



**Testimony of Mike Breen**  
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**House Energy & Commerce Committee**  
**Subcommittee on Energy & Power**  
**July 10<sup>th</sup>, 2012**

Mr. Chairman, members of the Committee, Ladies and Gentlemen: thank you for inviting me to appear before this Committee today to discuss the critical importance of alternative fuels to America's national security.

I come before you first and foremost as a fellow citizen, deeply concerned about the future prosperity and security of our great nation. I serve as the Vice-President of the Truman National Security Project, a leadership institute dedicated to forging strong, smart and principled national security policy for America. As a former Army Captain and an Iraq & Afghanistan combat veteran, I am also proud to be one of the leaders of Operation Free, a non-partisan nationwide coalition of over one thousand patriotic veterans who stand together in the common belief that our national addiction to oil poses a clear national security threat to the United States.

To be clear, oil is immensely important to our economy and will remain so for the foreseeable future. Its value goes far beyond its utility as a liquid fuel. Petroleum is a key input in advanced manufacturing, pharmaceuticals, agricultural products, and a host of other applications. Unfortunately, however, our near-total dependence on oil as a fuel has eclipsed petroleum's other contributions, threatening our prosperity and security.

Our dependence on oil as a single source of transportation fuel poses a clear national security threat to the nation. As things now stand, our modern military cannot operate without access to vast quantities of oil. Our economy is equally dependent, with over 95% of our transportation sector reliant on oil. This lack of alternatives means that oil has ceased to be a mere commodity. Oil is a vital strategic commodity, a substance without which our national security and prosperity cannot be sustained. Until and unless we develop alternatives, the United States has no choice but to do whatever it takes in order to obtain a sufficient supply of oil. We share that sad and dangerous predicament with virtually every other nation on earth.

Oil is a fungible product, traded globally, with prices set on a world market. In other words, global supply and global demand set the market and drive the price – not American supply and American demand alone. This has crucial implications for policy, since any potential increase in US supply must be considered in light of global demand.

Recent technological advancements such as horizontal drilling and advanced hydraulic fracturing promise to increase domestic production, allowing us to reach supplies of oil that were

until recently prohibitively remote or impossible to obtain. These advances have led some to claim that the United States is suddenly capable of producing enough oil domestically to meet our needs, and that this will solve our oil-related economic and national security problems, eliminating the need to develop alternatives.

This is a fallacy, for at least three reasons. First, it is highly unlikely that we can drill enough here in the United States to meet our needs, especially for any appreciable length of time. The US consumes over 20% of the world's oil, but has about 3% of the world's reserves. The American economy consumes 18.8 million barrels of petroleum per day, while producing about 5.6 million barrels of crude per day.<sup>i</sup> Simply put, we cannot drill our way out this problem.

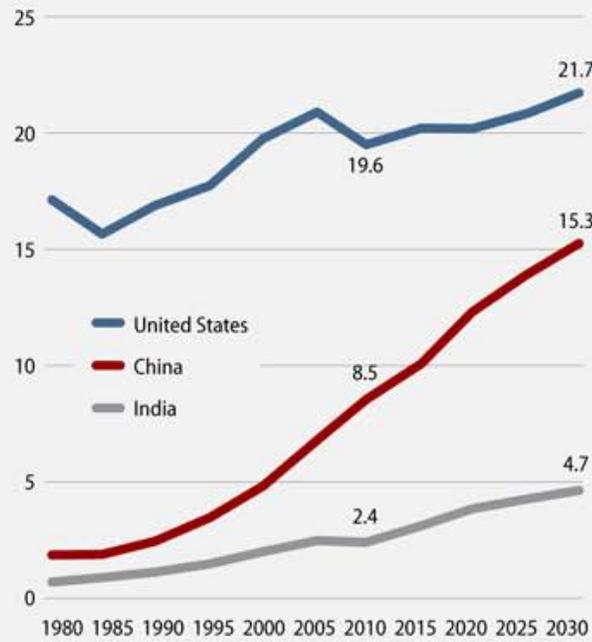
Second, American families would remain vulnerable to swings in gasoline prices even if U.S. oil imports dropped dramatically. The percentage of imports has little impact on prices paid by U.S. consumers. In the United Kingdom in 2000, truck drivers went on strike over rising gas prices. The United Kingdom was a net oil *exporter* at the time, but that didn't protect British truckers from rising world oil prices.<sup>ii</sup> When it comes to the price we pay at the pump, there's simply no such thing as "foreign" oil.

Third, global demand for oil is rising at a breathtaking pace, with no sign of slowing down in the foreseeable future. While American demand has been very high but relatively static for some time, demand in China, India and the rest of the developing world is skyrocketing. According to the Energy Information Administration, America's oil consumption is expected to grow by 11% over the next two decades.<sup>iii</sup> Meanwhile, in that same timespan, China's oil consumption is expected to grow by 80%, and India's by 96%.<sup>iv</sup> It is unrealistic at best to imagine that increasing production can somehow keep up with such dramatically rising demand. Even if it somehow can, there is every reason to believe that OPEC and other producers will stay true to historical form, and keep their own production artificially low in order to profit from higher prices.

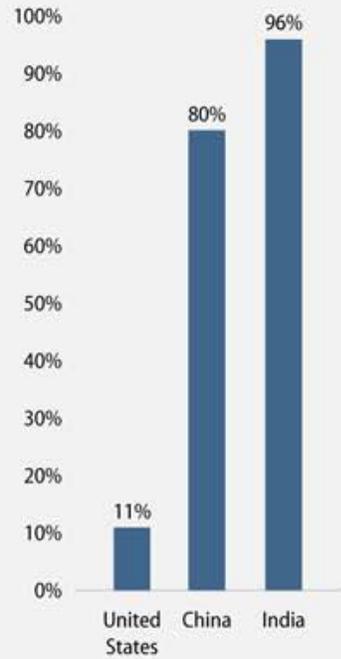
The long-term reality is stark: as demand outpaces supply by greater and greater margins, the price of oil will climb ever higher. Without alternatives, we will have no choice but to pay whatever price this ironclad market demands.

### Projected oil consumption, 1980–2030

Million barrels oil equivalent per day

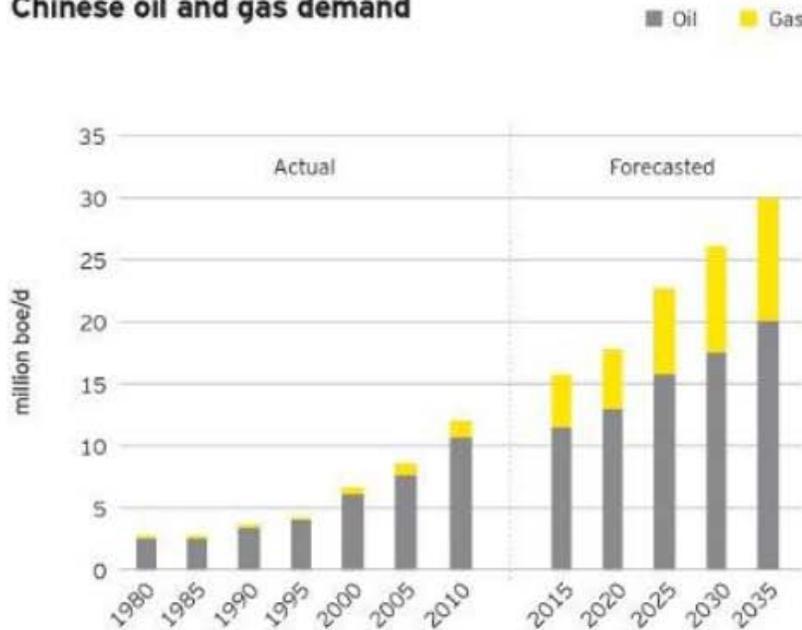


### Projected oil consumption in percent growth, 2010–2030



Source: Energy Information Administration, Office of Energy Markets and End Use, "World Petroleum Consumption, Annual Estimates, 1980-2008," October 6, 2009, available at: <http://www.eia.gov/emeu/international/RecentPetroleumConsumptionBarrelsperDay.xls> (accessed February 26, 2010); EIA, International Energy Outlook 2009, Table A5, "World Liquids Consumption by Region, Reference Case, 1990-1930," May 2009, available at: [http://www.eia.doe.gov/oiaf/ieo/excel/ieoreftab\\_5.xls](http://www.eia.doe.gov/oiaf/ieo/excel/ieoreftab_5.xls) (accessed February 26, 2010).

### Chinese oil and gas demand



Source: Ernst & Young calculations using data from the International Energy Agency and BP plc.<sup>2</sup>

This is a market with clear winners and losers. The winners, by and large, are non-free market countries with nationalized oil companies, many of whom are openly opposed to the United States. For every \$5 rise in the price of a barrel of crude oil, Putin’s Russia receives more than \$18 billion annually, Chavez’s Venezuela an additional \$4.9 billion annually, and Ahmadinejad’s Iran an additional \$7.9 billion annually.<sup>v</sup> Indeed, according to the CIA, over 50% of the Iran’s entire budget comes from the oil sector.<sup>vi</sup> As the price of oil climbs, Iran’s nuclear program and support for global terrorist organizations are among the biggest winners.

The losers in this game are equally clear. They are the Syrian resistance movement, being gunned down as we speak with bullets supplied by Putin’s oil-rich Russia. They are the American Soldiers and Marines who have spent the last decade confronting terrorists in Iraq and Afghanistan armed with Iranian weapons, purchased with oil money. They are everyday Americans, who struggle to pay at the pump even as our nation sends about \$1 billion dollars a day overseas for oil.<sup>vii</sup> Small wonder, then, that oil is the single largest contributor to our foreign debt, outpacing even our trade deficit with China. In every case just mentioned, American national security is significantly threatened.

It should be no surprise that the US military spends tremendous time and resources safeguarding global oil supplies. Given the tremendous vulnerabilities in the global oil supply chain, this is no easy task. So great is the effort expended by our military on securing the supply of Middle East oil, a RAND study estimated that removing the mission to defend oil supplies and sea routes from the Persian Gulf to the US would save between 12 and 15 percent of the entire defense budget – over \$90 billion dollars annually.<sup>viii</sup>



Of course, even as the military expends tremendous resources defending oil supplies, our forces rely on oil to operate. Even as the dynamics of the global oil market drain American coffers and empower the enemies of democracy and the free market, they also serve to undermine our military's ability to confront those same enemies. Virtually every major weapons system in the US military arsenal relies on oil to operate, from fighter aircraft to ground combat vehicles to the Navy's surface fleet. Without it, even our most advanced fifth-generation fighter aircraft and fearsome main battle tanks are rendered useless.

Recently, Secretary of the Navy Ray Mabus called the Navy's reliance on oil a "strategic vulnerability."<sup>ix</sup> And, in testimony to the Senate Armed Services Committee, he stated, "We all know the reality of a volatile global oil market. Every time the cost of a barrel of oil goes up a dollar, it costs the Department of the Navy \$31 million in extra fuel costs. These price bites have to be paid for out of our operational funds. That means that our sailors and Marines are forced to steam less, fly less, and train less."<sup>x</sup>

A \$10 dollar increase in the price of a barrel of oil costs the Department of Defense an estimated \$1.3 billion—almost equal to the entire procurement budget for the Marine Corps.<sup>xi</sup> In fiscal year 2011 alone, the Department of Defense was left with a \$3 billion budget shortfall because of rising fuel prices.

Fortunately, our military leadership has not been idle in the face of this challenge. The U.S. Navy is committed to reducing petroleum use by 50% by 2015, with the goal of 40% of total energy consumption from alternative sources by 2020. In 2010, the Navy conducted the first flight test of the "Green Hornet" – an F/A-18 strike fighter powered by a 50% biofuel blend derived from the Camelina plant. This week, the Navy will evaluate a similar 50% blend under combat conditions during large-scale exercises in the Pacific. Advanced biofuels are performing well in the field, and costs are coming down. In fact, the Deputy Chief of Naval Operations predicts that advanced biofuels will be cost competitive with conventional fuels no later than 2020.<sup>xii</sup>

The military's success with renewable fuels points the way toward a more secure and prosperous future, free from our paralyzing addiction to oil. We must find a way to transition from total dependence on petroleum to a world in which oil plays a major role in our economy, but does not determine our national destiny. Fortunately, similar victories have been won before.

Today, oil is a strategic commodity – its supply dictates the march of armies and the fate of nations. But two centuries ago, the world’s top strategic commodity wasn’t oil. It was salt. Salt was the world’s preeminent way of preserving foods, especially for long voyages. Without salt, Christopher Columbus would not have made it to America. Wars were fought over salt; kingdoms were built on it. And then, salt—the world’s key strategic commodity—was out-innovated by an alternative technology: the icebox.

As R. James Woolsey, former Director of Central Intelligence, wrote, “Today, no nation sways history because it has salt mines. Salt is still a useful commodity for a range of purposes...But to most of us there is no ‘salt dependence’ problem at all — because electricity and refrigeration decisively ended salt’s monopoly of meat preservation, and thus its strategic importance. We can and must do the same thing to oil.”<sup>xiii</sup>

Some say that government has no role to play in making this possible. But when government sets aggressive—yet attainable—standards for private industry, while providing real incentives for innovation, there’s nothing that American businesses can’t achieve. That is the real strength of technology-neutral standards, including the recent 54.5 MPG CAFÉ standards embraced by the automotive industry. The Low-Carbon Fuel Standard California has recently enacted is a similar example. There’s nothing new or radical about this approach, and it’s worked countless times before.

The story of the electronic fuel injector helps drive this point home. In the 1970’s and 80’s, gas prices were skyrocketing. Congress knew it had to push automakers to produce more fuel-efficient cars, which would save Americans money at the pump and spur innovation for the industry. Congress led the way, raising fuel emissions standards and miles-per-gallon requirements.

In response, the Bendix Corporation, a small manufacturing outfit in South Bend, Indiana, developed the first electronic fuel injector. It was designed to improve upon the carburetor—a troublesome part, to say the least. The fuel injector was much more efficient by comparison; it saved gallons and gallons of fuel, while preserving the car’s torque and speed. Bendix began selling the part to Chrysler, and soon after, auto manufacturers around the world were rushing to buy.

By moving from the bulky carburetor to the precise fuel injector, Congress saved people hundreds of millions of dollars at the pump, raised the auto industry's average miles-per-gallon, and put money back in people's pockets by making parts that required fewer repairs.

It's a lesson worth revisiting. Just as foreign competitors were catching up to us, we developed a new technology—kick-started by Congress' incentives—that soon led the world. Today, almost all gasoline passenger cars sold in markets like Europe, Canada and the U.S. have the fuel injection systems. And, because the fuel injector is so precise, most are manufactured here at home. The fuel injector—that tiny piece of metal—sent ripples through the global economy and boosted American manufacturing jobs for decades to come.

We're at that point again. The story of the fuel injector gives us an essential lesson. When Congress leads the way, it can spur American innovation and break our dependence on oil as a single source of fuel. With the technology we have today, the viability of alternative fuels is improving rapidly.

Next week, over 25,000 American sailors and Marines will embark on one of the largest naval wargame simulations ever conducted in the Pacific Ocean. Along with our allies in the region, they will test themselves and their equipment to the breaking point in scenarios ranging from disaster response to full-scale war. The exercise will be an opportunity to test a range of new technologies produced by American companies, including submarine-launched Unmanned Aerial Vehicles, "blue laser" underwater communications technology, and the fuel for the exercise itself, a 50/50 biofuel blend based on advanced algae oils and recycled cooking oil. Navy pilots will fly the world's most advanced combat aircraft up to twice the speed of sound, powered by renewable American fuel.

We can and must follow the military's example. The credible debate on oil dependence and national security is over – there is simply no question at this point that single-source dependence threatens our future security and prosperity. It is time for Congress to act, and to lead.

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<sup>i</sup> U.S. Energy Information Agency. "United States Analysis Brief." (July, 2010)

<http://205.254.135.7/countries/country-data.cfm?fips=US&trk=p1#pet>

<sup>ii</sup> Report from Brookings. Sandalow, David. "*Ending Oil Dependence: Protecting National Security, the Environment and the Economy.*" (February, 2007) [http://www.brookings.edu/~media/research/files/papers/2007/2/28globalenvironment\\_sandalow\\_opp08/pb\\_energy\\_sandalow.pdf](http://www.brookings.edu/~media/research/files/papers/2007/2/28globalenvironment_sandalow_opp08/pb_energy_sandalow.pdf)

<sup>iii</sup> Energy Information Administration, Office of Energy Markets and End Use, "World Petroleum Consumption, Annual Estimates, 1980-2008"

<sup>iv</sup> Ibid.

<sup>v</sup> Powers, Jonathan. "Oil Addiction: Fueling Our Enemies." Truman National Security Project, February 17<sup>th</sup>, 2010.

[http://www.trumanproject.org/files/papers/Oil\\_Addiction\\_-\\_Fueling\\_Our\\_Enemies\\_FINAL.pdf](http://www.trumanproject.org/files/papers/Oil_Addiction_-_Fueling_Our_Enemies_FINAL.pdf)

<sup>vi</sup> CIA World Factbook. "Iran." CIA, February 21<sup>st</sup>, 2012. <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>

<sup>vii</sup> Powers, Jonathan. "Oil Addiction: Fueling Our Enemies." Truman National Security Project, February 17<sup>th</sup>, 2010.

[http://www.trumanproject.org/files/papers/Oil\\_Addiction\\_-\\_Fueling\\_Our\\_Enemies\\_FINAL.pdf](http://www.trumanproject.org/files/papers/Oil_Addiction_-_Fueling_Our_Enemies_FINAL.pdf)

<sup>viii</sup> RAND Corporation. "Imported Oil and U.S. National Security." P. 74 (2009)

<sup>ix</sup> "Mabus Defends Navy Alternative Energy Plan." Seapower Magazine.

<http://www.seapowermagazine.org/sas/stories/20120416-mabus.html>

<sup>x</sup> "Remarks by the Honorable Secretary Ray Mabus, Senate Armed Services Committee, March 15<sup>th</sup> 2012."

[http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CE0QFjAB&url=http%3A%2F%2Fwww.navy.mil%2Fnavydata%2Fpeople%2Fsecnav%2FMabus%2FTestimony%2FSASC%2520DON%2520Posture%2520Statement%25202012.pdf&ei=\\$133T5jPEcS36wH1z9XHBg&usq=AFQjCNGROI2bzE6W4HhxDGmKp7bQn3KheQ](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CE0QFjAB&url=http%3A%2F%2Fwww.navy.mil%2Fnavydata%2Fpeople%2Fsecnav%2FMabus%2FTestimony%2FSASC%2520DON%2520Posture%2520Statement%25202012.pdf&ei=$133T5jPEcS36wH1z9XHBg&usq=AFQjCNGROI2bzE6W4HhxDGmKp7bQn3KheQ)

<sup>xi</sup> CNA Report on "Powering America's Defense: Energy and the Risks to National Security" (May 2009)

<http://www.cna.org/documents/PoweringAmericasDefense.pdf>

<sup>xii</sup> "Q&A with Rear Adm. Philip Hart Cullom" CHIPS Magazine.

<http://www.doncio.navy.mil/chips/ArticleDetails.aspx?ID=2475>

<sup>xiii</sup> Ibid.