mbd) of oil is targeted for 2020, the equivalent of more than half the current world production capacity of 93 mbd.¶ 6. After adjusting this substantial figure considering the risk factors affecting the actual accomplishment of the projects on a country-by-country basis, the additional production that could come by 2020 is about 29 mbd. Factoring in depletion rates of currently producing oilfields and their “reserve growth,” the net additional production capacity by 2020 could be 17.6 mbd, yielding a world oil production capacity of 110.6 mbd by that date – as shown in Figure 1 above. This would represent the most significant increase in any decade since the 1980s.

#### No brink to peak oil

Davies (Principal of Melbourne-based economic and planning consultancy) 7/24/12 (Alan “Is peak oil a non-event?” <http://blogs.crikey.com.au/theurbanist/2012/07/24/is-peak-oil-a-non-event/>)

Ken Parish at Club Troppo draws attention to a new report that confounds the conventional wisdom on peak oil and, if correct, has important implications for cities.¶ It’s published by Harvard University’s Belfer Centre for Science and International Affairs. It concludes that oil supply capacity is growing worldwide at such an unprecedented level, it might outpace consumption, potentially leading to a glut of overproduction and a steep dip in oil prices.¶ Oil is not in short supply. From a purely physical point of view, there are huge volumes of conventional and unconventional oils still to be developed, with no “peak-oil” in sight. The real problems concerning future oil production are above the surface, not beneath it, and relate to political decisions and geopolitical instability.¶ It’s estimated known projects could theoretically produce an additional 49 mbd by 2020, equivalent to about half existing world capacity. Taking into account various risk factors and depletion rates of existing fields, this could increase capacity by a net 17.6 mbd. If so, it would constitute the largest increase in any decade since the 1980s.¶ A key assumption underlying the analysis is oil remains above $70 a barrel out to 2020. Oil prices plunged this year but are still well above this level. Crude oil for September delivery is now $88.14 a barrel and Brent oil is $103.30.¶ The author of the report, former oil industry executive Leonardo Maugheri, told Reuters production capacity is expected to grow the most in Iraq, the United States, Canada, Brazil and Venezuela. It could decline in Norway, the United Kingdom, Mexico and Iran. He said much of the surge in U.S. capacity is due to the boom in shale oil.¶ It might be tempting to imagine this is some sort of dastardly con perpetrated by vested interests. But Guardian columnist and environmental activist George Monbiot has read the report and concludes – regretfully – that it provides compelling evidence a new oil boom has begun.¶ Peak oil hasn’t happened, and it’s unlikely to happen for a very long time.…The constraints on oil supply over the past 10 years appear to have had more to do with money than geology. The low prices before 2003 had discouraged investors from developing difficult fields. The high prices of the past few years have changed that….There is enough oil in the ground to deep-fry the lot of us, and no obvious means to prevail upon governments and industry to leave it in the ground.¶ The idea the peak oil might recede shouldn’t be a surprise. Higher prices encourage consumers to reduce demand and switch to substitutes like renewables and shale oil. They also encourage further exploration and make previously marginal reserves viable.¶ The era of really “cheap oil” that prevailed in the post-war period up to around 2000 is probably behind us, according to the report. But “it is still uncertain what the future level of oil prices might be. Technology may turn today’s expensive oil into tomorrow’s cheap oil.”¶ The reason George Monbiot is regretful is lower-than-feared oil supply could mean we’ll continue our profligate ways and set back progress on addressing climate change. As Ken Parish says, we can no longer expect that peak oil will “soon intervene and compel drastic reductions in human CO2 emissions through huge price increases driven by increasing resource shortage.”¶ That possibility is troubling given this new research by James Hansen and colleagues. It warns of the emergence of extreme weather events with temperatures more than three standard deviations above historical norms.¶ So far as cities are concerned, transport is a key area where peak oil is expected by many to have a dramatic effect, especially on petrol/diesel availability and fuel prices. I’ve long taken the view that, like it or not, cars will be with us for a long time yet.¶ If the report is right (and it has its critics), it reinforces that probability. The price of petrol might very well rise further in real terms but it now appears it probably won’t go permanently stratospheric. In the absence of an exogenous driver like peak oil, reducing transport-related emissions will require deliberate policy intervention.¶ But the report might not be right. Apart from what the critics say, there’s a range of factors acknowledged in the report that could complicate and undermine the projections. I’ve put a list of key points taken from the report under the fold:¶ Oil is not in short supply. From a purely physical point of view, there are huge volumes of conventional and unconventional oils still to be developed, with no “peak-oil” in sight. The real problems concerning future oil production are above the surface, not beneath it, and relate to political decisions and geopolitical instability.¶ Other things equal, any significant setback to additional production in Iraq, the United States, and Canada would have a strong impact on the global oil market, considering the contribution of these countries to the future growth of oil supply.¶ The shale/tight oil boom in the United States is not a temporary bubble, but the most important revolution in the oil sector in decades. It will probably trigger worldwide emulation over the next decades that might bear surprising results – given the fact that most shale/tight oil resources in the world are still unknown and untapped. What’s more, the application of shale extraction key-technologies (horizontal drilling and hydraulic fracturing) to conventional oilfield could dramatically increase world’s oil production.¶ In the aggregate, conventional oil production is also growing throughout the world at an unexpected rate, although some areas of the world (Canada, the United States, the North Sea) are witnessing an apparently irreversible decline of the conventional production.¶ The age of “cheap oil is probably behind us, but it is still uncertain what the future level of oil prices might be. Technology may turn today’s expensive oil into tomorrow’s cheap oil.¶ The oil market will remain highly volatile until 2015 and prone to extreme movements in opposite directions, thus representing a major challenge for investors, in spite of its short and long term opportunities. After 2015, however, most of the projects considered in this paper will advance significantly and contribute to a strong build-up of the world’s production capacity. This could provoke a major phenomenon of overproduction and lead to a significant, stable dip of oil prices, unless oil demand were to grow at a sustained yearly rate of at least 1.6 percent for the entire decade.¶ A revolution in environmental and emission-curbing technologies is required to sustain the development of most unconventional oils – along with strong enforcement of existing rules. Without such a revolution, a continuous clash between the industry and environmental groups will force the governments to delay or constrain the development of new projects.¶ Some of the major geopolitical consequences of the oil revolution include Asia becoming the reference market for the bulk of the Middle East oil, and China becoming a new protagonist in the political affairs of the whole region.¶ At the same time, the Western Hemisphere could return to a pre-World War II status of theoretical oil self-sufficiency, and the United States could dramatically reduce its oil import needs.¶ However, quasi oil self-sufficiency will neither insulate the United States from the rest of the global oil market (and world oil prices), nor diminish the critical importance of the Middle East to its foreign policy. At the same time, countries such as Canada, Venezuela and Brazil may decide to export their oil and gas production to markets other than the U.S. for purely commercial reasons, making the notion of Western Hemisphere self-sufficiency irrelevant.¶ It’s also true, however, that over the next decades, the growing role of unconventional oils will make the Western hemisphere the new center of gravity of oil exploration and production.

#### **Oil dependency is key to Middle East Stability. Even if there is a shift to alternative resources in the SQ, it will cost billions – raising gas prices solves. Their evidence doesn’t assume this**

Bryce (Institute for Energy Research Fellow) 2011 (Robert “This Is No Time to Discourage U.S Oil and Gas Production” <http://online.wsj.com/article/SB10001424052748704900004576152431935573812.html> )

¶ Of all the times for the U.S. to be discouraging domestic production of oil and natural gas, right now might be the worst. Libya's descent into chaos is fueling a rapid rise in oil prices, and unrest in other oil-producing countries in the Middle East and North Africa has led some analysts to predict unprecedented oil-price spikes may be looming.¶ ¶ Nevertheless, President Barack Obama's administration has not only stopped issuing permits for deep water drilling in the Gulf of Mexico, it also wants to stop "subsidizing yesterday's energy" so that the federal government can boost revenues and spend more on developing alternative energy sources. The president's 2012 budget, released earlier this month, calls for eliminating a dozen tax incentives that benefit producers of coal, oil and natural gas. Mr. Obama is most eager to eliminate what he calls "costly tax cuts for oil companies."¶ ¶ Big Oil has long been a plump piñata for politicos and environmental groups, but a simple cost-benefit analysis shows that eliminating decades-old tax rules for oil and gas could be a lousy deal for consumers.¶ ¶ Two tax deductions for the oil and gas sector are most important: percentage depletion (part of the tax code since 1926) and intangible drilling costs (part of the tax code since 1913.) According to Mr. Obama's budget, those two items will cost taxpayers about $2.4 billion per year over the next decade. A handful of other oil- and gas-related tax policies, including an increase in the amortization period for geological and geophysical expenses, cost taxpayers an additional $2 billion per year. So the sector's total annual tax advantages amount to about $4.4 billion.¶ ¶ Percentage depletion allows well owners to deduct a certain amount of the value of their production in a given year. It's significant, but the really important tax rule is the deduction for intangible drilling costs, or IDC. That allows drillers to immediately expense, rather than capitalize over years, many of the costs associated with drilling a well, including labor, supplies and fuel.¶ ¶ The energy industry contends that the deduction encourages capital formation—and greater production—in their high-risk business. And many economists have long favored expensing to encourage capital formation throughout the economy. Still, even if we assume that the IDC deduction is in fact a subsidy, are consumers getting a tangible benefit?¶ ¶ Consider natural gas. Thanks to the increasing use of horizontal drilling and hydraulic fracturing, U.S. gas production has soared over the past few years. The result: Methane prices are now about half what they were in 2008.¶ A simple cost-benefit analysis shows that eliminating decades-old tax rules for oil and gas could be a lousy deal for consumers.¶ ¶ Various studies—including one done in 2009 by Tudor, Pickering, Holt & Co., a Houston-based, energy-focused investment bank—predict that eliminating the deduction for intangible drilling costs could increase natural gas prices by 50 cents per thousand cubic feet. Their reasoning is simple: As the industry sees its costs increased and cash flow reduced, it will drill fewer wells and recover less gas. Given that the U.S. burns about 23 trillion cubic feet of gas per year, simple arithmetic shows that eliminating the deduction could mean an increased cost to consumers of $11.5 billion per year in the form of higher natural gas prices.¶ ¶ Changing the tax rules could also slow the surprising resurgence of the U.S. oil industry. After decades of declining production, domestic drillers are increasing their oil output because they are tapping shale deposits with the same new techniques that have helped increase gas production. The result: Domestic oil output could jump by as much as one million barrels per day by 2015, according to the analytics firm Bentek Energy.¶ ¶ This is great news for tax-starved local and state governments. And it's directly in line with one of the stated goals of Mr. Obama's 2012 budget: to "enhance our national security by reducing dependence on foreign oil."¶ ¶ The president also wants to "break our dependence on oil with biofuels," as he said in his State of the Union address. But using biofuels to displace oil requires massive subsidies.¶ ¶ Last year, the Congressional Budget Office (CBO) reported that the cost to taxpayers of using corn ethanol to reduce gas consumption by one gallon is $1.78. This year, the corn ethanol sector will produce about 13.8 billion gallons of ethanol, the energy equivalent of about 9.1 billion gallons of gasoline. Using the CBO's numbers, that means the total cost to taxpayers this year for the ethanol boondoggle will be about $16.2 billion. That's compared to the $4.4 billion in foregone tax revenue for oil and gas tax rules.¶ ¶ So annual ethanol subsidies are nearly four times as great as those provided for oil and gas, even though domestic drilling provides about 36 times as much energy to the U.S. economy. Per unit of energy produced, the tax preferences given to corn ethanol are 130 times as great as those given to oil and gas.¶ ¶ If the president is truly serious about raising revenue, then he should eliminate all energy-related tax preferences and let all sources compete—fair field, no favor. Short of that, he should at least subject ethanol to the same treatment he's giving to oil and gas.

#### Oil dependency good for a laundry list of reasons – sustains US heg, de-escalates conflict in the middle east, sustains the economy, and paves the way to start renewable energy projects.

Bryce (Institute for Energy Research Fellow) 2007 (Robert “The Politics of Cheap Oil” <http://www.petroleumworld.com/SF07012801.htm> )

Oil prices may be falling, but hold off the cheering. Yes, cheaper oil leads to cheaper gasoline, and that's good for America. At least, that's the common wisdom, particularly among the neoconservatives. But there is plenty of downside to cheaper oil and those deleterious effects rarely get discussed.¶ First, a quick review. Oil prices recently fell below $50 per barrel, a drop of about 30 percent since crude hit $77 last July. And this price drop may persist. The Bahrain Tribune reported on January 22 that Iran and Kuwait are now planning their budgets based on $40 crude. Adding momentum to the price drop is the apparent inability of OPEC members to follow through on sustained production cuts. Cheating on production quotas has long been a problem in OPEC and that cheating, it appears, continues.¶ All this should be the best of news for the neoconservatives, who love to claim that the simplest way to undercut the growing power of petrocrats like Iran's Mahmoud Ahmadinejad and Venezuela's Hugo Chávez is to drastically reduce the price of oil. The reasoning goes like this: these rulers depend on oil revenues to fund their regimes. If that revenue declines, so, too, will their power. This concept has become the mantra of pro-Iraq war boosters like former CIA director James Woolsey, columnists like the New York Times' Thomas Friedman, super-hawk Frank Gaffney, and groups like the Set America Free coalition, which insists that America must quit buying "foreign oil."¶ These pundits insist that foreign oil -­ including presumably, the crude that comes from such notoriously belligerent terrorist havens like Canada and Mexico, which are, respectively, the first- and second-largest suppliers of crude to the U.S. market ­ poses a threat to American security. And therefore, the only solution is for the U.S. to be "energy independent." There is, alas, bipartisan idiocy on this front. Democratic presidential hopeful Hillary Clinton promoted energy independence in her speech announcing her bid for the White House. The new Speaker of the House, Nancy Pelosi, declared last week that she will deliver a slate of legislation by July 4, for "declaring energy independence." Barack Obama has made similar statements.¶ Let's leave aside the fundamental, undeniable truth that America will never be energy independent. Instead, let's focus on the many reasons why a sustained period of $30 or $40 oil will hurt America's long-term interests.¶ Lower prices would further damage Iraq's economy. Amid the torrent of bad news in Iraq, higher oil prices have been among the few positive news developments, allowing the country to amass sizable funds for the rebuilding effort. Iraq's oil output has plummeted since Bush and the neocons rushed to invade the country in March 2003. But that falling output has been offset, at least partially, by higher prices. And given that Iraq will ­ for good or ill ­ be America's colonial possession in the Persian Gulf for the foreseeable future, higher oil prices are far better than lower prices.¶ Cheaper oil will mean higher consumption in developing countries like China and India. The Chinese government has repeatedly increased the price of gasoline in an effort to slow that country's insatiable thirst for oil. Cheaper crude would reduce China's oil import bills and thereby allow greater consumption with little cost. If they Chinese decide to allow the yuan to float against the dollar, then their oil becomes even cheaper. And that would allow the Chinese economy to grow even faster ­ growth that will further fuel China's rise as a global power.¶ A long period of cheap petroleum could result in instability in key countries in the Middle East. This runs directly counter to the neocon gospel. If the U.S. could, magically, be energy independent, Friedman and his fellow travelers claim that global crude prices will collapse. That will mean, according to Friedman, that the rulers of repressive oil-rich countries would be forced to "open up their economies and their schools and liberate their women." He might be right. Or he could be disastrously wrong. And if that instability does occur, A.F. Alhajji, an energy economist and professor of economics at Ohio Northern University, says "the West cannot turn a blind eye to such conflicts." Indeed, the U.S. could not stay on the sidelines if a key ally like Saudi Arabia or Kuwait were to get embroiled in a nasty internal conflict due to an economic crisis caused by low prices.¶ Just to drive that point home, Gaffney and Woolsey and their ilk love to bash the Saudis. Would they be happier, if, thanks to their push for energy independence and cheap oil, Saudi Arabia's king, Abdullah, who is a moderate and a staunch ally of the U.S., were to be deposed and replaced by a group of Wahhabi clerics who hate the U.S. as well as everything modern?¶ Cheap crude would short-circuit the push for greater automotive fuel efficiency. American motorists ­ who've become accustomed to $3 per-gallon gasoline ­ have, of late, been buying more fuel-efficient vehicles. If crude (and therefore, gasoline) prices continue to fall, they will happily return to their Hummers, big pickups, and SUVs. And that will, once again, set up a scenario that will allow foreign automakers like Toyota, Nissan and Honda to capture even larger shares of the auto industry when gasoline prices rise again, and they will.¶ Cheap crude will short-circuit the push for renewable energy. We've seen this before. The surge in oil prices that occurred after the 1973 oil embargo didn't last. As prices softened, so, too, did the interest in solar power, wind power and other technologies. The best hope for the renewable energy sector is a sustained period of high prices for fossil fuels of all types, from coal to natural gas.¶ Low-cost oil would increase emissions of greenhouse gases. One can argue all day about what's causing global warming. But if policymakers want to embrace Kyoto or other anti-warming initiatives, cheap oil is the last thing they should want.¶ A collapse in oil prices would mean a collapse in America's domestic oil production. We've seen this movie before, too. In the early 1980s, Dallas and Houston were in a frenzy fueled by high-priced oil and a river of cheap money provided by crooked savings and loan operators. Everyone was convinced that high prices were here to stay. That illusion ended with the oil price crash of 1986 , which, by the way, was largely precipitated by unrestricted production from Saudi Arabia. The crash resulted in bankruptcies from Midland to Tulsa. Idle drilling rigs were cut up and sold for scrap. Skilled oilfield workers left the industry for good.¶ Cheap oil increases America's reliance on foreign oil. Back in 1985, when America's domestic oil production was on the upswing, OPEC countries supplied 41 percent of America's imported oil. By 1990, with domestic production decimated, OPEC's share had climbed to 60 percent. If a stint of low crude prices persists, the U.S. domestic oil industry will, once again, fall on hard times. That will mean foreign producers, who generally have lower production costs, will be able to gain market share at the expense of domestic producers.¶ Given these many facts, perhaps Clinton, Obama, Pelosi, Woolsey, Friedman, et al. can explain how cheap oil, and the potential collapse of the domestic oil and gas industry will help America be energy independent.¶ The punchline here is obvious: Be careful what you wish for. Cheap oil could hurt America just as much as expensive oil. In fact, it might hurt more.

### Adv CP - Oil

#### US oil reserves solve oil dependency. Solves all of case and politics

Bryce (Institute for Energy Research Fellow) 4/25/12 (Robert “Obamas Oil Blindness” <http://www.robertbryce.com/component/content/article/1-docs/442-obamas-oil-blindness-3.html> )

Rising gasoline prices are hurting President Obama’s re-election campaign, and like most politicians grappling with a complicated, unpopular issue the president has opted to torture some numbers in his quest for a snappy talking point. Last week during a press conference in the Rose Garden at which he called for more policing of oil-trading markets, the president said “we use more than 20 percent of the world’s oil and we only have 2 percent of the world’s oil reserves.”¶ That’s almost identical to a statement he made last month, when he said that no matter how much drilling is done here, domestic reserves won’t “get much above 3 percent. So we're still going to have this huge shortfall.”¶ Obama has the numbers right. But he’s wrong about what those percentages mean, and his wrongness reflects a fundamental misunderstanding of the oil and gas industry.¶ In 2010, America’s proved oil reservesstood at 31 billion barrels, just slightly below the 33.8 billion barrels of proved reserves the United States had in 1990. But over that two-decade period, the domestic oil sector produced about 52 billion barrels of oil. In other words, between 1990 and 2010, the United States produced nearly twice as much oil as we believed the whole country had in 1990, and yet at the end of that period, we still had about the same amount in proven reserves. What’s going on? In a word: innovation. And few industries on the planet have been as innovative as the American oil and gas sector.While it’s true that America’s share of total global oil reserves is just 2.2 percent, the United States produces about 9 percent of the world’s oil, making us the world’s third-biggest oil producer, behind only Russia and Saudi Arabia. How can we have relatively little reserves on paper, yet continue to produce so much oil? The answer is both simple and somewhat confounding: The more oil we find, the more oil we find.¶ It’s not the size of your reserves that counts, it’s what you do with them. And the U.S. oil and gas sector has been remarkably proficient at exploiting this country’s vast mineral wealth. Over the past century or so, oil and gas drilling has gone from a business dominated by wildcatters armed mainly with a hunch and a prayer to one where the latest seismic and “geosteering” technologies allow drillers to steer their bits so accurately that they can arrive within inches of their target zone two miles (or more) beneath the Earth’s surface.¶ Add in ongoing improvements in horizontal drilling—and yes, in hydraulic fracturing, the bugaboo of many environmental groups—and the changes are easily seen. For instance, over the last five years, Southwestern Energy, a Houston-based company drilling in the Fayetteville Shale in Arkansas, has halved the number of days it takes to drill an average well while nearly tripling the amount of gas it gets during the initial phase of production. Southwestern has done it by tweaking the fracturing process while more than doubling the length of the horizontal segments, so that more of the well is in contact with the source rock.¶ These improvements are allowing drillers to extract enormous amounts of both oil and gas from rock formations (like shale) that only a few years ago were thought to be uneconomic. The result: Drillers are unlocking vast quantities of hydrocarbons and in doing so, they are adding lots of new reserves. As one veteran driller told me recently, companies are having to deal with what he calls “crappy rock.” But he quickly added the good news: “there’s a whole lot” of crappy rock that contains oil and gas.¶ As a result, we see the same kind of numbers when it comes to domestic production of natural gas, the cleanest of the hydrocarbons. The United States sits atop only 4.1 percent of the world’s natural gas reserves. But the United States is, by a wide margin, the world’s biggest gas producer. In 2011, the nation produced a record quantity of the fuel, some 23 trillion cubic feet, or about 20 percent of the world total. Compare that performance with Iran, a country that sits atop 16 percent of the world’s known gas reserves (only Russia’s reserves are larger) and yet produces just 4 percent of the world’s natural gas. In fact, as recently as 2009, Iran was a net natural gas importer.¶ Obama has repeatedly made the claim that “clean” energy is the way of the future. But the president dares not admit the obvious: Over the past few years, the oil and gas sector has out-innovated the political darlings of the moment: solar and wind energy. Four years ago this month, natural gas prices were over $10. Today, the price is about $2. Despite all of the hype—and billions of dollars in subsidies doled out to solar and wind energy projects over the past few years—the clear reality is that horizontal drilling and hydraulic fracturing and the incremental production gains that have resulted from them, have resulted in a tidal wave of new natural-gas production that is pricing wind and solar energy out of the market.¶ Boone Pickens, once of the wind sector’s biggest boosters, says wind projects need $6 natural gas to be competitive. Pickens also recently said “I’ve lost my ass” in the wind business.¶ If anyone doubts how the shale revolution has changed the domestic oil and gas sector, they need only visit Midland, Texas, a town that is in the midst of an unprecedented boom. New construction is visible all around the city. Truck traffic is constant. And much of that construction and traffic is to support surging oil and gas production from geologic zones like the Sprayberry and Wolfcamp that were thought to be uneconomic just a few years ago.¶ Arlen Edgar, who’s been in the drilling business in Midland since 1973, says the previous boom back in the 1980s “was crazy, but this is crazier.” About 500 drilling rigs are now working in the Permian Basin near Midland, and that is creating lots of new jobs as well as a surge in production. In January, oil production in Texas was 1.6 million barrels per day, the highest levelsince 1994. Overall U.S. oil production is also climbing rapidly. Indeed, the shale revolution has so fundamentally changed the global energy equation that last month, analysts at Citigroup led by Ed Morse predicted that U.S. oil production could exceed that of Russia and Saudi Arabia within the next three years or so.

#### CP solves the economy

Bush (Advisor at American Petroleum Institute) 7/26/12 (Bill “Energy and jobs act could reduce unemployment and help faltering economy” <http://www.api.org/news-and-media/news/newsitems/2012/jul-2012/energy-and-jobs-act-could-reduce-unemployment-help-faltering-economy.aspx> )

WASHINGTON, July 26, 2012 – API President and CEO Jack Gerard said that legislation introduced in the Senate today, the Domestic Energy and Jobs Act, could help move America’s economy in the right direction and strengthen our nation’s energy security: ¶ “Every policymaker says they want to create jobs. This legislation provides a clear opportunity to do so. It would approve the Keystone XL pipeline, putting tens of thousands of Americans to work almost immediately. It also would expand access, expedite permitting and require a cumulative analysis of certain EPA rules and regulations. ¶ “Since the recession began, the U.S. oil and natural gas industry has created more than 86,000 new jobs while the economy as a whole has lost five million. The sponsors of this legislation know there’s vast potential for America’s oil and natural gas industry to put even more people to work, boost domestic production, and generate millions of dollars in new revenue for the government.” ¶ API represents more than 500 oil and natural gas companies, leaders of a technology-driven industry that supplies most of America’s energy, supports 9.2 million U.S. jobs and 7.7 percent of the U.S. economy, delivers $86 million a day in revenue to our government, and, since 2000, has invested over $2 trillion in U.S. capital projects to advance all forms of energy, including alternatives.

### Adv CP – Corn-based Ethanol

CP Text: The United States federal government should invest in corn-based ethanol fuel stations

#### CP solves – corn-based ethanol fuels are abundant

Runge and Senauer 2007 (Distinguished McKnight University Professor of Applied Economics and Law and Director of the Center for International Food and Agriculture Policy at the University of Minnesota) (Professor of Applied Economics and Co-director of the Food Industry Center at the University of Minnesota) (C. Ford and Benjamin “How Biofuels Could Starve the Poor” [http://www.foreignaffairs.com/articles/62609/c-ford-runge-and-benjamin-senauer/how-biofuels-could-starve-the-poor#](http://www.foreignaffairs.com/articles/62609/c-ford-runge-and-benjamin-senauer/how-biofuels-could-starve-the-poor) )

In 1974, as the United States was reeling from the oil embargo imposed by the Organization of Petroleum Exporting Countries, Congress took the first of many legislative steps to promote ethanol made from corn as an alternative fuel. On April 18, 1977, amid mounting calls for energy independence, President Jimmy Carter donned his cardigan sweater and appeared on television to tell Americans that balancing energy demands with available domestic resources would be an effort the "moral equivalent of war." The gradual phaseout of lead in the 1970s and 1980s provided an additional boost to the fledgling ethanol industry. (Lead, a toxic substance, is a performance enhancer when added to gasoline, and it was partly replaced by ethanol.) A series of tax breaks and subsidies also helped. In spite of these measures, with each passing year the United States became more dependent on imported petroleum, and ethanol remained marginal at best.¶ Now, thanks to a combination of high oil prices and even more generous government subsidies, corn-based ethanol has become the rage. There were 110 ethanol refineries in operation in the United States at the end of 2006, according to the Renewable Fuels Association. Many were being expanded, and another 73 were under construction. When these projects are completed, by the end of 2008, the United States' ethanol production capacity will reach an estimated 11.4 billion gallons per year. In his latest State of the Union address, President George W. Bush called on the country to produce 35 billion gallons of renewable fuel a year by 2017, nearly five times the level currently mandated.¶ The push for ethanol and other biofuels has spawned an industry that depends on billions of dollars of taxpayer subsidies, and not only in the United States. In 2005, global ethanol production was 9.66 billion gallons, of which Brazil produced 45.2 percent (from sugar cane) and the United States 44.5 percent (from corn). Global production of biodiesel (most of it in Europe), made from oilseeds, was almost one billion gallons...

#### Corn-based ethanol solves warming and politics

Smith (founder and coordinator of International Consumers for Civil Society, Adjunct Fellow with the Competitive Enterprise Institute where she focuses on trade and international issues affecting consumers) 2007 (Francis B. “Corn-Based Ethanol A Case Study in the Law of Unintended Consequences” <http://cei.org/pdf/5976.pdf> )

A boom in ethanol production is taking place today for variety of reasons. Undoubtedly, the most signiﬁ cant ¶ factor is government support and subsidies for biofuel production. The rationale for subsiding biofuels arises ¶ from a convergence of security, environmental, and nationalistic concerns, which has led policy makers to ¶ endorse stiffer mandates and increased subsidies. ¶ While fuels produced from crops such as corn have been mandated and subsidized for decades, politicians ¶ are expressing new urgency for energy independence in the face of high and volatile oil prices and political ¶ instability in oil-producing regions. Fears about rapid catastrophic global warming caused by carbon dioxide ¶ emissions from fossil fuels have helped build support for the development of alternative energy sources—¶ particularly biofuels.¶ With tax incentives, grants, and loans for biofuel development and mandates for greatly expanded biofuel ¶ use, farmers are rapidly shifting to corn production for ethanol to feed the expanded, government-driven demand ¶ for corn as an ethanol feedstock. ¶ However, this demand has already created unforeseen problems—which are likely to be exacerbated by ¶ new energy proposals to dramatically increase biofuel use mandates and production subsidies. Experts predict an ¶ increase in soil erosion, increased use of fertilizers leading to greater runoff, decrease in water quality, and more ¶ fuel used in the transportation of ethanol.¶ As with environmental consequences, the unintended economic consequences of U.S. ethanol policy are ¶ far-reaching. With new government subsidies and mandates for ethanol, corn producers are increasingly turning ¶ to ethanol production, leading to the price of corn skyrocketing. Since corn goes into so many foods—from ¶ livestock feed to cereals—high prices for corn translate into higher costs for manufacturing a wide array of ¶ foods. Those costs are passed on to consumers in the form of higher prices, with the poor suffering the most, ¶ since they pay a larger proportion of their incomes on food. ¶ The ethanol bubble may not be about to burst yet—government support is likely to keep it going for a ¶ while. But there are already some strong signals of discontent among other interest groups affected by the high ¶ costs of corn.

### Alt Fuel Bad – Nuclear Power

Note: get them to say that the plan will implement things like nuclear power 🡪 then you can access nuclear power bad, and possibly turn this into a counter plan i.e solar, wind, geothermal power, etc. are all better options than nuclear power

CP Text: The United States federal government should not invest in nuclear energy refueling stations

#### CP solves – nuclear fuel not necessary – Japan proves

Naidoo (Greenpeace’s International Executive Director) 2011 (Kumi “Nuclear Energy Isn’t Needed” <http://www.nytimes.com/2011/03/23/opinion/23iht-ednaidoo23.html> )

Twelve days are not nearly enough to comprehend the magnitude of the catastrophes that hit Japan starting March 11. From the children who lost parents in the crush of the earthquake, to those whose loved ones are still missing after the tsunami, to the scores of workers risking their health by heroically attempting to stabilize the Fukushima nuclear complex — there is no end to the tragic stories.¶ Yet in addition to the grief and empathy I feel for the Japanese people, I am beginning to develop another emotion, and that is anger. **As we anxiously await every bit of news about the developments at Fukushima, hoping that radiation leaks and discharges will be brought to an end, that the risk of further catastrophe will be averted, and that the Japanese people will have one less nightmare to cope with, governments across the world continue to promote further investment in nuclear power.** Just last week, for example, the government of my home country of South Africa announced that it was adding 9,600 megawatts of nuclear energy to its new energy plan.¶ **There are two dangerous assumptions currently parading themselves as fact in the midst of the ongoing nuclear crisis. The first is that nuclear energy is safe. The second is that nuclear energy is an essential element of a low carbon future, that it is needed to prevent catastrophic climate change.** Both are false.¶ **Nuclear technology will always be vulnerable to human error, natural disaster, design failure or terrorist attack**. What we are seeing at Fukushima right now are failures of the systems. The reactors themselves withstood the earthquake and tsunami, but then the vital cooling systems failed. When the back-up power systems also failed, the reactors overheated, eventually causing the spread of radiation. **This is only one example of what can go wrong.¶ Nuclear power is inherently unsafe and the list of possible illnesses stemming from exposure to the accompanying radiation is horrifying: genetic mutations, birth defects, cancer, leukemia and disorders of the reproductive, immune, cardiovascular and endocrine systems.¶** While we have all heard of Chernobyl and Three Mile Island, the nuclear industry would have us believe these are but isolated events in an otherwise unblemished history. Not so. Over 800 other significant events have been officially reported to the International Atomic Energy Agency — Mayak, Tokaimura, Bohunice, Forsmark to name just a few.¶ **The argument that nuclear energy is a necessary component of a carbon-free future is also false.¶ Greenpeace and the European Renewable Energy Council have put together a study called “Energy [R]evolution,” which clearly shows that a clean energy pathway is cheaper, healthier and delivers faster results for the climate than any other option. This plan calls for the phase-out of existing reactors around the world and a moratorium on construction of new commercial nuclear reactors.¶ Furthermore, an energy scenario recently produced by the conservative International Energy Agency highlights the fact that nuclear power is not necessary for lowering greenhouse gas emissions**. It shows that even if existing nuclear power capacity could be quadrupled by 2050, the proportion of energy that it provided would still be below 10 percent globally. This would reduce carbon dioxide emissions by less than 4 percent. The same amount of money, invested in clean, renewable energy sources such as wind and solar could have a much greater impact on lowering global warming.¶ **Nuclear energy is an expensive and deadly distraction from the real solutions. “Fuel-free” sources of energy do not generate international conflicts (as I write I cannot help but think of Libya), they do not “run dry” and they do not spill**. There are initial financial investments to be made, but in time the price of renewables will decline as technological advances and market competition drive the costs down. Furthermore, implemented wisely, a green, nuclear and fossil-free future will create a host of safe, new jobs.¶ As international organizations like Greenpeace join Japan’s Citizens Nuclear Information Center in an appeal to the Japanese government for improved evacuation plans and other protective measures for people still within the 30-kilometer exclusion zone; as the issue of food and water contamination continues to grow in Asia; as iodine tablets continue to sell out around the globe and people in places as far away from Japan as Los Angeles are on high alert for “radioactive plumes” — it is imperative that as citizens of the world we continue to voice our opposition to further investment in nuclear energy. We need a truly clean energy revolution now.

#### CP solves a laundry list of impacts

Green America No date (“Ten Strikes Against Nuclear Power” <http://www.greenamerica.org/programs/climate/dirtyenergy/nuclear.cfm> )

Green America works to address the climate crisis by transitioning the US electricity mix away from its heavy emphasis on coal-fired power. But all of that work will be wasted if we transition from coal to an equally dangerous source – nuclear power. Nuclear power is not a climate solution. It may produce lower-carbon energy, but it is not clean energy.¶ Solar power, wind power, geothermal power, hybrid and electric cars, and aggressive energy efficiency are climate solutions that are safer, cheaper, faster, more secure, and less wasteful than nuclear power. Our country needs a massive influx of investment in these solutions if we are to avoid the worst consequences of climate change, enjoy energy security, jump-start our economy, create jobs, and work to lead the world in development of clean energy.¶ Thankfully, no new nuclear plants have been built in the US for over 30 years. That means that a whole new generation of concerned citizens grew up without knowing the facts about nuclear power – or remembering the terrible disasters at Three Mile Island and Chernobyl. With the Nuclear Regulatory Commission now voting to allow the first new nuclear plants in the US, and after witnessing the 2011 nuclear disaster in Fukushima, Japan, it is time to remind everyone that nuclear is not the answer. ¶ Currently around 400 nuclear plants exist worldwide. Nuclear proponents say we would have to scale up to around 17,000 nuclear plants to offset enough fossil fuels to address climate change. This isn’t possible, and neither are 2,500 or 3,000 more nuclear plants that many people frightened about climate change suggest. Here’s why:¶ ¶ 1. Nuclear waste -- The waste from nuclear power plants will be toxic for humans for more than 100,000 years. It’s untenable now to secure and store all of the waste from the plants that exist. To scale up to 2,500 or 3,000, let alone 17,000 plants is unthinkable.¶ Nuclear proponents hope that the next generation of nuclear plants will generate much less waste, but this technology is not yet fully developed or proven. Even if new technology eventually can successfully reduce the waste involved, the waste that remains will still be toxic for 100,000 years. There will be less per plant, perhaps, but likely more overall, should nuclear power scale up to 2,500, 3,000 or 17,000 plants. No community should have to accept a nuclear waste site, or even accept the risks of nuclear waste being transported through on route to its final destination. The waste problem alone should take nuclear power off the table.¶ President Obama took the proposed solution of a national nuclear waste storage facility at Yucca Mountain, Nevada, off the table, though members of the president's Blue Ribbon Commission on America's Nuclear Future have suggested reopening discussion of this location. But the people of Nevada have said they don’t want a nuclear waste facility there, and we would need to transfer the waste to this facility from plants around the country, which puts thousands of other communities at risk.¶ ¶ 2. Nuclear proliferation – In discussing the nuclear proliferation issue, Al Gore said, “During my eight years in the White House, every nuclear weapons proliferation issue we dealt with was connected to a nuclear reactor program.” Iran and North Korea are reminding us of this every day. We can’t develop a domestic nuclear energy program without confronting proliferation in other countries.¶ Here too, nuclear power proponents hope that the reduction of nuclear waste will reduce the risk of proliferation from any given plant, but again, the technology is not yet proven – and reduced risk doesn't mean no risk of proliferation. If we want to be serious about stopping proliferation in the rest of the world, we need to get serious here at home, and not push the next generation of nuclear power forward as an answer to climate change. There is simply no way to guarantee that nuclear materials will not fall into the wrong hands¶ ¶ 3. National Security – Nuclear reactors represent a clear national security risk, and an attractive target for terrorists. In researching the security around nuclear power plants, Robert Kennedy, Jr. found that there are at least eight relatively easy ways to cause a major meltdown at a nuclear power plant.¶ What’s more, Kennedy has sailed boats right into the Indian Point Nuclear Power Plant on the Hudson River outside of New York City not just once but twice, to point out the lack of security around nuclear plants. The unfortunate fact is that our nuclear power plants remain unsecured, without adequate evacuation plans in the case of an emergency. Remember the government response to Hurricane Katrina, and cross that with a Chernobyl-style disaster to begin to imagine what a terrorist attack at a nuclear power plant might be like. ¶ ¶ 4. Accidents – Forget terrorism for a moment, and remember that mere accidents – human error or natural disasters – can wreak just as much havoc at a nuclear power plant site. The Chernobyl disaster forced the evacuation and resettlement of nearly 400,000 people, with thousands poisoned by radiation. The Fukushima disaster forced the evacuation of 150,000 people, and the costs of the clean-up are still being calculated.¶ Here in the US, the partial meltdown at Three Mile Island in 1979 triggered a clean-up effort that ultimately lasted for nearly 15 years, and topped more than two billion dollars in cost. The cost of cleaning up after one of these disasters is simply too great, in both dollars and human cost – and if we were to scale up to 17,000 plants, is it reasonable to imagine that not one of them would ever have a single meltdown? Many nuclear plants are located close to major population centers. For example, experts argue that if there was an accident at the Indian Point Nuclear Power Plant outside of New York City, evacuation would be impossible.¶ And accidents aren't limited to power plants. Also in 1979, another nuclear-related accident occurred at the Church Rock uranium mine in New Mexico, where more than 1,000 tons of radioactive mill waste was spilled into the Puerco River. The accident, occuring in a rural area of the Navajo Reservation, received little media attention, though it would have long-term consequences. A 2007 study found significant radiation still present in the area, and in 2008 Congress authorized funds for continued clean-up efforts. In the US, uranium mining occurs disproportionately on Native American lands, with Native communities facing the worst consequences of potential accidents.¶ ¶ 5. Cancer -- There are growing concerns that living near nuclear plants increases the risk for childhood leukemia and other forms of cancer – even when a plant has an accident-free track record. One Texas study found increased cancer rates in north central Texas since the Comanche Peak nuclear power plant was established in 1990, and a recent German study found childhood leukemia clusters near several nuclear power sites in Europe.¶ According to Dr. Helen Caldicott, a nuclear energy expert, nuclear power plants produce numerous dangerous, carcinogenic elements. Among them are: iodine 131, which bio-concentrates in leafy vegetables and milk and can induce thyroid cancer; strontium 90, which bio-concentrates in milk and bone, and can induce breast cancer, bone cancer, and leukemia; cesium 137, which bio-concentrates in meat, and can induce a malignant muscle cancer called a sarcoma; and plutonium 239. Plutonium 239 is so dangerous that one-millionth of a gram is carcinogenic, and can cause liver cancer, bone cancer, lung cancer, testicular cancer, and birth defects. Uranium mining and transportation increase background radiation and cancer risks worldwide, not only at nuclear power-plant sites. Because safe and healthy power sources like solar and wind exist now, we don’t have to rely on risky nuclear power.¶ ¶ 6. Not enough sites – Scaling up to 17,000 – or 2,500 or 3,000 -- nuclear plants isn’t possible simply due to the limitation of feasible sites. Nuclear plants need to be located near a source of water for cooling, and there aren’t enough locations in the world that are safe from droughts, flooding, hurricanes, earthquakes, or other potential disasters that could trigger a nuclear accident. Over 24 nuclear plants were at risk of needing to be shut down in the summer of 2008 because of the drought in the Southeast. No water, no nuclear power.¶ There are many communities around the country that simply won’t allow a new nuclear plant to be built – further limiting potential sites. And there are whole areas of the world that are unsafe because of political instability and the high risk of proliferation. In short, because of geography, local politics, political instability and climate change itself, there are not enough sites for a scaled-up nuclear power strategy. ¶ ¶ 7. Not enough uranium – Even if we could find enough feasible sites for a new generation of nuclear plants, we’re running out of the uranium necessary to power them. Scientists in both the US and UK have shown that if the current level of nuclear power were expanded to provide all the world's electricity, our uranium would be depleted in less than ten years. ¶ As uranium supplies dwindle, nuclear plants will actually begin to use up more energy to mine and mill the uranium than can be recovered through the nuclear reactor process. Dwindling supplies will also trigger the use of ever lower grades of uranium, which produce ever more climate-change-producing emissions – resulting in a climate-change catch 22. To increase our access to uranium, there will be heightened pressure to open new mines and expand existing mines, including in fragile or protected areas, bringing increased risk to mine workers and local communities, and contributing to the overall issue of increases in background radiation local to the mines and globally. ¶ ¶ 8. Costs – Some types of energy production, such as solar power, experience decreasing costs to scale. Like computers and cell phones, when you make more solar panels, costs come down. Nuclear power, however, will experience increasing costs to scale. Due to dwindling sites and uranium resources, each successive new nuclear power plant will only see its costs rise, with taxpayers and consumers ultimately paying the price. ¶ What’s worse, nuclear power is centralized power. A nuclear power plant brings few jobs to its local economy. In contrast, accelerating solar and energy efficiency solutions create good-paying, green-collar jobs in every community. ¶ Around the world, nuclear plants are seeing major cost overruns. For example, a new generation nuclear plant in Finland is already experiencing numerous problems and cost overruns of 25 percent of its $4 billion budget. The US government’s current energy policy providing more than $11 billion in subsidies to the nuclear energy could be much better spent providing safe and clean energy that would give a boost to local communities, like solar and wind power do. Subsidizing costly nuclear power plants directs that money to large, centralized facilities, built by a few large companies that will take the profits out of the communities they build in.¶ ¶ 9. Private sector unwilling to finance – Due to all of the above, the private sector has largely chosen to take a pass on the financial risks of nuclear power, which is what leads the industry to seek taxpayer loan-guarantees and insurance from Congress in the first place. ¶ As the Nuclear Energy Institute reported in a brief to the US Department of Energy, “100 percent loan coverage [by taxpayers] is essential … because the capital markets are unwilling, now and for the foreseeable future, to provide the financing necessary” for new nuclear power plants. Wall Street refuses to invest in nuclear power because the plants are assumed to have a 50 percent default rate. The only way that Wall Street will put their money behind these plants is if American taxpayers underwrite the risks. If the private sector has deemed nuclear power too risky, it makes no sense to force taxpayers to bear the burden.¶ And finally, even if all of the above strikes against nuclear power didn’t exist, nuclear power still can’t be a climate solution because there is …¶ ¶ 10. No time – Even if nuclear waste, proliferation, national security, accidents, cancer and other dangers of uranium mining and transport, lack of sites, increasing costs, and a private sector unwilling to insure and finance the projects weren’t enough to put an end to the debate of nuclear power as a solution for climate change, the final nail in nuclear’s coffin is time. We have the next ten years to mount a global effort against climate change. It simply isn’t possible to build 17,000 – or 2,500 or 17 for that matter – in ten years. ¶ With so many strikes against nuclear power, it should be off the table as a climate solution, and we need to turn our energies toward the technologies and strategies that can truly make a difference: solar power, wind power, and energy conservation.

### Tax CP

CP Text: The United States Federal Government should give tax breaks to motor companies who create and build alternative fueled vehicles

#### Tax breaks solves the aff – stimulates the economy and incentivizes consumers

KTBS News 6/3/12 (“Alternative fuel vehicles can save you money more than gas money in Louisiana” <http://www.ktbs.com/news/Alternative-fuel-vehicles-can-save-you-more-than-gas-money-in-Louisiana/-/144844/14446206/-/s6s5nq/-/index.html> )

A little known refund can help save you money. It's the Louisiana Alternative Fuel Tax Credit, a credit that can return 10% of your car's cost to your wallet. You only have to buy a car that runs on something besides gasoline.¶ The state recently clarified the rules to point out what qualifies. Hebert's Town and Country President Mark Herbert says his dealership is working to better inform customers about the tax credit. He says several cars qualify for the credit, so customers don't need to look too hard for a deal. Herbert points out that flex-fuel vehicles, which can use regular gasoline, are on the list.¶ "You can run regular fuel, but it is capable of running on E85, which we're able to produce in the United States a lot cheaper," he said. That makes paying for E85 fuel cheaper but at another cost.¶ "It's a lower price at the pump, but your fuel economy isn't as good as with regular fuel," Herbert said.¶ Tax Manager Patrick Caraway says he and other tax preparers are contacting their clients to let them know about the savings and how to get them.¶ "You claim the credit on the return for the year on which you purchased the vehicle," Caraway said.¶ To claim a car already purchased ask your tax preparer about amending an old return.¶ "So, for instance if you bought a vehicle on June 15, 2010, you would file an amended Louisiana tax return for the 2010 tax year and claim the credit on that return," Caraway said.¶ If your car is more than $30,000, you can only be refunded $3,000. Louisiana's Alternative Fuel Tax Credit doesn't just cover flex-fuel vehicles. Those that run on or have been modified to use CNG qualify, as well as certain diesel vehicles.

#### **Tax breaks solves the aff**

IRS 2008 (“Hybrid Vehicles” [http://www.irs.gov/newsroom/article/0,,id=157632,00.html](http://www.irs.gov/newsroom/article/0%2C%2Cid%3D157632%2C00.html) )

The Energy Policy Act of 2005 replaced the clean-fuel burning deduction with a tax credit. A tax credit is subtracted directly from the total amount of federal tax owed, thus reducing or even eliminating the taxpayer’s tax obligation. The tax credit for hybrid vehicles applies to vehicles purchased or placed in service on or after January 1, 2006.¶ The credit is only available to the original purchaser of a new, qualifying vehicle. If a qualifying vehicle is leased to a consumer, the leasing company may claim the credit.¶ Hybrid vehicles have drive trains powered by both an internal combustion engine and a rechargeable battery. Many currently available hybrid vehicles may qualify for the tax credit.¶ These models have been certified for the credit in the following amounts:¶ † This reflects a decrease in the credit amount as of Oct. 1, 2006, due to the manufacturers meeting quarterly sales of 60,000 qualified hybrid cars — See Quarterly Sales, below.¶ †† This credit amount does not phase out. The full amount of the altenative fuel vehicle credit would be available for vehicles purchased on or before December 31, 2010. ¶ Qualifed Cars and Credit Amounts¶ Model Year 2009¶ Model Year 2008¶ Model Year 2007¶ Model Year 2006¶ Model Year 2005¶ Quarterly Sales¶ Consumers seeking the credit may want to buy early since the full credit is only available for a limited time. Taxpayers may claim the full amount of the allowable credit up to the end of the first calendar quarter after the quarter in which the manufacturer records its sale of the 60,000th hybrid passenger automobile or light truck or advance lean burn technology motor vehicle. For the second and third calendar quarters after the quarter in which the 60,000th vehicle is sold, taxpayers may claim 50 percent of the credit. For the fourth and fifth calendar quarters, taxpayers may claim 25 percent of the credit. No credit is allowed after the fifth quarter.¶ More information on the latest hybrid quarterly sales is available.¶ For example, F Company is a manufacturer of hybrid motor vehicles, but not advanced lean burn technology motor vehicles. F Company sells its 60,000th hybrid car on March 31, 2007.¶ Ms. Smith buys an F Company hybrid car on June 30, 2007, and claims the full credit.¶ Ms. Maple buys an F Company hybrid car on Dec. 31, 2007, and claims 50 percent of the credit.¶ Mr. Grey buys an F Company hybrid car on June 30, 2008, and claims 25 percent of the credit.¶ Mr. Green buys an F Company hybrid car on July 1, 2008, and is unable to claim the credit, because the credit has phased out for F Company vehicles.¶ Toyota Motor Sales, U.S.A., Inc., has submitted quarterly reports indicating that its cumulative sales of qualified vehicles to retail dealiers has reached the 60,000-vehicle limit during the calendar quarter ending June 30, 2006. Effective Oct. 1, 2006, the tax credit amounts for certified Toyota models will be reduced. The models and allowable credits may be found in news releases IR-2006-145, Toyota Hybrids Begins Phaseout on October 1and IR-2006-154, Additional Toyota and Lexus Vehicles Certified for the Energy Tax Credit.¶ More detailed information may be found in the Summary of the Credit for Qualified Hybrid Vehicles¶ Advanced Lean Burn Technology Vehicles¶ Purchasers of advanced lean burn technology motor vehicles may claim a credit of $1,300 per vehicle.¶ Make ¶ Model¶ Credit Amount ¶ Volkswagen¶ 2009 Jetta –2.0L TDI Sedan manual and automatic¶ $1,300¶ Volkswagen¶ 2009 Sportwagen –2.0L TDI manual and automatic¶ $1,300¶ Mercedes-Benz ¶ GL320 BLUE TEC ¶ $1,800¶ Mercedes-Benz ¶ R320 BLUE TEC ¶ $1,550¶ Mercedes-Benz ¶ ML320 BLUE TEC ¶ $900¶

I’m no more innumerate than the next financial journalist, but when hungry, I still prefer a snack that is 98 percent fat free to one that is 2 percent solid cholesterol. And if I’m sick, I’ll take a medicine that has a 20 percent chance of working over one known to be ineffective 80 percent of the time. I can’t help but be swayed by the framing of choices, even when I know the choice is an illusion. You can’t either. It’s the way our brains work.¶ Unfortunately, it’s also how the budget debate is working. In budgetary arithmetic, there is no difference between a dollar of spending and a dollar of tax breaks, and the political purpose of the two is identical—to reward certain politically favored behavior and discourage the opposite. But on the floor of Congress and on the campaign trail, the difference between a tax dollar spent and tax dollar not collected is fundamental. The former is bad, the latter is good. Take a look at two separate subsidies for motherhood: When delivered as a government check, it is a handout, and recipients are known as “welfare mothers.” When delivered as a tax credit, the same subsidy is tax relief, and recipients are known as “mothers.”¶ Harvard Law professor turned Treasury tax official Stanley Surrey coined the term “tax expenditure” to level the rhetorical playing field between government goodies delivered as deductions, credits, or tax deferrals and those delivered as checks. But rhetorically—and cognitively—it’s still not a fair fight. Government spending still feels like an intrusion. Tax breaks feel like a blessing, and Republicans in particular have built their public message around that false distinction. That’s too bad: Individual and corporate tax expenditures now cost the U.S. Treasury more than a trillion dollars a year and account for a third to a quarter of all government benefits and subsidies — without being subject to annual appropriations review. Once a tax break is in the tax code, it continues until specifically excised.¶ What’s worse, tax expenditures tend to be a particularly ineffective way to spend a trillion of the taxpayers’ dollars, especially when delivered as a tax deduction. Take, for example, the second largest tax expenditure (after the deductibility of employer-provided health care): the home mortgage deduction. Jason Fichtner, a senior research fellow at the Mercatus center at George Mason University, describes how the much-beloved tax break (which the OMB estimates will cost $98.5 billion in 2012) goes wrong:¶ The deductibility of mortgage interest ... provides an incentive for people to own, rather than rent, under the theory that…people are more likely to care and invest in the community ... if they are home owners ....[But its] design as a tax deduction provides perverse incentives and might not actually help those who really need help. For example, [it] encourages larger mortgages and larger homes than a family might buy without the deduction. Further, it’s worth more to higher income taxpayers because the deduction is offset against higher marginal tax rates, while for those in lower tax brackets the deduction is worth less or nothing at all for people who don’t itemize.¶ Specifically, while about two-thirds of American households own homes, only about a quarter of taxpayers take the home mortgage deduction—either because they don’t have a mortgage, or because they don’t itemize deductions. Although a number of retirees with limited incomes may have benefitted from the deduction and have paid off their mortgages, running this subsidy through the tax code assures that this $98.5 billion addition to the budget deficit mainly benefits families in the top tax brackets living in the poshest homes in America. If Congress were actually to appropriate $98.5 billion in funds to promote community feeling, you’d have to believe they’d find a more effective way to do it.¶ The worst thing about the framing of tax expenditures is that it forces Republicans to regard any attempt to rein them in as a tax hike — which, of course, they are sworn to oppose. The closest the Republican “Path to Prosperity” deficit reduction plan comes to addressing tax expenditures is to fold them into a still vague tax reform promise in which “loopholes and deductions” would be reduced in return for lower tax rates. That’s fine as far as it goes. But as Eric Todor, an economist with the Tax Policy Center at the Urban Institute points out, “The most egregious tax expenditures are the small ones that favor, say, bow-and-arrow makers or hedge fund managers. But the most expensive ones are those that benefit millions, like the home mortgage deduction and the one for health insurance.” It will be no easy feat, he says, to get millions of taxpayers to give those up as part of tax reform. That may simply be one reform too far. ¶ There may be one other way, however. Economist Martin Feldstein in a New York Times Op Ed last week suggested limiting tax deductions to 2% of a taxpayers’ adjusted gross income. (The President’s deficit reduction plan would also impose a limit on deductions, but it would apply only to high income taxpayers.) Congress could avoid the bruising tax-break-by-tax-break fight needed to close out most expenditures, as envisioned in standard reform programs, and some Republicans could embrace the plan because it would allow greater revenue without raising marginal tax rates.¶ Before that is possible, however, the question has to be reframed. Lawmakers have to concede that tax credits, deductions, tax deferrals and preferential rates are not the opposite of government spending. They are, as Feldstein puts it, “government spending by another name.” Any serious deficit plan must put them on the table.¶

Read more at http://www.thefiscaltimes.com/Columns/2011/05/10/Budget-Reform-Math-Tax-Breaks-Equal-Government-Spending.aspx#ueIpW8fpPXZxQwK2.99