BACKGROUNDER

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Oil Addiction Threatens America's National Security:
Renewable Energy Is Critical to Meeting 21st Century Challenges

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Energy Security = National Security

We have built our whole civilization on oil, and it has brought us prosperity we never could have dreamed of otherwise. That makes it hard to say goodbye. But America's continued dependence on oil lies at the root of some of the most difficult national security challenges we face. Transitioning from oil to renewable energy sources is critical if America is to prevail against the security threats of this new century.

Solving the energy problem solves a real security problem... [We need to] focus on conservation and on energy sources that aren't based in carbon...When we go looking for oil, we're really looking for trouble.

- Lt. General Larry Farrell, USAF, Ret.

Overdependence on Foreign Oil Leaves Us:

Funding Both Sides in the Fight Against Terrorism
Radical Islamist terrorism has been a top security concern since 9/11, and is not going away soon. From the madrassas that teach children to hate, to the regimes and financiers that equip its murderers, the vast majority of the movement is funded by oil money—our money that we spend at the gas pump every week. Fully 97% of our transportation energy comes from oil. And every time we fill our gas tanks, a little bit of that money finds its way to terrorists sworn to kill us.

Vulnerable to Attacks Abroad
Oil used to be a primarily domestic energy source for America. But America has only 3% of the world's known oil reserves left. And with a global oil market, prices at American pumps are set by factors all over the globe. That means whether oil comes from Alaska or Iran, an attack on oil fields anywhere attacks our economy. We spend $50 billion every year in peacetime just patrolling shipping lanes and supplying our allies to secure Middle Eastern oil fields and transport routes. And when war comes, the sacrifices are much greater.

Switching to Renewables: Can It Be Done?

We can live with less oil. The only question is how soon we adapt.

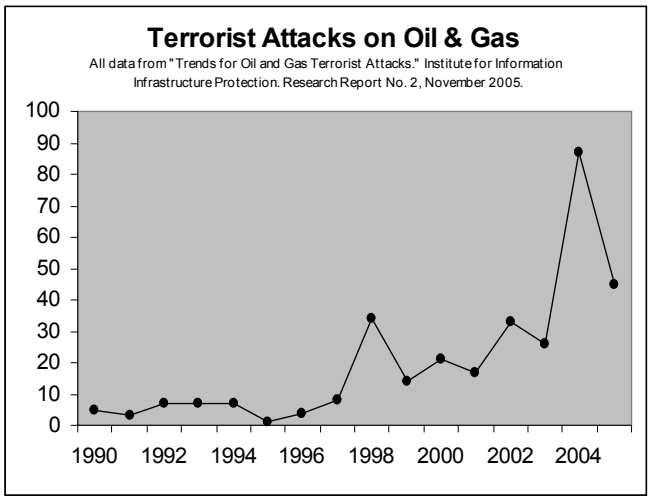
When President Kennedy challenged the nation to put a man on the moon, it seemed a distant possibility, technically unfeasible. Some now say the same about renewable energy.

At the outset of WWII, America did not have the defense industrial base needed for the war. The economy had to be completely transformed overnight. We had to design and build completely new weapons systems—including the Manhattan Project itself—and we had no time. The nation rose to the challenge, and won the war. The question is not America's ability to move our economy away from overdependence on oil. America's abilities are proven. The question is America's will.

Terrorists have been keen to exploit this vulnerability: Osama bin Laden commanded his followers to strike at oil supplies, and terrorist attacks on oil and gas rose dramatically after 9/11 and even further once the U.S. invaded Iraq. This has contributed to the rising price of oil, which has nearly doubled since 9/11. The average American family spent $1,279 a year to fuel their cars in 2001; by 2005, they were spending $2,033.

One of the main causes for our enemies' gaining hegemony over our country is their stealing our oil; therefore, you should make every effort in your power to stop the greatest theft in history.

- Osama bin Laden, December, 2004



Enabling Authoritarian Regimes
It's not only terrorists who benefit from our oil addiction—tyrants and oppressive regimes are also empowered. Most of the world's oil is in places that are unstable or unfriendly to America, controlled by regimes hostile to the United States, and sometimes to their own people as well.

For every dollar the price of oil goes up, it puts billions into the coffers of Iran, Russia, and Venezuela—money that then finds its way to fund Iran's nuclear program, repression of political dissidents, and anti-American activities in Latin America. As Thomas Friedman points out, it is no coincidence that as oil prices doubled a few years ago, regimes in Russia, Iran, Nigeria, Venezuela, Syria, Sudan, Egypt, Chad, Angola, Azerbaijan and Turkmenistan all became more authoritarian.

Domestic Oil is No Solution
Oil is a global commodity. That means oil prices are the same whether the oil comes from Louisiana or Lagos. We can't change those numbers by leaning even harder on dwindling American oil supplies. The only way to drive the price of oil down—to stop funding terrorists and destabilizing regimes and to protect our economy from shocks—is to be less dependent on oil altogether, and to help other countries move away as well.

Renewable Energy is the Way Forward
There is no single solution to moving away from oil: we will need to draw on many viable energy options. Some options have side effects that cause other problems: global warming is itself a security issue, and we do not wish to jump from the frying pan of oil addiction into the fire of natural disasters born of climate change. Renewable energy sources are best for our security, and good for our economy as well.

This Generation's Investment in American Security
In the 1950s, Eisenhower invested billions to create our interstate highway network to enable evacuation and rapid mobility across the country in the event of attack, while knitting together our nation. The investment spurred tremendous economic growth nationwide. Investing in a renewable energy economy is this generation's security challenge.

Our energy sector has never operated in a free market: energy companies have long been subsidized to produce fossil fuels, despite record-breaking profits that have soared more than 150% since 9/11. These counter-productive subsidies must end—they harm our economy, and our security. The economics of oil are a classic example of market failure: the price consumers pay at the pump does not reflect the enormous consequences of our oil addiction around the world—a "negative externality," in economists' terms. We pay the price of oil in the form of higher taxes to fund military and homeland security operations, as well as increased global instability.

Public investment in renewable fuels is an investment in our security infrastructure, with positive side effects for America's economic growth. Once the initial investment has been made to encourage the switch from oil where possible, market forces should take over to ensure that the best technologies prevail.

Oil Addiction Hinders Battlefield Effectiveness

Most military casualties in Iraq are incurred by convoys carrying supplies—and 70% of the tonnage carried on the battlefield is fuel. That means the lower our military's fuel economy, the more we put our troops' lives at risk. The Bradley fighting vehicle gets less than two miles to the gallon; an M1 tank gets less than one mile per gallon.

70% of the tonnage on the battlefield is fuel. That's an amazing number. If you have less tonnage but the same level of protection and firepower, you're more efficient on the battlefield. That's a life and death issue.
- Lt. General Larry Farrell, USAF, Ret.

Unleash us from the tether of fuel!
- Lt. Gen. James Mattis, Commander, 1st Marine Division, Operation Iraqi Freedom

Congress Can Lead Us Forward

The two ways to reduce dependence on oil are to use renewable energy supplies, and to consume energy more efficiently. Congress is considering a number of measures to help us reduce our crippling oil dependency:

Drop Tax Breaks for Oil Companies: Taxpayers are paying record high prices at the pump and oil companies are making record profits. The idea of giving oil companies more of taxpayers' money to extend our dependence on oil even further is bad economics, bad energy policy, and it is terrible for our national security.

Offer R&D Support for Renewable Energy Production: There are many promising technological innovations being developed in the renewable energy field. But certain promising technologies need federal support to move forward, because their economic prospects depend on demand, which in turn depends on an uncertain regulatory environment now tilted towards oil. Federal financing assistance for R & D increases the supply of new technology in the pipeline, while letting market forces determine which technologies prevail.

Support Renewable Fuel Standards: By mandating Renewable Fuel Standards, Congress could increase production of renewable fuels to 36 billion gallons per year by 2022. This would cut our consumption of oil and help the U.S. towards greater energy independence.

Raise Renewable Fuel Standards for Utilities: Renewable Portfolio Standards (RPS) require utility companies to use a certain amount or percentage of renewable energy sources, which increases demand for renewable energy, and stimulating investments in innovative technologies and driving down costs to the consumer. A national RPS of 15% renewable energy would create a $75 billion renewables market and make the U.S. the global leader in renewable energy production by 2020 (Union of Concerned Scientists figure).

Raise Fuel Economy Standards: Currently, US auto fuel efficiency requirements are among the lowest in the world, even China's standards are higher. The technology already exists to make cars less oil-thirsty today; American car manufacturers sell cars with greater fuel efficiency to customers in Europe. Raising Corporate Average Fuel Economy (CAFE) standards would push automakers to further develop and implement improved fuel economy across their entire lines of cars and trucks.

Raise Home and Appliance Energy-Efficiency Standards: Just as with cars, appliances and homes in the U.S. use a lot more energy than they need to - in fact, Americans use 26% of the world's energy, even though we have only 5% of the world's population. Increasing efficiency standards for appliances and homes is a high-impact way to reduce energy consumption and greenhouse gas emissions without altering our lifestyle, and also encourages technological innovation that benefits our economy. Provisions recently passed by the Senate would save American consumers an estimated $12 billion, while reducing energy use at federal buildings 30% by 2015 would save another $4 billion.

Offer Incentives to Consumers to Buy Green: Many states provide incentives directly to consumers to encourage them to use renewable fuels and energy-saving devices. Congress should also provide support for these measures.

The Case of Carbon Capture

Turning from foreign oil to domestic coal has great appeal—but would amount to jumping from the frying pan into the fire if not done right. One critical new technology that needs a federal push to become reality is carbon capture, which would store carbon captured during new coal burning processes by pushing it deep into the earth (rather than being released into the atmosphere as greenhouse gases). This process could make it possible for countries with large coal reserves, including both the U.S. and China, to generate electricity from coal without increasing greenhouse gas emissions. This is critically important, as much of this coal, especially in China, is otherwise likely to be burned the old way, which will greatly increase natural disasters from climate disruption.

A New View of an Old Issue: Energy Policy as Security Policy

Many people's thinking on this issue seems to be stuck in the 70's—renewable energy reminds them of shag rugs, cold houses, and wishful thinking. Maybe back then. But thirty years later, we're facing Islamist terrorists, rising gas prices and the strengthening of hostile regimes all at once. We need to stop dismissing renewables as an environmental science project and start understanding them as mission-critical military R&D. Moving away from oil to renewable, American-made energy sources is not an option—it is a necessity. Not just for our economy, or for our environment, but for our security.

*Please see a table on major renewable energy options on the next page

Major Renewable Energy Options

Bio-diesel	Cost competitive with oil when oil is $65/barrel (currently over $80/barrel)
Ethanol (Cellulosic or corn-based)	At least 30% of US gasoline has ethanol mixed into it as of 2006. Cost is competitive with oil when oil is $45 a barrel. By the end of next year, we will exceed 11 billion gallons of ethanol production.
Solar	55% of electricity could be provided by solar panels on buildings—this is the actual operating (not technical potential) of rooftop solar power; photovoltaic cells (PVs) on 4% of the world's deserts could meet world energy demand annually.
Wind	Wind energy output more than tripled since 2000, powering 30 million homes. The Great Plains are a "Persian Gulf of wind" that could generate 20% of US electricity.
Geothermal	Currently replaces over 60 million barrels of oil annually in the U.S.
Hydro-electric	Only 3% of the US's 80,000 dams are used to create electricity. Using these existing dams could double our hydropower output.
Nuclear	France generates 78% of its electricity using nuclear power; Japan generates 30%. The U.S. has not built a new plant since the 1970s.

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