

# Implications of U.S. Dependence on Middle East Oil

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Brief Analysis

## Reasons for Concern

The subject of energy and oil dependence should be at the top of the U.S. national security agenda. There are several reasons for concern. First, the world demand for oil is growing rapidly. Chinese and Indian development alone will push oil consumption up in the near future. The middle class in India, for instance, although not yet reaching the American standard of living, is approximately the size of the population of the United States and will be in the market for cars in the next five to ten years.

Second, many of the world's oil fields have reached their halfway exploitation points, leading to a substantial increase in production costs. Although this issue might not be so important in Saudi Arabia because of the low cost of production there, it is a substantial problem in other fields with inherently high costs, such as the field in Russia, where factors such as weather, environment, and transportation limitations come into play, and that in Alberta, because of environmental costs. Thus, producers that control low-cost production -- namely, those in the Middle East -- will have the steering power for a number of years.

Third, security and political developments in Saudi Arabia raise concerns about the stability of the oil market. Saudi Arabia holds about a quarter of the proven oil reserves of the world, and it has used this advantage to manipulate oil prices in the past. Moreover, not only is al-Qaeda operating quite vigorously in the kingdom, but also more "oil-guarding" positions are potentially opening up for al-Qaeda operatives or sympathizers. Those problems add to increased security threats on oil production facilities in the form of sea and air attacks that can take millions of barrels per day out of production for a number of months and can devastate the world's economy.

Politically, there is the issue of natural succession to consider. Crown Prince Abdullah is, as Saudi Arabian rulers go, a reformer. He has taken some aspects of religious education of girls away from the muttawa (religious police) and has tried to get local elections started, but he is eighty years old. One of the potential heirs to the crown is the interior minister, Prince Nayef. Prince Nayef regularly imprisons reformers and fires newspaper editors who call for reform. The last time Prince Nayef, who is in charge of the kingdom's counterterrorism efforts, spoke publicly on the issue of September 11, he blamed Jews for being the masterminds behind the attack. Cooperative efforts with a King Nayef seem unlikely.

The world faces an oil problem of growing concern. Obstacles include burgeoning demand, supply that is hitting peaks in much of the rest of the world, increasing dependence on the Gulf and the Middle East, several types of terrorism threats, and the prospect of a next Saudi ruler whose views have closer similarity to those of Osama bin Laden than to those of the United States. This situation is not strategically sound.

## What Can Be Done?

Reducing oil dependence requires fundamental reforms in infrastructure. In sixteen years, according to President George W. Bush's State of the Union address, hydrogen fuel-cell vehicles will be available. Sixteen years is too long. Transforming the U.S infrastructure, though having its own merits, does nothing to improve the current strategic

position regarding oil dependency on the Middle East. The United States needs a much faster solution. In addition to not helping the strategic situation, pursuing fuel-cell vehicles holds us back by employing resources that can otherwise be used for a more immediate solution.

There are two overall principles that the United States ought to focus on in adopting policies for reducing U.S. reliance on oil. First, the issue of oil is not a uniquely American problem, and policymakers should therefore not pursue a uniquely American solution. Self-sufficiency ideas that floated around during the oil shocks of the 1970s are not worth pursuing. It will do no good for the world if the United States shifts its reliance on oil supply to the Western Hemisphere alone. The world has an oil problem, and if the Saudis choose to drive the prices up to \$60 per barrel, the world economy will suffer a shock. Therefore, shifting U.S. reliance exclusively to the Western Hemisphere will be useless.

Second, the United States needs to avoid looking at the energy issue as one overall problem. It is fine to get enthusiastic about solar and wind energy, but those forms of energy have almost nothing to do with the oil problem. Only 2 percent of the country's electricity is produced from oil. With today's automotive vehicles, one could blanket the country with windmills, and it would do no good; the electricity market and the oil market have little to do with each other. There are good reasons to move toward alternative electricity production, but for national security purposes it is not the type of fuel used but the security of the grid that is relevant for electricity production.

#### Using Existing Infrastructure

A campaign toward this end should enlist environmental groups to help wean the country away from oil dependency. To reach a quicker resolution, the United States must focus on using the existing infrastructure. Alternative fuels produced from agricultural waste, such as ethanol, ought to be fuels that can be used together with regular gasoline or diesel in the existing infrastructure. An example is the flexible-fuel vehicles that can burn up to 85 percent ethanol by using a distinct type of plastic in the fuel line and a different computer chip. This alteration costs less than a hundred dollars per vehicle, and most people do not even know their cars can accommodate it. There is no reason for all vehicles not to be designed with similar technology. Doing so will serve as an incentive to advance the production of ethanol from agricultural waste. Tipping fees -- payments made for getting rid of waste -- can serve as additional incentives and already exist in Europe. One can theoretically give away ethanol for free and make a profit because of the tipping fees.

Several types of technologies are very interesting. First, is the use of genetically modified biocatalysts to break down cellulous, therefore allowing rice-straws, prairie grass, and similar agricultural products to be used to produce ethanol. That technology exists today. Second, is the use of organic waste to produce real diesel. Third, is the conversion of gasifying coal into diesel, a process known as Fischer-Trope. The process, which used to be extremely expensive, is now much cheaper. Today, a small company in Pennsylvania is using the slag, or waste, from strip-mines to produce diesel. Not only does the company produce an alternative fuel, but it also cleans the ground from strip-mines' waste. All of these ways of producing alternative fuels are compatible with existing infrastructure.

Hybrid cars -- and, moreover, plug-in hybrid cars -- hold tremendous promise. Electric vehicles failed because nobody wanted a car that could go only thirty miles. Even if most people's trips are fewer than 30 miles, the notion of spending a night charging one's car in the case of exceeding this distance just did not appeal to the public. Hybrid cars, on the other hand, which operate at 60 miles per gallon in the city, are successful. Even more promising are the plug-in hybrids that, in addition to the initial savings, offer the option of overnight charging, thus leading to a ratio of 100 or 200 miles per gallon. Cars that also include the flexible-fuel technology can reach up to 300 miles per gallon in town. Working with plug-in hybrid cars, with alternative fuels, and within the existing infrastructure of the United States, car manufacturers might be able to produce cars that run at between 100 and 300 miles per gallon.

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