# Natural Gas Vehicles 1AC

## 1AC

### 1AC Inherency

#### Inherency:

#### ( ) Transportation infrastructure investment and spending in the status quo

Laing 7-6

[Keith. Staffer for the Hill. “Obama Signs Highway Bill” The Hill, 7/6/12 ln]

President Obama signed a $105 billion transportation bill on Friday, bringing to an end a three-year fight over road and transit spending.¶ The bill signing capped a day that began with an unemployment report showing the U.S. economy had added only 80,000 jobs in June, leaving the national unemployment rate unchanged at 8.2 percent. Obama has touted the highway bill as a jobs bill, and at the White House signing ceremony he was surrounded by construction workers and students. The ceremony began after the president concluded a two-day campaign trip through the swing states of Ohio and Pennsylvania.¶ “First of all, this bill will keep thousands of construction workers on the job rebuilding our nation’s infrastructure," Obama said in a quick speech delivered less than an hour after he landed at Andrews Air Force base in suburban Washington.¶ “Second, this bill will keep interest rates on federal student loans from doubling this year, which would have hit nearly seven and a half million students with an average of $1,000 more on their loan payments,” he continued. “These steps are going to make a real difference in the lives of millions of Americans.” Republicans had sharply criticized the president for the unemployment numbers on Friday.¶ “Millions and millions of families are struggling and suffering because the president's policies have not worked for them,” Republican presidential nominee Mitt Romney said at a press conference in New Hampshire, where he is on vacation with his family.¶ “This kick in the gut has got to end,” Romney added.¶ Obama argued at the transportation bill signing on Friday that lawmakers in Congress should send him more bills like the measure he was signing into law.¶ “My hope is this bipartisan spirit spills over into the next phase,” Obama said. “That we can start putting more construction workers back to work – not just those that were already on existing projects that were threatened to be laid off – but also getting some new projects done.¶ “My message to Congress is the same thing I’ve been saying for months now — let’s keep going,” Obama continued. “Let’s keep finding ways to work together to grow the economy and help put more folks back to work. There’s no excuse for inaction where there’s so many Americans trying to get back on their feet.”¶ The bill Obama signed provides road and transit funding for the next two years. It also extends a 3.4 percent interest rate on student loans for one year and a flood insurance program for five.

#### ( ) The alternative vehicle market is drying up – lack of refueling infrastructure is the *key reason*

Kemp 5-25

[John. Market Analyst for the Associated Press. “Will US Federal Fleet help Alternative Fuel Switch?” The Associated Press, 5/25/12 ln]

Federal law defines alternative fuel vehicles broadly to include both those running on alternative fuels such as compressed natural gas (CNG), liquefied natural gas (LNG), hydrogen and high blend ethanol (E85) as well as certain qualifying hybrid electric vehicles run on a combination of regular petroleum and electricity (42 USC 13211). In 2010, there were nearly 1 million vehicles running on alternative fuels in use across the United States, according to the Department of Energy's Alternative Fuels and Advanced Vehicles Data Center, up from less than 400,000 a decade earlier. In addition, more than 2 million hybrid electric vehicles had been sold over the same period. Alternative fuelled vehicles are still a tiny minority of vehicles on U.S. roads, but the number is increasingly rapidly. The problem is that few are actually filling up with alternatives to gasoline owing to the lack of outlets actually selling alternative fuels such as E85 or LNG. There were just 10,000 fuelling stations dispensing alternative fuels in 2011 (up from less than 7,000 in 2010). Of those, a little over 3,300 were supplying electricity (six times as many as in 2010 making this the fastest growing segment of the alternative fuel infrastructure). But less than 1,000 dispensed compressed natural gas, and just 45 dispensed LNG. Even E85 was available from fewer than 2,500 outlets. In contrast, there are almost 160,000 retail gasoline stations across the country, and many more private refuelling facilities owned by large fleet operators such as UPS, transit systems, and the federal government. Availability problems are compounded by the uneven distribution of alternative fuelling stations. There are lots in California, the nation's biggest vehicle market, and another concentration in the ethanol-producing states of the Midwest such as Illinois, Indiana and Minnesota, but not many in the rest of the country.

### 1AC Plan Text

#### Plan: The United States federal government should substantially increase its investment for natural gas vehicle fueling infrastructure. We’ll Clarify.

### 1AC Oil Advantage

#### Advantage [ ] is Oil – Scenario 1 is Prices:

#### ( ) Oil prices are low - prices have already fallen below $100 per barrel

Rozhnov 7-23

[Konstantin. Oil Reporter for the Wall Street Journal. “Oil Prices Plunge 4%” The Wall Street Journal, 7/23/12 ln]

Crude-oil futures skidded on worries over global demand for oil, as the euro-zone's sovereign debt crisis pushed down European stocks and the euro.¶ "Focus is back on Europe, and there's a bit of a nervousness in the market," said Ole Hansen head of commodity strategy at Saxo Bank.¶ The front-month September Brent contract on London's ICE futures exchange was down $3.40, or 3.4%, at $103.43 per barrel. Crude-oil futures trading on the New York Mercantile Exchange fell 4% to $88.21 per barrel.¶ The soaring cost of Spanish government borrowing costs and worries over Greece ended the $10-a-barrel rise in oil prices which lasted for seven trading days up to last Thursday, analysts said.¶ "This price rise wasn't the result of any change in fundamentals but to supply risks," Commerzbank said in a note. "Although these supply risks haven't gone away [...] they are likely to merely slow the price slide so long as there is no further escalation of the situation in Syria or of the Iran conflict."¶ Also, activity in the oil futures market is relatively light now due to the summer holiday season and it doesn't take much to move the market, said Saxo's Mr. Hansen.

#### ( ) These trends will continue over the medium-term – crumbling demand and global economic stagnation ensure a 7% drop in 2013

AFP 7-12

[The Agence France Presse. “IAE: Oil Prices May Fall 7%” The Agence France Presse, 7/12/12 ln]

Oil prices are unlikely to fall much further over the balance of this year but could come under pressure in 2013 as the global economy falters due to slower US and Chinese growth, the IEA said Thursday. The International Energy Agency, which advises developed countries on energy policy, said supply risks appeared to have put a floor under prices for this year even as global economic growth slows.¶ But for 2013, oil prices could fall in real terms by more than 7.0 percent, based on current models and futures contracts, it said, adding that such a downturn should marginally support demand.¶ Global economic growth this year will likely come in at 3.3 percent, down from the previous estimate of 3.5 percent as an "exceptionally challenging macroeconomic backdrop" forced the IEA to change its forecasts.¶ For 2013, the global economy should grow 3.8 percent, down from the previous 4.1-percent estimate based on figures in April from the International Monetary Fund, it added.¶ "Concerns are mounting on the sustainability of the eurozone, there has been a definite easing in China's economic impetus and the US outlook has weakened," the IEA said in its latest monthly report.¶ "Ongoing debt concerns across the developed world will likely see associated austerity measures curtailing government, business and consumer expenditure levels alike," it said.¶ The IMF is expected to issue new economic growth forecasts shortly.¶ Oil prices were slightly easier, with New York's main contract, light sweet crude for delivery in August, down 34 cents to $85.47 a barrel.¶ Brent North Sea crude for August shed 22 cents to $100.01, having fallen as low as $89 in late June after hitting highs in March of around $125. In terms of oil demand, the IEA left its 2012 growth forecast at around 800,000 barrels per day (bpd) to around 89.9 million bpd, with 2013 gaining a "relatively muted" 1.0 mbd to 90.9 mbd, led by Asia.¶ The increase next year, while marginally more than the expected 2012 gain, was much less than would have been expected based on trends before the 2008 global financial crisis brought the economy to its knees, it said.¶ The eurozone debt crisis has since undercut growth further.¶ The IEA said that total global oil supply in June was down 500,000 bpd to some 90.4 mpd, with OPEC production slipping 100,000 bpd to 31.8 mpd.¶ Among OPEC members, the IEA noted that Iranian output had slumped to near 22-year lows at 3.2 mbd in June, down 100,000 bpd from May as US and EU sanctions ramp up from July 1.

#### ( ) Oil price freefall will collapse financing for global Anti-Americanism in Iran and Venezuela – but future price increases cause revitalization

Levy & Slackman ‘8

[Cliff and Michael – Trade Desk at the New York Times. “3 Oil-Rich Countries Face a Reckoning” The New York Times, 10/21/8 ln]

As the price of oil roared to ever higher levels in recent years, the leaders of Venezuela, Iran and Russia muscled their way onto the world stage, using checkbook diplomacy and, on occasion, intimidation. Now, plummeting oil prices are raising questions about whether the countries can sustain their spending — and their bids to challenge United States hegemony. For all three nations, oil money was a means to an ideological end. President Hugo Chávez of Venezuela used it to jump-start a socialist-inspired revolution in his country and to back a cadre of like-minded leaders in Latin America who were intent on eroding once-dominant American influence. Iran extended its influence across the Middle East, promoted itself as the leader of the Islamic world and used its petrodollars to help defy the West’s efforts to block its nuclear program. Russia, which suffered a humiliating economic collapse in the 1990s after the fall of communism, recaptured some of its former standing in the world. It began rebuilding its military, wrested control of oil and gas pipelines and pushed back against Western encroachment in the former Soviet empire. But such ambitions are harder to finance when oil is at $74.25 a barrel, its closing price Monday in New York, than when it is at $147, its price as recently as three months ago. That is not to say that any of the countries is facing immediate economic disaster or will abandon long-held political goals. And the price of oil, still double what was considered high just a few years ago, could always shoot back up. Still, Russia, Iran and Venezuela have all based their spending on oil prices they thought were conservative but are now close to the market level. Significant further drops could tip the three countries into deficit spending or at least force them to choose among priorities. A worldwide recession, which many economists say is likely, would worsen matters, dampening energy demand and holding down prices. It is not clear whether the new pressures could create opportunities for the United States to ease tensions, or whether the three countries’ leaders will rely more on angry words even if they cannot afford provocative actions. Mr. Chávez has continued his overtures to Russia. He, Prime Minister Vladimir V. Putin of Russia and President Mahmoud Ahmadinejad of Iran may now see the United States, hobbled by financial crisis, as even more vulnerable. Daniel Yergin, chairman of Cambridge Energy Research Associates, a consulting firm in Cambridge, Mass., said oil states were facing something of a reckoning. Originally, he said, they saw the economic crisis as a problem mainly for the United States — but then oil prices went into free fall. “Now, the producers are experiencing a reverse oil shock,” Mr. Yergin said. “As revenue went up, government spending went up and expectations of a continuing windfall led to greater and greater ambitions. Now they are finding how integrated they are into this globalized world.”

#### ( ) The plan is the death knell for oil

Podesta et al 11

(John Podesta, President and CEO of the Center for American Progress, Carl Pope, Chairman of Sierra Club, Gene Carpinski, President of the League of Conservation Voters, March 2011, “Cleaner Cars, Less Foreign Oil,” http://www.americanprogress.org/issues/2011/03/pdf/oilsavingsagenda.pdf)

Millions of Americans are locked into using their cars because of limited transportation choices. Their communities lack affordable, convenient buses; subways; or other means of transit. Some communities lack safe biking and walking areas. Workers must spend hours in congested driving nightmares. People must drive a car to get a gallon of milk where housing is separated from services and amenities. Seniors face the loss of their freedom when they are no longer able to drive a car. Businesses are also constrained by limited choices, which have real economic costs. Shipping goods is more expensive because current railroad bottlenecks force them onto trucks, which increases oil dependence and pollution. More truck freight adds to highway congestion and road wear and tear. Too much of our freight moves on trucks because we have invested too little in our rail system. Infrastructure and planning improvements are necessary to provide genuine transportation alternatives for both passengers and freight. Fortunately, public transit is popular among those Americans who have reasonable access to it. Public transportation experienced a significant increase in use over the past 15 years. According to the American Public Transit Association: From 1995 through 2009, public transportation ridership increased by 31 percent—a growth rate higher than the 15 percent increase in U.S. population and higher than the 21 percent growth in the use of the nation’s highways over the same period. Buses, subways, streetcars, and other forms of transit dramatically reduce oil use. The American Public Transit Association determined that Riding public transportation is a significant way to cut passenger transportation energy use. … transit reduces annual fuel use by the equivalent of 4.2 billion gallons of gasoline. This is about 100 million barrels of oil saved annually. Outlays for new and improved transit networks can also help speed our economic recovery. There is $4 in economic return for every $1 of investment. Every $1 billion provided for transit creates 36,000 jobs. Fix roads, bridges, and trains, and unclog transportation bottlenecks While we must increase our investment in transportation infrastructure, we must avoid wasting it. Boondoggles and pork-barrel earmarks have added to our present congestion. We must not build highways we don’t need. We must ensure the ones we have are in good repair. New capacity should be added strategically to increase the overall flexibility of the transportation system rather than simply adding lanes and increasing gridlock. America’s ports, for example, represent major bottlenecks in getting feed stocks to factories and goods to consumers. Shipping freight by railroad is three times more oil efficient compared to using trucks. Yet our outdated rail system suffers from bottlenecks that make it less attractive for businesses. For instance, the News Hour found that “Chicago has been a freight rail hub for the past 150 years, but an outdated layout often makes it a bottleneck for the country’s shipping network.” And demand for rail shipment is projected to nearly double over the next 25 years. Yet the American Society of Civil Engineers projects a 20 percent shortfall in rail investment over this time. To address these problems, there should be a national transportation policy with a prominent oil-savings goal. Such a program would first invest in transportation programs that decrease dependence on oil. The president’s outline for transportation program provides a good starting point, including increasing our investment in transit by 128 percent over six years. In addition, Congress should create an “Infrastructure Bank” that would lend money for large-scale infrastructure projects, including funds for the repair and rehabilitation of highways, transit, and railroads. These funds would be paid back over time by tolls or local dedicated taxes. The federal government would spur investment in these modes by putting in the first dollars and attracting private partners. Every federal dollar loaned to a project will be matched by as many as six private dollars.

#### ( ) Green vehicles are key

Corless 10

(James, James Corless was a senior planner for the Metropolitan Transportation Commission and is now Campaign Director, Transportation for America, June 24, “Smart Technology Means More Options,” http://transportation.nationaljournal.com/2010/06/what-should-transportation-dep.php)

Developing a smarter and cleaner transportation system that reduces greenhouse gas emissions and our dependence on oil must be the overriding vision that guides the next federal transportation bill. Part of that vision must be realized through smarter approaches to managing traffic congestion, providing more options like public transportation, vanpools, intercity buses and high speed rail and offering incentives for states and local governments to develop more walkable and livable communities that encourage shorter commutes. But if we’re serious about reducing emissions and oil dependency, that vision can only be fully realized if we make a significant investment in infrastructure that will accelerate a transition to electric vehicles.

#### ( ) Venezuela is aggressively pursuing anti-Americanism – includes rogue nuclear development and terrorism – low oil prices are key to derailment

IBD ‘8

[The Investor’s Business Daily. “Chavez’s Nightmare” IBD, 10/1/8 ln]

Why do we say this? Because Chavez is using his abundant oil earnings for three purposes: to buy regional influence, to buy arms and now to introduce Russian nuclear proliferation to our hemisphere. All are serious threats that the next U.S. president will face if global oil prices remain high. Only lower oil prices will stop him. That's because oil prices, not ideas, fuel his capacity to act. The self-described communist has stolen and wasted a lot of the $800 billion in oil revenue that has flowed to Venezuela over the last decade, mainly from U.S. buyers. But he's managed to use much of it like a captured weapon to undercut what he calls the "empire." Chavez is also well on the way to making the hemisphere his playground. He has used oil cash to buy off leaders in Argentina; bankroll vassal states in Ecuador, Nicaragua and Bolivia; win new friends in Paraguay; meddle in elections in Peru, El Salvador and Mexico; and finance terrorists in Colombia. Now he's extended his influence in unexpected new places such as Costa Rica, Honduras, St. Vincent, the Grenadines and Dominica, all of which have made disturbing diplomatic moves in his direction. Fewer and fewer U.S. allies will be left standing against this Chavista tide of corrupt oil largesse. What's more, Chavez is the region's chief arms proliferator, forking out $4.4 billion for Russian advanced jet fighters, small arms, submarines and now missile systems, none of which he needs. The stakes rise further with his invitation to Russian influence, starting with "peaceful" nuclear energy development in a nation where gas sells for 18 cents a gallon. Like fellow petrotyrant Iran, development of nuclear weapons — in this case, 1,350 miles from Key West, Fla. — will be next on his to-do list. A third petrotyranny, Russia, still bitter over its loss of empire and blaming the U.S., assures Chavez it will gladly pay for this. As disturbing as this picture is, there's little doubt next year's list of Chavista "achievements" will be longer. The one thing that will cut it short is an end to high oil prices. Chavez said as much Tuesday in speaking to friends at a gathering of leftist leaders in Manaus, Brazil. Turmoil in U.S. financial markets will slow global growth and hit Latin America hard, he said, adding that a drop in oil revenue hit Venezuela like "a hurricane, or more than one hurricane, it's a hundred hurricanes." A downturn in the U.S. economy is one way to lower oil prices. But it's far preferable to defang Chavez by creating permanent substitutes for his petroleum products in U.S. markets.

#### ( ) Venezuelan anti-Americanism escalates into a second cold war – causes nuclear acquisition and global state failure

Abelgas ‘8

[Valerie. Columnist for the Philippine Post. “The Second Cold War” Ang Peryodiko, V6 No19 http://www.angperyodiko.ca/opinion\_columns/val\_abelgas/abelgas\_vol6no19.html, 10/2/8]

The dispatch by Moscow of the nuclear-powered missile cruiser Peter the Great and three other ships to Venezuela on Monday has made the resurgence of the Cold War between the United States and Russia imminent, if it has not actually began. As in the original Cold War, which began with the fall and split of Germany in World War II in 1945 and ended with the break-up of the Soviet Union and the reunification of Germany in 1990, Latin America is turning out to be an important battleground for the two superpowers. Russia has recently intensified its contacts with Venezuela -- an oil-rich nation that has been a pain in the neck for the US -- Cuba and other South American nations following the heightening of tensions between the two superpowers in the dispute over Georgia. The incident brings to mind the Cuban Missile Crisis in October 1962 when the world came closest to a nuclear war, and which ended when American President John F. Kennedy and United Nations Secretary General U Thant reached an agreement with Soviet Premier Nikita Kruschev to dismantle Soviet missiles in Cuba in exchange for a no-invasion agreement and the removal of US missiles in Turkey. The emerging new Cold War is starting in almost the same manner as the old one. In 1945, shortly after Germany surrendered to the Allies and was split into West and East Germany, Russia, fearing another invasion from Western Europe after Germany had tried to invade it three times in the last 150 years, formed a buffer zone from Western Europe by exerting its might over what later became known as the Iron Curtain – Bulgaria, Czechoslovakia, Hungary, Poland and Romania. These countries, along with the Soviet Union, formed the Warsaw Pact, the formation of which was in response to the formation of the United States-led North Atlantic Treaty Organization (NATO). With the Soviets ready to extend its sphere of influence to Greece and Turkey in 1947 – with the Greeks in the midst of a civil war and the Turks needing help to modernize its society -- then US Undersecretary of State Dean Acheson called on Congress to come to the assistance of the two countries, arguing that if these countries fall into the hands of the communists, the neighboring nations would also subsequently fall. This later became known as the Domino Theory. Thus, the Cold War intensified as the two major victors of the Second World War raced to claim the spoils of war. The Cold War was characterized by satellite wars, foremost of which were the Korean War and the Vietnam War. The score was tied in the Korean War, with Korea being divided into North and South Korea, but the communists prevailed in the Vietnam War, with Hanoi overpowering Saigon after the US abandoned its ally. The Cold War also saw the emergence of the Nuclear Arms Race, with both the Soviets and the Americans battling to have more and superior nuclear bombs; the Space Race, which was dominated by the Soviets early on until the Americans beat them to the moon; the close calls to disaster during the Bay of Pigs Invasion and the Cuban Missile Crisis; and the calming policy that came to be known as détente. The Cold War put the world constantly on the edge of fear and devastation for 45 years while the two superpowers expanded their spheres of influence to wide parts of the globe and threatened to annihilate each other. With the emergence of a rationale leader in the Soviet Union in the 1980s in the person of Mikhail Gorbachev, the Cold War began to thaw. Gorbachev declared, upon assuming the position of general secretary of the Communist Party of the Soviet Union, that beyond a certain point, which, according to him, had been reached and passed at that time, increases in military power were useless. Gorbachev launched his glasnost (openness) and perestroika (economic restructuring) policies that triggered the end of the Cold War, and eventually of the once powerful Soviet Union. I was lucky to witness the Soviet Union’s transformation at that time when the Novosti Press Agency invited fellow journalist Maritess Vitug and I in August of 1988 to visit the cities of Moscow and Leningrad (now St. Petersburg) in Russia, Tbilisi in the Georgian Republic, and Baku in the Azerbaijan Republic. A couple of years later, the arms race came to an end and Gorbachev abandoned the Brezhnev Doctrine, which declared that no satellite country in Eastern Europe would be allowed to defect. Within months, democratic movements emerged in these Iron Curtain countries and their authoritarian governments fell one by one, ironically like dominoes. The Cold War ended where it started, with the tearing down of the Berlin Wall in November 1989 and the reunification of the two Germanys. With Russia now trying to create another buffer zone around its southern borders, and the United States racing to exert influence over these former Soviet republics around the Caspian Sea, which incidentally hold a huge reserve of oil and natural gas and host major oil pipelines to the East and to Central Asia, it was inevitable that history would repeat itself. For years after the break-up of the once powerful Soviet Union, Russia was pictured by the West as a defeated country. Crippled by the sudden turn of events, the Russians were faced with domestic problems – rising crime rates, government corruption, separatism, economic depression, rising poverty and social discontent. But since the financial collapse of 1998, Russia’s economy has taken a major rebound, powered by its huge oil and gas reserves. It is the world’s eighth largest oil producer, the world’s top natural gas producer, has the world’s fifth largest foreign reserves at $600 million, and has the world’s fifth largest gold reserves. It supplies 30% of Europe’s oil needs and 40% of its gas. Its economy grows by an average of 6 to 7 percent annually since 1999, and its stock market index increased by 83 percent last year. In contrast, the US economy is experiencing the biggest turmoil since the Great Depression with its financial institutions in serious jeopardy, its stock market in chaos, its economy teetering on the precipice of a deep recession or worse, another depression, its body politic currently immersed in extremely divisive political campaign, and more importantly, its credibility and influence among the world’s nations in serious doubt. Unlike the first Cold War, the Second Cold War is not a race for political influence but is a battle for the world’s dwindling oil and gas reserves. It is not coincidental that it started in an area where vast oil and gas reserves sit – the Caspian Sea region. And it’s not merely symbolic that Russia has decided to intensify it by sending a part of its naval fleet to oil-rich Venezuela. The Second Cold War’s satellite wars will not be fought in Korea or Vietnam, but is now being fought in Iraq and soon in Iran, both oil-producing countries. Don’t expect insurrections and skirmishes in Cuba. They will occur in oil-producing countries, such as Venezuela, Georgia, Azerbaijan, Iran, and possibly the oil-rich region of Brunei, Indonesia, the Spratlys in the China Sea, and Mindanao. While the economy and the Iraq problem are the central issues in the US presidential campaign, there is a need to recognize that the Second Cold War has begun and should, therefore, be an important parameter in the choice of this great nation’s next leader. Should we elect a leader who will be firm and strong, but who will gently and calmly steer us through the troubled waters of the Second Cold War, or should we choose one who has for years ruled out conciliation with Russia, wanted Russia out of the stabilizing economic group G-8, and who has been itching for a direct confrontation with the long-time Cold War rival? Should it be Barack Obama or John McCain? The debates on this important foreign policy matter have not begun. But the Second Cold War is well way off the starting gate.

#### ( ) State failure explains every impact

Manwaring ‘4

[Max. Latin America Expert @ CSIS, PhD in Poli Sci from UChicago. Shadows of the Past and Images of the Future 2004, Pg 36-8]

State failure is an evolutionary process, not an outcome. This state of affairs is often brought on by poor, irresponsible, and insensitive governance, and leads to at least one other very fundamental reason why states fail. That is, state failure can be a process that is exacerbated by nonstate (insurgent) groups that, for whatever reason, want to take down or exercise illicit control over a given government. In Latin America, Colombia is, Peru has been, and both continue to be good examples of this. The narco-insurgent/terrorist [is a] threat to the authority of the central governments. Through murder, kidnapping, corruption, intimidation, destruction of infrastructure, and other means of coercion and persuasion, these violent, internal, nonstate actors compromise the exercise of state authority. The government and its institutions become progressively less and less capable of performing the tasks of governance, including exercising their fundamental personal security functions to protect citizens. As a result, the narco-insurgents become increasingly wealthy and powerful, and affected countries deteriorate further and further toward failed state status. Peru’s Sendero Luminoso calls violent and destructive activities that facilitate the processes of state failure armed propaganda. Drug cartels operating in that country and throughout the Andean Ridge of South America and elsewhere call these activities business incentives. Thus, in addition to helping to provide wider latitude to further their specific objectives, Sendero’s and other violent nonstate actors’ armed propaganda and business incentives are aimed at lessening a regime’s credibility and capability in terms of its ability and willingness to govern and develop its national territory and society. This debilitating and destabilizing activity generates the most dangerous long-term security challenge facing the global community today. More specifically, failing or failed states in Latin America, Africa, the Middle-East, and Asia are breeding grounds for instability, insurgency, and terrorism. A breakdown in institutional governance can breed or exacerbate humanitarian disasters and major refugee flows. Such states can host networks of all kinds, including criminal business enterprises and/or some form of ideological, religious, or populist crusade. They also spawn a variety of pernicious and lethal activities and outcomes, including torture and murder; poverty, starvation, and disease; the recruitment and use of child soldiers; trafficking in women and human organs for transplants; trafficking and proliferation of conventional weapons systems and weapons of mass destruction; genocide, ethnic cleansing, warlordism; and criminal anarchy and insurgency. At the same time, these networks and activities normally are unconfined and spill over into regional syndromes of destabilization and conflict. Additionally, failing and failed states simply do not go away. Ample evidence demonstrates that failing and failed states become dysfunctional states, rogue states, criminal states, narco-states, or new people’s democracies. Moreover, failing and failed states tend not to (1) buy U.S. and other exporting nations’ products, (2) be interested in developing democratic and free market institutions and human rights, or (3) cooperate on shared problems such as illegal drugs, illicit arms flows, debilitating refugee flows, and potentially dangerous environmental problems. In short, the longer they persist, the more they and their associated problems endanger global security, peace, and prosperity.

#### ( ) Venezuelan nuclear acquisition causes extinction

Zulauga ‘5

[Felipe. President of Visions of Latin America at the Univ of Pitt. “Venezuela…A Good Neighbor?” 2005, http://www.ucis.pitt.edu/clas/publications/Visions\_vol1\_issue1.pdf]

Although Chavez indicates that the development of nuclear power is to be for peaceful purposes only, his statement in May was not well received in the majority of Venezuela’s neighboring countries or in the United States. But why is Chavez’s idea regarded with suspicion by the international community? Why is his initiative viewed as a threat rather than a positive development? The most likely answer can be summed up by security and stability reasons, as Venezuela is seeking a more secure position in the global context. However, this ambition engenders concerns in the Latin American region and could potentially generate serious repercussions for the entire Latin American community Among these concerns is determining the true reason as to why President Chavez aspires to acquire nuclear energy. According to Douglas Mackinnon in an article from the Houston Chronicle, the real reason that Chavez wants to develop nuclear technology is for the purpose of developing nuclear weapons! It may be hard to determine the credibility of this statement, but considering Mackinnon’s source is a high ranking official for a Latin American government, it should not be taken lightly. It is upsetting and almost incomprehensible to conceive of the Venezuelan government developing nuclear weapons. This not only poses a threat to the stability and security of the Latin American region, but it also has the potential to cause a nuclear crisis at the global level. If nuclear technology is developed in Venezuela for the purpose of acquiring nuclear arms, the country will violate the Treaty of Tlatelcol, which prohibits nuclear weapons in Latin America. This treaty, signed by 23 Latin American states, has been the pillar in maintaining nuclear security for the entire region and sets an example for other regions to successfully achieve nuclear-free zones. However, if Venezuela officially decides to break the treaty by achieving nuclear power, it is probable that other countries with previous intentions to develop military nuclear capacity - such as Mexico, Chile, Brazil and Argentina – will follow suit.

#### ( ) US-Iran tensions are rapidly increasing – ensures terrorist attacks around the globe

Miller 7-19

[John. Intl Desk for CBS News. “Ex-Revolutionary Guard member: Iran ready with terror plans to hit U.S. if Israel attacks.” CBS News, 7/19/12 ln]

A former Iranian agent from that country's feared Revolutionary Guard corps - a man who's been on the inside - tells CBS News that a surrogate, stealth war, carried out in the shadows by both sides, has been going on for more than a year.¶ It began with the targeted killings of Iranian scientists working on that country's nuclear program.¶ Then a computer virus was covertly deployed against Iranian nuclear sites. The virus was designed to make the sites self-destruct. Iran publicly accused the U.S., Great Britain and Israel of being behind the plots.¶ And now, it appears Iran is striking back.¶ "They're looking at this saying, 'We've got to respond. Aggression has been taken against us,"' says former CIA analyst Phil Mudd. "So that's the first factor. The second factor is, in the background, they're hearing the drumbeats of war."¶ That drumbeat is the continued discussion over if or when Israel might launch airstrikes against more than a dozen underground suspected Iranian nuclear sites.¶ But Iran hasn't backed away.¶ Since the killing of the last Iranian scientist, Iran has been linked to a series of plots:¶ -- A bomb attached to the car driven by the wife of an Israeli diplomat in India¶ -- A plan to use local organized crime hit men in a sniper attack in the U.S., and Israeli targets in Azerbaijan and the nation of Georgia¶ -- A plot using a Mexican drug cartel to kill the Saudi ambassador in a crowded restaurant in Washington, D.C.¶ -- And just days ago, in Kenya a suspected plot to attack a synagogue in Nairobi and Israeli-owned hotels in the coastal city of Mombasa¶ The two suspected Iranian agents captured in Kenya on July 3 are believed to be members of Iran's elite Revolutionary Guard force.¶ Reza Kahlili was once a member of that force himself and for years, he says, a double agent who supplied information to the CIA.¶ He says these attacks are Iran's version of a warm-up, in the event of a full conflict with Israel.¶ "They're just sending signals that they are capable of, and the order is by Ayatollah Khamenei, the Iranian supreme leader that, should war break out, then all terror cells will become activated and attack major interests of America, Israel, European countries and even within America," warns Kahlili, author of "A Time to Betray."¶ But, given the number of alleged plots by Iran against Israeli targets, some analysts wonder why Iran would seem to keep provoking the very attack they say they want to avoid.¶ "The mindset of this organization that is the Iranian intelligence service and this government is not a Western mindset," Mudd observes. "We see stability as a goal. They see instability and revolution as a goal."¶ Kahlili says, in the event of an Israeli airstrike, Iran is prepared to up the ante, not by responding militarily, but with a global campaign of terror attacks.¶ "Should it become an all-out war, then they will definitely respond on the world stage by terrorist attacks within the U.S., in Europe, and against America's interests, against Israel's interests," Kahlili says.¶ Intelligence officers believe Iran has already done the pre-operation surveillance for a series of terrorist attacks.¶ There's plenty of evidence that Tehran has scoped out targets, taken photos and written plans for terrorist strikes in the Mideast, Europe, South America, and even the United States.

#### ( ) *Sustained* low oil prices devastate Iran’s ability to effectively attack American interests

Collie ‘8

[Tim. Middle East Correspondent and Finalist for the Pulitzer Prize. “Cheap Oil could Alter International Landscape” [www.newsmax.com/international/cheap\_crude\_oil/2008/10/17/141607 10/17/8](http://www.newsmax.com/international/cheap_crude_oil/2008/10/17/141607%2010/17/8) ]

In neighboring Iran, however, the falling oil price could prompt a retreat from international adventurism to more focus inside that country’s borders. Improbably, Iranians already pay high domestic prices because of inefficient markets, and dilapidated infrastructure. On Friday, Israeli President Shimon Peres said that, “We see only our troubles, but we must note that there is finally a drop in oil prices, and this is a severe blow to Iran.” “If the price of oil continues to drop, Iran will not be able maintain its military spending [levels],” Peres said. That would mean less money to supply its proxies, Hamas, which controls the Gaza Strip, and Hezbollah, which has essentially built a state-within-a-state inside Lebanon.

#### ( ) Also forces Iran to the negotiating table

Bock ‘8

[Alan. Senior Writer at WorldNetDaily. “An Upside to the Financial Crisis?” <http://www.antiwar.com/bock/?articleid=13676>, 10/27/8]

Iran has used petrodollars to spread its influence in Iraq and the rest of the Middle East, to subsidize Hezbollah and Hamas, to buy off domestic critics appalled at the government's mismanagement of the economy, and to establish commercial relations with European countries, thus dampening opposition to its nuclear plans. If oil prices stay low, it may have to cut back its foreign meddling and reach some kind of compromise on its nuclear ambitions. President Mahmoud Ahmadinejad, who has been steadily losing popularity anyway, could well be defeated in next June's elections. The consequences in the rest of the Middle East could be interesting. Already tentative negotiations are taking place between Israel and Syria, with the likely implicit deal being to let Syria run Lebanon in exchange for eliminating Syrian support for Hezbollah. If Iran has diminished capacity to subsidize such groups, and if the U.S. has the minimal intelligence needed to start meeting with Iran and figuring out how the various interests in the region can be reconciled, given diminished capacity for both the U.S. and Iran, is there a chance that peace – or at least a period of the absence of open conflict – might start to break out?

#### ( ) No alt causes – Iran’s economy would not be able to recover and oil is key

Kudlow ‘7

[Larry. Host of CNBC’s Kudlow & Company. “Investors Say: Give the Iraq Plan a Chance. I agree” 1/12/7,

And let’s not forget that plunging oil prices — from nearly $80 a barrel all the way down to $52 — will do severe damage to Iran’s already tenuous fiscal position. As the new U.S. security blanket protects Persian Gulf shipping lanes from any Iranian mischief, continued oil-price declines will bleed the weak Iranian economy. That, in turn, will undermine Iran’s ability to financially assist terrorist groups like Hezbollah and Hamas, or anti-American factions in Iraq. Think of it: Falling oil prices not only reflect lower war and political risk, but they are actually doing enormous damage to one of the Middle East’s top risk producers: Iran.

#### ( ) Iranian-sponsored terrorist attacks cause nuclear war

Speice ‘6

[Patrick. JD Candidate at William and Mary, 2003 BA from Wake Forest. “Note: Negligence and Nuclear Nonproliferation: Eliminating the Current Liability Barrier to Bilateral US-Russian Nonproliferation Assistance Programs” William and Mary Law Review, Feb 2006 ln]

The potential consequences of the unchecked spread of nuclear knowledge and material to terrorist groups that seek to cause mass destruction in the United States are truly horrifying. A terrorist attack with a nuclear weapon would be devastating in terms of immediate human and economic losses. 49 Moreover, there would be immense political pressure in the United States to discover the perpetrators and retaliate with nuclear weapons, massively increasing the number of casualties and potentially triggering a full-scale nuclear conflict. 50 In addition to the threat posed by terrorists, leakage of nuclear knowledge and material from Russia will reduce the barriers that states with nuclear ambitions face and may trigger widespread proliferation of nuclear weapons. 51 This proliferation will increase the risk of nuclear attacks against the United States [\*1440] or its allies by hostile states**,** 52 as well as increase the likelihood that regional conflicts will draw in the United States and escalate to the use of nuclear weapons. 53

#### Scenario 2 is Dependence:

#### ( ) It makes extinction inevitable – try or die for the aff

Freeman ‘4

[Robert. Energy Expert @ Heritage Foundation. “Will the End of Oil mean the End of America?” [www.commondreams.org](http://www.commondreams.org) Feb 2004]

America has its own hand in a coconut, one that may doom it just as surely as the monkey. That coconut is its dependence on cheap oil in a world where oil will soon come to an end. The choice we face (whether to let the food go or hold onto it) is whether to wean ourselves off of oil—to quickly evolve a new economy and a new basis for civilization—or to continue to secure stable supplies from the rest of the world by force. As with Pirsig’s monkey, the alternative consequences of each choice could not be more dramatic. Weaning ourselves off of cheap oil, while not easy, will help ensure the vitality of the American economy and the survival of its political system. Choosing the route of force will almost certainly destroy the economy and doom America’s short experiment in democracy. To date, we have chosen the second alternative: to secure oil by force. The evidence of its consequences are all around us. They include the titanic US budget and trade deficits funding a gargantuan, globally-deployed military and the Patriot Act and its starkly anti-democratic rescissions of civil liberties. **There is little time left to change this choice before its consequences become irreversible.** The world is quickly running out of oil. In the year 2000, global production stood at 76 Million Barrels per Day (MBD). By 2020, demand is forecast to reach 112 MBD, an increase of 47%. But additions to proven reserves have virtually stopped and it is clear that pumping at present rates is unsustainable. Estimates of the date of “peak global production” vary with some experts saying it already may have occurred as early as the year 2000. New Scientist magazine recently placed the year of peak production in 2004. Virtually all experts believe it will almost certainly occur before the end of this decade. And the rate of depletion is accelerating. Imagine a production curve that rises slowly over 145 years—the time since oil was discovered in Pennsylvania in 1859. Over this time, the entire world shifted to oil as the foundation of industrial civilization. It invested over one hundreds trillion dollars in a physical infrastructure and an economic system run entirely on oil. But oil production is now at its peak and the right hand side of the curve is a virtual drop off. Known reserves are being drawn down at 4 times the rate of new discoveries. The reason for the drop off is that not only have all the “big” discoveries already been made, the rate of consumption is increasing dramatically. Annual world energy use is up five times since 1945. Increases are now driven by massive developing countries—China, India, Brazil—growing and emulating first or at least second world consumption standards. Fixed supply. Stalled discoveries. Sharply increased consumption. This is the formula for global oil depletion within the next few decades. The situation is especially critical in the US. With barely 4% of the world’s population, the US consumes 26% of the world’s energy. But the US produced only 9 MBD in 2000 while consuming 19 MBD. It made up the difference by importing 10 MBD, or 53% of its needs. By 2020, the US Department of Energy forecasts domestic demand will grow to 25 MBD but production will be down to 7 MBD. The daily shortfall of 18 MBD or 72% of needs, will all need to be imported. Perhaps it goes without saying but it deserves repeating anyway: oil is the sine qua non of “industrial” civilization—the one thing without which such civilization cannot exist. All of the world’s 600 million automobiles depend on oil. So do virtually all other commodities and critical processes: airlines, chemicals, plastics, medicines, agriculture, heating, etc. Almost all of the increase in world food productivity over the past 50 years is attributable to increases in the use of oil-derived additives: pesticides; herbicides; fungicides; fertilizers; and machinery. When oil is gone, civilization will be stupendously different. The onset of rapid depletion will trigger convulsions on a global scale, including, likely, global pandemics and die-offs of significant portions of the world’s human population. The “have” countries will face the necessity kicking the “have-nots” out of the global lifeboat in order to assure their own survival. Even before such conditions are reached, inelastic supply interacting with inelastic demand will drive the price of oil and oil-derived commodities through the stratosphere, effecting by market forces alone massive shifts in the current distribution of global wealth. If the US economy is not to grind to a halt under these circumstances it must choose one of three alternate strategies: dramatically lower its living standards (something it is not willing to do); substantially increase the energy efficiency of its economy; or make up the shortfall by securing supplies from other countries. President Bush’s National Energy Policy published in March 2001 explicitly commits the US to the third choice: Grab the Oil. It is this choice that is now driving US military and national security policy. And, in fact, the past 60 years of US policy in the Middle East can only be understood as the effort to control access to the world’s largest supply of oil. Witness, for example, the deep US embrace of Saudi Arabia since World War II. One quarter of all US weapons sales between 1950 and 2000 went to Saudi Arabia despite its horrifically repressive, literally medieval tribal nature. The CIA’s overthrow of Mohamed Mosadegh in Iran in 1953 after he nationalized his country’s oil is another example. So, too, was the US strategic embrace of Israel during the 1967 Six Day War. The US was deeply mired in Vietnam but needed a “cop on the beat” to challenge Arab states—Egypt, Iraq, Syria, Yemen—that were “going Soviet.” It has stuck with that relationship ever since. More recent examples of national strategy in bondage to the compulsion for oil include US support for Saddam Hussein in the Iran/Iraq War; its support for Osama bin Laden in the Afghanistan War against the Soviet Union; and, of course, the most recent invasion of Iraq to seize its oilfields and forward position US forces for an invasion of neighboring Saudi Arabia when it is inevitably destroyed by internal civil war. And **under a Grab the Oil strategy, militarization of US society will only deepen**. The reason is that a very major portion of the world’s oil is, by accident of geology, in the hands of states hostile to the US. Fully 60% percent of the world’s proven reserves of oil are in the Persian Gulf. They lie beneath Muslim countries undergoing a religious revolution that wants to return the industrial world to a pre-modern order governed by a fundamentalist Islamic theocracy. Saudi Arabia alone controls 25% of all the world’s oil, more than that of North America, South America, Europe and Africa combined. Kuwait, Iran and Iraq, each control approximately 10% of the world’s oil. Another 15% of the world’s oil lies in the Caspian Sea region, also a dominantly Muslim region. It includes a group of post-Soviet, satellite and buffer states that lack any semblance of legal or market systems. They are extraordinarily corrupt, really just Gangster Thugocracies masquerading as countries. Think Afghanistan. Both Russia and China consider this region part of their “sphere of strategic influence” portending significant clashes for the US over coming decades. As long as the US chooses the Grab the Oil alternative, the implications for national policy are inescapable. The combination of all these facts—fixed supply, rapid depletion, lack of alternatives, severity of consequences, and hostility of current stockholding countries—drive the US to HAVE to adopt an aggressive and pre-emptive military posture and to carry out a nakedly colonial expropriation of resources from weaker countries around the world. This is why the US operates some 700 military bases around the world and spends over half a trillion dollars per year on military affairs, more than all the rest of the world—its “allies” included—combined. This is why the Defense Department’s latest Quadrennial Review stated, “The US must retain the capability to send well-armed and logistically supported forces to critical points around the globe, even in the face of enemy opposition.” This is why Pentagon brass say internally that current force levels are inadequate to the strategic challenges they face and that they will have to re-instate the draft after the 2004 elections. But the provocation occasioned by grabbing the oil, especially from nations ideologically hostile to the US, means that military attacks on the US and the recourse to military responses will only intensify until the US is embroiled in unending global conflict. This is the perverse genius of the Grab the Oil strategy: it comes with its own built-in escalation, its own justification for ever more militarization—without limit. It will blithely consume the entire US economy, the entire society, without being sated. It is, in homage to Orwell, Perpetual War for Perpetual Grease.

#### ( ) Price spikes are also inevitable – makes global economic collapse an unavoidable reality

Supply Chain ‘8

[The Supply Chain Digest. “Does US Need a “No Oil” Contingency Plan?” http://www.scdigest.com/assets/On\_Target/08-09-30-3.php?cid=1964, 9/30/8]

To say that there are some stress points in the world right now is an understatement. From the global financial crisis to accelerating Russian aggression, the “hot spots” in both a geographic and political/economic sense are many. With that backdrop, does the US need a national plan that lays out a blueprint for something almost unthinkable – a highly restricted flow of oil? Yes, says Edwin Black, an author who has just written a new book titled The Plan: How to Save America When the Oil Stops — or the Day Before. “Government has prepared for hurricanes, anthrax, terrorism and every other disaster, but not the one threatened daily — a protracted oil stoppage, whether caused by terrorism, intervention in the Persian Gulf or a natural disaster,” Black says. Is such a scenario worth planning for? It would seem so. The US currently imports about 60% of its total oil consumption. While friendly neighbors Canada and Mexico are the number 1 and 3 sources of those oil imports, much less secure and stable sources such as Saudi Arabia, Venezuela and Nigeria make up the rest of the top 5 (see chart below). In a global crisis, no one can be sure how much oil might move even from friendly countries. “First the trucks and shippers will curtail shipments. Shelves will become scant and in some cases bare,” Black cheerfully notes in the book's first pages. “Quickly, unemployment will become epidemic as people are laid off due to economic contraction or because many will simply be unable to get to work. That in turn will worsen the country’s economic convulsion. Mobile America will cease to exist as we knew it because transportation via automobiles, taxis, buses, planes and other vehicular traffic will become an ever more unaffordable luxury. When people cannot get from Point A to Point B, the nation’s economic vitality will quickly wither.” There are a variety of risks, ranging from those that would curtail the flow of oil modestly to ones where global trade in oil would be significantly stanched. Example scenarios that would impede the flow of oil could include war in the Middle East, further Russian aggression and energy extortion, terrorist actions against pipelines or ports, etc. Black says, for example, that should there be a military strike in the Strait of Hormuz near Iran, the US would have to tap its Strategic Petroleum Reserve immediately. “Like any snow emergency, water drought or natural disaster, a national oil supply emergency should be governed by a plan,” Black states. “A Plan? America does not have such a plan. No Plan A. No Plan B.”

#### ( ) Economic collapse causes extinction

Freidberg and Schoenfeld ‘8

[\*Professor of Politics and IR at Princeton’s Woodrow Wilson School, AND \*\*senior editor of Commentary and a visiting scholar at the Witherspoon Institute in Princeton (10/21/2008, Aaron and Gabriel, “The Dangers of a Diminished America”, Wall Street Journal, http://online.wsj.com/article/SB122455074012352571.html?mod=googlenews\_wsj]

With the global financial system in serious trouble, is America's geostrategic dominance likely to diminish? If so, what would that mean?¶ One immediate implication of the crisis that began on Wall Street and spread across the world is that the primary instruments of U.S. foreign policy will be crimped. The next president will face an entirely new and adverse fiscal position. Estimates of this year's federal budget deficit already show that it has jumped $237 billion from last year, to $407 billion. With families and businesses hurting, there will be calls for various and expensive domestic relief programs.¶ In the face of this onrushing river of red ink, both Barack Obama and John McCain have been reluctant to lay out what portions of their programmatic wish list they might defer or delete. Only Joe Biden has suggested a possible reduction -- foreign aid. This would be one of the few popular cuts, but in budgetary terms it is a mere grain of sand. Still, Sen. Biden's comment hints at where we may be headed: toward a major reduction in America's world role, and perhaps even a new era of financially-induced isolationism.¶ Pressures to cut defense spending, and to dodge the cost of waging two wars, already intense before this crisis, are likely to mount. Despite the success of the surge, the war in Iraq remains deeply unpopular. Precipitous withdrawal -- attractive to a sizable swath of the electorate before the financial implosion -- might well become even more popular with annual war bills running in the hundreds of billions.¶ Protectionist sentiments are sure to grow stronger as jobs disappear in the coming slowdown. Even before our current woes, calls to save jobs by restricting imports had begun to gather support among many Democrats and some Republicans. In a prolonged recession, gale-force winds of protectionism will blow.¶ Then there are the dolorous consequences of a potential collapse of the world's financial architecture. For decades now, Americans have enjoyed the advantages of being at the center of that system. The worldwide use of the dollar, and the stability of our economy, among other things, made it easier for us to run huge budget deficits, as we counted on foreigners to pick up the tab by buying dollar-denominated assets as a safe haven. Will this be possible in the future?¶ Meanwhile, traditional foreign-policy challenges are multiplying. The threat from al Qaeda and Islamic terrorist affiliates has not been extinguished. Iran and North Korea are continuing on their bellicose paths, while Pakistan and Afghanistan are progressing smartly down the road to chaos. Russia's new militancy and China's seemingly relentless rise also give cause for concern.¶ If America now tries to pull back from the world stage, it will leave a dangerous power vacuum. The stabilizing effects of our presence in Asia, our continuing commitment to Europe, and our position as defender of last resort for Middle East energy sources and supply lines could all be placed at risk.¶ In such a scenario there are shades of the 1930s, when global trade and finance ground nearly to a halt, the peaceful democracies failed to cooperate, and aggressive powers led by the remorseless fanatics who rose up on the crest of economic disaster exploited their divisions. Today we run the risk that **rogue states may choose to become ever more reckless with their nuclear toys**, just at our moment of maximum vulnerability.¶ The aftershocks of the financial crisis will almost certainly rock our principal strategic competitors even harder than they will rock us. The dramatic free fall of the Russian stock market has demonstrated the fragility of a state whose economic performance hinges on high oil prices, now driven down by the global slowdown. China is perhaps even more fragile, its economic growth depending heavily on foreign investment and access to foreign markets. Both will now be constricted, inflicting economic pain and perhaps even sparking unrest in a country where political legitimacy rests on progress in the long march to prosperity.¶ None of this is good news if the authoritarian leaders of these countries seek to divert attention from internal travails with external adventures.¶ As for our democratic friends, the present crisis comes when many European nations are struggling to deal with decades of anemic growth, sclerotic governance and an impending demographic crisis. Despite its past dynamism, Japan faces similar challenges. India is still in the early stages of its emergence as a world economic and geopolitical power.¶ What does this all mean? There is no substitute for America on the world stage. The choice we have before us is between the potentially disastrous effects of disengagement and the stiff price tag of continued American leadership.

#### ( ) Natural gas vehicles are best-suited to resolve oil dependence – price, abundant reserves, and trucking

Pickens ‘5

T. Boone Pickens, founder and chairman of BP Capital, February 05, 2012¶ “Rev up tapping of our own natural gas”¶ <http://articles.chicagotribune.com/2012-02-05/news/ct-perspec-0205-energy-20120205_1_natural-gas-natural-gas-vast-shale-deposits>

If you are going to transform American energy to address the national security and economic risks associated with our OPEC oil dependence, there is only one solution: move our natural gas reserves into transportation, with an emphasis on the [heavy-duty truck](http://articles.chicagotribune.com/2012-02-05/news/ct-perspec-0205-energy-20120205_1_natural-gas-natural-gas-vast-shale-deposits) and fleet-vehicle markets. Free-market advocates argue that's bad public policy. They fail to understand that OPEC is far from a free market. They'll tell you we shouldn't pick winners and losers in the transportation fuel segments. I say it's time to pick America over OPEC. Let's go with anything American. I'm fine with the battery, but remember, it won't move an 18-wheeler. Imagine the impact natural gas could have in solving our energy problem. Targeting [heavy-duty trucks](http://articles.chicagotribune.com/2012-02-05/news/ct-perspec-0205-energy-20120205_1_natural-gas-natural-gas-vast-shale-deposits) and fleet vehicles — about 8.5 million in all — could cut our OPEC oil dependence in half in 10 years or less. Fortunately, while we wait for Washington policymakers to lead, the move to replace more expensive, dirtier OPEC oil, diesel or gasoline with cheaper, cleaner domestic natural gas is gaining private-sector support. At an event in Chicago last week, two leaders in the natural gas vehicle industry — Navistar and Clean Energy Fuels — announced a plan to aggressively develop a comprehensive system to build natural-gas [truck](http://articles.chicagotribune.com/2012-02-05/news/ct-perspec-0205-energy-20120205_1_natural-gas-natural-gas-vast-shale-deposits) engines and provide the infrastructure to fuel them. Over-the-road trucks tend to run the same routes on the same schedule. Drivers stop in the same places to rest, eat and refuel. Putting natural-gas refueling stations along the major travel routes is a relatively minor logistical issue. Building natural-gas engines for those trucks will be a major job creator. We're a country awash in natural gas. Since 2008, the biggest shift in energy resources has been the enormous reserves of natural gas in the vast shale deposits in Texas, Louisiana, Arkansas and Appalachia. New deposits are being tested in places like Iowa and Ohio, but even now, we have a 125-year supply of domestic natural gas literally under our collective feet. On the world market, natural gas is [selling](http://articles.chicagotribune.com/2012-02-05/news/ct-perspec-0205-energy-20120205_1_natural-gas-natural-gas-vast-shale-deposits) from $12 per million cubic feet in Europe to $16 in the Middle East. The price in the United States? Less than $3 because of our massive reserves. Getting that natural gas out of the ground and into our [rolling stock](http://articles.chicagotribune.com/2012-02-05/news/ct-perspec-0205-energy-20120205_1_natural-gas-natural-gas-vast-shale-deposits) is another major job creator. A recent study by PricewaterhouseCoopers LLP suggests that by utilizing America's shale gas resources, "U.S. manufacturers could employ approximately 1 million more workers by 2025." America is sending nearly $1 million a minute out of the country to pay for foreign oil. We're paying about $100 per barrel for foreign oil and, in the case of OPEC oil, often to nations that are hostile to our best interests. With gasoline at the pump climbing toward $4 per gallon we might have thought energy would have emerged as a top-tier election year issue. In spite of the lingering threat to our economic recovery and our national security, it has not. For more than four decades, every presidential candidate has said something to the effect of "Elect me, and we'll be energy independent." That's four decades of failed promises. Once we have serious fuel competition, we can control our energy destiny, have a better grasp on our energy costs and achieve what we've been promised for decades. To make that happen, we have to get on our own resources and in this case natural gas is an obvious winner.

### 1AC Warming

#### ( ) Warming’s real, fast, human-induced and causes extinction

Morgan ‘9

[Professor of Current Affairs @ Hankuk University of Foreign Studies, South Korea (Dennis Ray, “World on fire: two scenarios of the destruction of human civilization and possible extinction of the human race”, Futures, Volume 41, Issue 10, December 2009, Pages 683-693, ScienceDirect]

As horrifying as the scenario of human extinction by sudden, fast-burning nuclear fire may seem, the one consolation is that this future can be avoided within a relatively short period of time if responsible world leaders change Cold War thinking to move away from aggressive wars over natural resources and towards the eventual dismantlement of most if not all nuclear weapons. On the other hand, another scenario of human extinction by fire is one that may not so easily be reversed within a short period of time because it is not a fast-burning fire; rather, a slow burning fire is gradually heating up the planet as industrial civilization progresses and develops globally. This gradual process and course is long-lasting; thus it cannot easily be changed, even if responsible world leaders change their thinking about ‘‘progress’’ and industrial development based on the burning of fossil fuels. The way that global warming will impact humanity in the future has often been depicted through the analogy of the proverbial frog in a pot of water who does not realize that the temperature of the water is gradually rising. Instead of trying to escape, the frog tries to adjust to the gradual temperature change; finally, the heat of the water sneaks up on it until it is debilitated. Though it finally realizes its predicament and attempts to escape, it is too late; its feeble attempt is to no avail— **and the frog dies**. Whether this fable can actually be applied to frogs in heated water or not is irrelevant; it still serves as a comparable scenario of how the slow burning fire of global warming may eventually lead to a runaway condition and take humanity by surprise. Unfortunately, by the time the politicians finally all agree with the scientific consensus that global warming is indeed human caused, its development could be too advanced to arrest; the poor frog has become too weak and enfeebled to get himself out of hot water. The Intergovernmental Panel of Climate Change (IPCC) was established in 1988 by the WorldMeteorological Organization (WMO) and the United Nations Environmental Programme to ‘‘assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of humaninduced climate change, its potential impacts and options for adaptation and mitigation.’’[16]. Since then, it has given assessments and reports every six or seven years. Thus far, it has given four assessments.13 With all prior assessments came attacks fromsome parts of the scientific community, especially by industry scientists, to attempt to prove that the theory had no basis in planetary history and present-day reality; nevertheless, as more andmore research continually provided concrete and empirical evidence to confirm the global warming hypothesis, that it is indeed human-caused, mostly due to the burning of fossil fuels, the scientific consensus grew stronger that human induced global warming is verifiable. As a matter of fact, according to Bill McKibben [17], 12 years of ‘‘impressive scientific research’’ strongly confirms the 1995 report ‘‘that humans had grown so large in numbers and especially in appetite for energy that they were now damaging the most basic of the earth’s systems—the balance between incoming and outgoing solar energy’’; ‘‘. . . their findings have essentially been complementary to the 1995 report – a constant strengthening of the simple basic truth that humans were burning too much fossil fuel.’’ [17]. Indeed, 12 years later, the 2007 report not only confirms global warming, with a stronger scientific consensus that the slow burn is ‘‘very likely’’ human caused, but it also finds that the ‘‘amount of carbon in the atmosphere is now increasing at a faster rate even than before’’ and the temperature increases would be ‘‘considerably higher than they have been so far were it not for the blanket of soot and other pollution that is temporarily helping to cool the planet.’’ [17]. Furthermore, almost ‘‘everything frozen on earth is melting. Heavy rainfalls are becoming more common since the air is warmer and therefore holds more water than cold air, and ‘cold days, cold nights and frost have become less frequent, while hot days, hot nights, and heat waves have become more frequent.’’ [17]. Unless drastic action is taken soon, the average global temperature is predicted to rise about 5 degrees this century, but it could rise as much as 8 degrees. As has already been evidenced in recent years, the rise in global temperature is melting the Arctic sheets. This runaway polar melting will inflict great damage upon coastal areas, which could be much greater than what has been previously forecasted. However, what is missing in the IPCC report, as dire as it may seem, is sufficient emphasis on the less likely but still plausible worst case scenarios, which could prove to have the most devastating, catastrophic consequences for the long-term future of human civilization. In other words, the IPCC report places too much emphasis on a linear progression that does not take sufficient account of the dynamics of systems theory, which leads to a fundamentally different premise regarding the relationship between industrial civilization and nature. As a matter of fact, as early as the 1950s, Hannah Arendt [18] observed this radical shift of emphasis in the human-nature relationship, which starkly contrasts with previous times because the very distinction between nature and man as ‘‘Homo faber’’ has become blurred, as man no longer merely takes from nature what is needed for fabrication; instead, he now acts into nature to augment and transform natural processes, which are then directed into the evolution of human civilization itself such that we become a part of the very processes that we make. The more human civilization becomes an integral part of this dynamic system, the more difficult it becomes to extricate ourselves from it. As Arendt pointed out, this dynamism is dangerous because of its unpredictability. Acting into nature to transform natural processes brings about an . . . endless new change of happenings whose eventual outcome the actor is entirely incapable of knowing or controlling beforehand. The moment we started natural processes of our own - and the splitting of the atom is precisely such a man-made natural process -we not only increased our power over nature, or became more aggressive in our dealings with the given forces of the earth, but for the first time have taken nature into the human world as such and obliterated the defensive boundaries between natural elements and the human artifice by which all previous civilizations were hedged in’’ [18]. So, in as much as we act into nature, we carry our own unpredictability into our world; thus, Nature can no longer be thought of as having absolute or iron-clad laws. We no longer know what the laws of nature are because the unpredictability of Nature increases in proportion to the degree by which industrial civilization injects its own processes into it; through selfcreated, dynamic, transformative processes, we carry human unpredictability into the future with a precarious recklessness that may indeed end in human catastrophe or extinction, for elemental forces that we have yet to understand may be unleashed upon us by the very environment that we experiment with. Nature may yet have her revenge and the last word, as the Earth and its delicate ecosystems, environment, and atmosphere reach a tipping point, which could turn out to be a point of no return. This is exactly the conclusion reached by the scientist, inventor, and author, James Lovelock. The creator of the wellknown yet controversial Gaia Theory, Lovelock has recently written that it may be already too late for humanity to change course since climate centers around the world, . . . which are the equivalent of the pathology lab of a hospital, have reported the Earth’s physical condition, and the climate specialists see it as seriously ill, and soon to pass into a morbid fever that may last as long as 100,000 years. I have to tell you, as members of the Earth’s family and an intimate part of it, that you and especially civilisation are in grave danger. It was ill luck that we started polluting at a time when the sun is too hot for comfort. We have given Gaia a fever and soon her condition will worsen to a state like a coma. She has been there before and recovered, but it took more than 100,000 years. We are responsible and will suffer the consequences: as the century progresses, the temperature will rise 8 degrees centigrade in temperate regions and 5 degrees in the tropics. Much of the tropical land mass will become scrub and desert, and will no longer serve for regulation; this adds to the 40 per cent of the Earth’s surface we have depleted to feed ourselves. . . . Curiously, aerosol pollution of the northern hemisphere reduces global warming by reflecting sunlight back to space. This ‘global dimming’ is transient and could disappear in a few days like the smoke that it is, leaving us fully exposed to the heat of the global greenhouse. We are in a fool’s climate, accidentally kept cool by smoke, and before this century is over billions of us will die and the few breeding pairs of people that survive will be in the Arctic where the climate remains tolerable. [19] Moreover, Lovelock states that the task of trying to correct our course is hopelessly impossible, for we are not in charge. It is foolish and arrogant to think that we can regulate the atmosphere, oceans and land surface in order to maintain the conditions right for life. It is as impossible as trying to regulate your own temperature and the composition of your blood, for those with ‘‘failing kidneys know the never-ending daily difficulty of adjusting water, salt and protein intake. The technological fix of dialysis helps, but is no replacement for living healthy kidneys’’ [19]. Lovelock concludes his analysis on the fate of human civilization and Gaia by saying that we will do ‘‘our best to survive, but sadly I cannot see the United States or the emerging economies of China and India cutting back in time, and they are the main source of emissions. The worst will happen and survivors will have to adapt to a hell of a climate’’ [19]. Lovelock’s forecast for climate change is based on a systems dynamics analysis of the interaction between humancreated processes and natural processes. It is a multidimensional model that appropriately reflects the dynamism of industrial civilization responsible for climate change. For one thing, it takes into account positive feedback loops that lead to ‘‘runaway’’ conditions. This mode of analysis is consistent  with recent research on how ecosystems suddenly disappear. A 2001 article in Nature, based on a scientific study by an international consortium, reported that changes in ecosystems are not just gradual but are often sudden and catastrophic [20]. Thus, a scientific consensus is emerging (after repeated studies of ecological change) that ‘‘stressed ecosystems, given the right nudge, are capable of slipping rapidly from a seemingly steady state to something entirely different,’’ according to Stephen Carpenter, a limnologist at the University of Wisconsin-Madison (who is also a co-author of the report). Carpenter continues, ‘‘We realize that there is a common pattern we’re seeing in ecosystems around the world, . . . Gradual **changes in vulnerability accumulate and** eventually **you get a shock** to the system - a flood or a drought - and, boom, you’re over into another regime. It becomes a self-sustaining collapse.’’ [20]. If ecosystems are in fact mini-models of the system of the Earth, as Lovelock maintains, then we can expect the same kind of behavior. As Jonathon Foley, a UW-Madison climatologist and another co-author of the Nature report, puts it, ‘‘Nature isn’t linear. Sometimes you can push on a system and push on a system and, finally, you have the straw that breaks the camel’s back.’’ Also, once the ‘‘flip’’ occurs, as Foley maintains, then the catastrophic change is ‘‘irreversible.’’ [20]. When we expand this analysis of ecosystems to the Earth itself, it’s frightening. What could be the final push on a stressed system that could ‘‘break the camel’s back?’’ Recently, another factor has been discovered in some areas of the arctic regions, which will surely compound the problem of global ‘‘heating’’ (as Lovelock calls it) in unpredictable and perhaps catastrophic ways. This disturbing development, also reported in Nature, concerns the permafrost that has locked up who knows how many tons of the greenhouse gasses, methane and carbon dioxide. Scientists are particularly worried about permafrost because, as it thaws, it releases these gases into the atmosphere, thus, contributing and accelerating global heating. It is a vicious positive feedback loop that compounds the prognosis of global warming in ways that could very well prove to be the tipping point of no return. Seth Borenstein of the Associated Press describes this disturbing positive feedback loop of permafrost greenhouse gasses, as when warming ‘‘. already under way thaws permafrost, soil that has been continuously frozen for thousands of years. Thawed permafrost releases methane and carbon dioxide. Those gases reach the atmosphere and help trap heat on Earth in the greenhouse effect. The trapped heat thaws more permafrost and so on.’’ [21]. The significance and severity of this problem cannot be understated since scientists have discovered that ‘‘the amount of carbon trapped in this type of permafrost called ‘‘yedoma’’ is much more prevalent than originally thought and may be 100 times [my emphasis] the amount of carbon released into the air each year by the burning of fossil fuels’’ [21]. Of course, it won’t come out all at once, at least by time as we commonly reckon it, but in terms of geological time, the ‘‘several decades’’ that scientists say it will probably take to come out can just as well be considered ‘‘all at once.’’ Surely, within the next 100 years, much of the world we live in will be quite hot and may be unlivable, as Lovelock has predicted. Professor Ted Schuur, a professor of ecosystem ecology at the University of Florida and co-author of the study that appeared in Science, describes it as a ‘‘slow motion time bomb.’’ [21]. Permafrost under lakes will be released as methane while that which is under dry ground will be released as carbon dioxide. Scientists aren’t sure which is worse. Whereas methane is a much more powerful agent to trap heat, it only lasts for about 10 years before it dissipates into carbon dioxide or other chemicals. The less powerful heat-trapping agent, carbon dioxide, lasts for 100 years [21]. Both of the greenhouse gasses present in permafrost represent a global dilemma and challenge that compounds the effects of global warming and runaway climate change. The scary thing about it, as one researcher put it, is that there are ‘‘lots of mechanisms that tend to be self-perpetuating and relatively few that tend to shut it off’’ [21].14 In an accompanying AP article, Katey Walters of the University of Alaska at Fairbanks describes the effects as ‘‘huge’’ and, unless we have a ‘‘major cooling,’’ - unstoppable [22]. Also, there’s so much more that has not even been discovered yet, she writes: ‘‘It’s coming out a lot and there’s a lot more to come out.’’ [22]. 4. Is it the end of human civilization and possible extinction of humankind? What Jonathon Schell wrote concerning death by the fire of nuclear holocaust also applies to the slow burning death of global warming: Once we learn that a holocaust might lead to extinction**,** we have no right to gamble, because if we lose, the game will be over, and neither we nor anyone else will ever get another chance. Therefore, although, scientifically speaking, there is all the difference in the world between the mere possibility that a holocaust will bring about extinction and the certainty of it, morally they are the same, and we have no choice but to address the issue of nuclear weapons as though we knew for a certainty that their use would put an end to our species [23].15 When we consider that beyond the horror of nuclear war, another horror is set into motion to interact with the subsequent nuclear winter to produce a poisonous and super heated planet, the chances of human survival seem even smaller. Who knows, even if some small remnant does manage to survive, what the poisonous environmental conditions would have on human evolution in the future. A remnant of mutated, sub-human creatures might survive such harsh conditions, but for all purposes, human civilization has been destroyed, and the question concerning human extinction becomes moot. Thus, **we have** no other choice but **to consider the finality of it all**, as Schell does: ‘‘Death lies at the core of each person’s private existence, but part of death’s meaning is to be found in the fact that it occurs in a biological and social world that survives.’’ [23].16 But what if the world itself were to perish, Schell asks. Would not it bring about a sort of ‘‘second death’’ – the death of the species – a possibility that the vast majority of the human race is in denial about? Talbot writes in the review of Schell’s book that it is not only the ‘‘death of the species, not just of the earth’s population on doomsday, but of countless unborn generations. They would be spared literal death but would nonetheless be victims . . .’’ [23]. That is the ‘‘second death’’ of humanity – the horrifying, unthinkable prospect that there are no prospects – that there will be no future. In the second chapter of Schell’s book, he writes that since we have not made a positive decision to exterminate ourselves but instead have ‘‘chosen to live on the edge of extinction, periodically lunging toward the abyss only to draw back at the last second, our situation is one of uncertainty and nervous insecurity rather than of absolute hopelessness.’’ [23].17 In other words, the fate of the Earth and its inhabitants has not yet been determined. Yet time is not on our side. Will we relinquish the fire and our use of it to dominate the Earth and each other, or will we continue to gamble with our future at this game of Russian roulette while **time** increasingly **stacks the cards against** our chances of **survival**?

#### ( ) Natural gas vehicles are key to reverse the trend

Beddor et al, ’9

[Christopher, Securing America’s Future Enhancing Our National Security by Reducing Oil Dependence and Environmental Damage, Aug, <http://www.americanprogress.org/issues/2009/08/pdf/energy_security.pdf>]

Natural gas is “by the far the cleanest burning” fossil fuel, and produces slightly more than one-fifth of all U.S. energy.40 Oil and coal combined comprise about two-thirds of all energy consumption, and their combustion produces substantially more global warming and other conventional pollution than natural gas. Combusting natural gas to power motor vehicles produces about one-third of the global warming pollution of petroleum burned in cars.41 It should therefore play a larger role in our energy mix and help reduce our oil use given its domestic abundance and its lower pollutant levels.

####  ( ) Emissions and the next decade are key

Anair and Mahmassani ‘12

[bachelor's and master's degrees in electrical engineering from Cornell University, senior analyst and engineer in the California office of the Union of Concerned Scientists' Clean Vehicles Program AND \*\*degree in Electrical Engineering from the University of Maryland, College Park and degree in Transportation Technology and Policy from the University of California, Davis, Vehicles Analyst/Engineer with UCS (“State of Charge: Electric Vehicles’ Global Warming Emissions and Fuel-Cost Savings across the United States”, Union of Concerned Scientists, April 2012, http://www.ucsusa.org/assets/documents/clean\_vehicles/electric-car-global-warming-emissions-report.pdf]

To meet the challenge of climate change and reduce our nation’s dependence on oil, continuing to run our cars and trucks predominantly on oil-based fuels is not an option. On the other hand, electric vehicles—coupled with clean and sustainable electricity—are important parts of the solution. Driving on electricity is a reality; it provides global warming benefits today and throughout the United States. Nearly half of Americans live in regions where driving an electric vehicle means lower global warming emissions than driving even the best hybrid gasoline vehicle available. Over the lifetime of an EV, the owner can save more than 6,000 gallons of gasoline—a significant contribution to U.S. energy security. But our nation’s reliance on coal-powered electricity limits electric vehicles from delivering their full potential. Only by making improvements to our electricity grid—by decreasing the use of coal and increasing the use of clean and renewable sources of electricity—will electric vehicles deliver their greatest global warming and air pollution benefits. Initiatives to clean up the electricity grid are occurring around the country, but additional efforts are needed both at the state and national level to ensure continued progress. Of course, cleaning up the nation’s electricity production won’t deliver large reductions in the transportation sector’s emissions and oil consumption unless electric vehicles become a market success. While they are now coming onto the market in a much bigger way than ever before, EVs still face many hurdles, including higher up-front costs than gasoline vehicles. Lower fueling costs for EVs, however, provide an important incentive for purchasing them, and our cost analysis of 50 cities across the country shows that EV owners can start saving money immediately on fuel costs by using electricity in place of gasoline. Meanwhile, utilities’ leaders and government policy makers have important roles to play: they must ensure electricity rate plans motivate EV ownership, and they must encourage charging behavior that supports lower emissions and a robust electricity grid. To prevent the worst consequences of global warming, the automotive industry must deliver viable alternatives to the oil-fueled internal-combustion engine— i.e., vehicles boasting zero or near-zero emissions. Such alternative technologies must become market successes in the next 10 to 15 years if they are to comprise the majority of vehicles on the road by 2050—a critical element to reaching an 80 percent reduction in global warming emissions by that year. EVs promise to be one of those technologies, but their success is not assured. To turn the nascent EV market into a mainstream phenomenon over the coming years, continued investments are needed for improving EVs’ performance and costs, incentivizing consumers and manufacturers, expanding accessible charging infrastructure, and reducing barriers to low-cost home charging.

#### ( ) The plan results in a 30% cut in all fuel cycle emissions

NWGA ‘11

[The Northwestern Gas Assc. “Natural Gas Vehicles: Today’s Transportation Solution” 10/27/11, http://www.nwga.org/wp-content/uploads/2012/06/ngvoverview.pdf ]

On a total fuel cycle (“well-to-wheels”) basis, the use of natural gas for transportation reduces GHG emissions up to 30 percent compared with conventional transportation fuels. Across most of the world, NGVs’ overall carbon footprint is also smaller than that of electric vehicles (factoring in emissions from coal-generated electricity).

### 1AC Solvency

#### Solvency:

#### ( ) Investment for refueling infrastructure is key – it tips the market and gives automakers confidence necessary to develop

Tanzy and Houk ‘11

[Kathleen Tanzy, Director of Strategic Industry Communications and Steve Houk, Director of Marketing and Promotion Washington - July 18, 2011 Fueling stations key for US shift to natural gas-powered wehicles, Chesapeake Energy CEO tells Platts Energy Week, <http://www.platts.com/PressReleases/2011/071811>, OTT]

Energy executives, politicians and others who are pushing to create a prominent role for natural gas-powered cars and trucks in the US have long pondered a “chicken-or-egg”-type question: should they focus on building the vehicles first, or the fueling stations and other specialized infrastructure they need to thrive? “We think the most important thing right now is to get the infrastructure in place,” [Aubrey McClendon, CEO Chesapeake Energy](http://www.plattsenergyweektv.com/video/default.aspx#/07.17.11+Chesapeake+Energy+Interview/1057630174001), the US’ second-largest gas producer, said Sunday on the [Platts Energy Week](http://www.platts.com/PressReleases/2011/www.plattsenergyweektv.com), an independent, all-energy television news and talk program that airs in the United States. The head of a major U.S. gas producer says America could begin to sharply reduce its need for imported oil by building a relatively small number of compressed natural gas and liquefied natural gas fueling stations across the country. There are currently more than 120,000 convenience stores and other retailers in the U.S. that sell fuel for conventional gasoline-powered cars and trucks, according to the US Census Bureau. But McClendon said the US would only need about 1,000 compressed natural gas (CNG) and liquefied natural gas (LNG) stations to form a “reliable national grid” for gas-powered vehicles across America’s 47,000-mile-long interstate highway system. “When you get to that point, we believe the trucking industry can make a full transition away from diesel made from imported oil, and toward a domestic resource like natural gas,” McClendon said, speaking from his company’s headquarters in Oklahoma City. To that end, McClendon announced last Monday that Chesapeake would invest $150 million in Clean Energy Fuels, a California-based company that is building LNG fueling stations at truck stops across the US Chesapeake’s investment, which will bankroll about 150 new LNG fueling stations, is part of a larger, $1-billion initiative to significantly ramp up its production of gas and oil from deep shale, tight sands and other “unconventional” geologic formations. McClendon hopes that Chesapeake’s increased gas production, along with its investment in LNG and CNG fueling stations, will trigger a “tipping point” that will give automakers the confidence they need to bolster their production advanced, gas-powered vehicles. He said he expects truck stops, convenience stores and other gas drillers to make additional investments in LNG and CNG infrastructure because the cost of the domestically produced fuel will be half that of gasoline and diesel refined from imported oil.

#### ( ) Refueling infrastructure’s key to affordability and reliability are – these are the two major inhibitors of market prevalence

Tech ‘12

[Eric. President of Navistar’s Engine Group. “As Fuel Prices Soar, Trucking Industry Seeks Alternatives With Natural Gas”. Forbes http://www.forbes.com/sites/energysource/2012/03/20/as-fuel-prices-soar-trucking-industry-seeks-alternatives-with-natural-gas/]

To break the seemingly endless cycle of dependence on foreign oil, America’s truckers need alternatives. And a promising one is offered by natural gas. Consider the facts. Natural gas today is nearly $1.50 less than diesel fuel for a price-per-gallon equivalent. And right now, America is sitting on an abundant domestic supply of natural gas—one that’s estimated will last for one hundred years or more. Among alternative fuels that could power our nation’s trucks, natural gas is the clear leader. The challenge to using it has been twofold: 1) Making natural gas-powered vehicles more affordable, and 2) Building the infrastructure that enables our abundant supply of natural gas to reach the trucker.

#### ( ) Infrastructure is key to spur industry development of NGV’s

Katz ‘12

[Jon. Managing Editor of IndustryWeek. “The Road to More Natural Gas Cars Starts with Infrastructure” IndustryWeek, 3/28/12 <http://www.industryweek.com/articles/the_road_to_more_natural_gas_cars_starts_with_infrastructure_26956.aspx>]

Natural gas vehicles could provide a revenue boost to natural gas producers reeling from low gas prices and save consumers the equivalent of $1.60 per gallon in gasoline, Mueller says. Southwestern believes so strongly in the possibilities of CNG vehicles, the company implemented a program earlier this year to help 10% of its workforce convert to CNG vehicles. Earlier this month, the company gave away CNG vehicles to 21 employees along with home fueling units. Southwestern is in the second phase of the program, during which the company plans to provide CNG conversion kits and fueling units to select employees. The company plans to continue the program until it converts about 200 workers to CNG vehicles, Mueller says. Making natural-gas powered vehicles a reality may be several years in the making and will likely require the industry to collaborate more with the auto industry and policymakers, says Mueller. Most of the natural gas-vehicle activities so far have been focused on truck fleets. As noted in a recent [Agence France-Presse article](http://www.industryweek.com/articles/thanks_to_fracking_cheap_natural_gas_makes_inroads_as_u-s-_vehicle_fuel_26950.aspx), General Motors Co. ([IW 500/5](http://www.industryweek.com/research/us500/2011/iwus500Company.asp?Input=5)) will begin production by the end of the year on two pickup trucks operating on CNG. The company also produces two vans that use CNG and has sold 1,200 of the vehicles to AT&T. There has been some small car CNG production, including Honda Motor Co.'s ([IW 1000/23](http://www.industryweek.com/research/iw1000/2011/iw1000Company.asp?Input=23)) Civic Natural Gas vehicle. The company is doubling production of the Civic Natural Gas to around 2,000 units this year, says John O'Dell, senior green car editor at [Edmunds.com](http://www.edmunds.com/). But the cars cost about $5,000 more than a similarly equipped gasoline model, O'Dell says. "Although the fuel savings can be tremendous, there are not enough retail natural gas pumps around to make the cars salable in even a majority of the states," he says. "Infrastructure is the key -- as it is or will be with any alternatively fueled vehicle. Somebody's got to see the value in and be able to pony up the cash for a nationwide fueling system that makes using the alternative fuel as easy as using gasoline." A more likely scenario is increased production of commercial vehicles, including full-size cargo vans and heavy-duty pickup trucks, O'Dell says. "This could change if there is a concerted - and successful - effort to install a nationwide natural gas fueling infrastructure, but that's several years down the road, at best," O'Dell says. In Ohio, for instance, the state has entered into an agreement with several states to explore the development of CNG infrastructure for transportation. Ohio is trying to convert its fleet of state cars along with some private-sector operations and local government vehicles to have a large enough CNG fleet to pay for the natural gas stations, Gov. John [Kasich said at the CERA Week conference](http://www.industryweek.com/articles/colorado_and_ohio_governors_talk_fracking_26781.aspx?SectionID=25).