

How to Break Both Oil's Monopoly and OPEC's Cartel

A few weeks ago, and 35 years after the Arab oil embargo, the leaders of OPEC met in Vienna and decided to enact an oil production cut of half a million barrels a day (mbd), reducing overall OPEC supply to 28.8 mbd. This cut, a deliberate effort to prop up prices despite the worsening global economic crisis, was quite in character for the oil cartel. OPEC produces today about as much oil as it did 30 years ago despite its ownership of 78 percent of proven global reserves of conventional crude oil and even though the global economy and non-OPEC production have doubled over the same period. And this OPEC domination of more than three-quarters of the world's crude is more than matched by oil's monopoly of over 95 percent of the world's transportation fuel.

This meager OPEC production level is more stunning in light of the fact that in 2007 the cartel expanded its member roster to include Ecuador and Angola, which together produce about as much oil as Norway.

Deeply embroiled in a struggle against radical Islam, nuclear proliferation, and totalitarianism, the U.S. faces a crude reality: Saudi Arabia and Iran, the same Sunni and Shi'ite theocratic and dictatorial regimes that most strongly resist America's efforts to bring democracy and the rule of law to the Middle East, will increasingly sit in the driver's seat of the global economy. As the leading countries of OPEC, they are in more of a position each year to thwart each and every U.S. foreign policy priority. While the U.S. economy bleeds, petrodictatorships around the world—even at oil prices well below last summer's stunning \$145 peak—are on the receiving end of staggering windfalls. With 10 percent of the world's oil reserves and the world's second largest natural gas reserve, Iran's President Mahmoud Ahmadinejad seems unfazed by the prospects of international sanctions against his country as a result of its efforts to develop nuclear weapons. Oil also lubricates the so-called Bolivarian revolution led by Venezuela's President Hugo Chavez, who is using Venezuela's oil wealth to buy political influence in the Western Hemisphere and to consolidate, now with Russia's help, an anti-U.S. bloc in the region.

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Beyond the profound toll levied on the U.S. economy by these oil-exporting autocratic kingdoms and dictatorships—the U.S. now imports over 60 percent of its oil, more than twice the ratio of imports before the 1973–74 Arab oil embargo—high oil prices have a devastating effect on the world’s poor. In fact, we are witnessing a tremendous transfer of wealth from the world’s poorest to the world’s exporters of oil. This has profound implications for global security, driving regional unrest, increasing poverty, and nipping in the bud progress towards democracy and the rule of law.

Should the world’s biggest natural gas reserve holders—in order, Russia, Iran, Qatar, Saudi Arabia, and UAE—proceed with plans to create an OPEC-like natural gas cartel, we can expect a further consolidation of power amongst the world’s primary energy producers.

STRIPPING OIL OF ITS STRATEGIC VALUE

The unique strategic importance of oil to the modern economy stems from the fact that oil has a virtual monopoly in the global economy’s very enabler—the transportation sector (contrary to popular belief, at present only 2 percent of U.S. electricity is generated from oil, and conversely only about 2 percent of U.S. oil demand is due to electricity generation.) A century of a transportation sector dominated by petroleum—almost all of the world’s cars, trucks, ships, and planes can run on nothing but petroleum products—has led to an acceptance of this domination as the natural order and oil’s status as a strategic commodity as a fait accompli. As a result, instead of viewing oil’s strategic value as a problem that needs to be addressed, when it comes to energy the focus has been, from a foreign policy perspective—as articulated by the Carter Doctrine—on ensuring uninterrupted access to oil, including by military force if necessary. From a domestic policy perspective, we have concentrated on policies that increase either the availability of petroleum or the efficiency of its use.

A large share of the public discourse has thus been overly focused on solutions that are, by and large, tactical rather than strategic (like domestic drilling and increasing mandatory fuel efficiency standards) or, much worse, irrelevant to the problem (such as promoting one form or another of electricity production). America is poor in oil relative to its need. It consumes one of every four gallons in the world but has barely 3 percent of the world’s proven reserves of conventional oil. The reality is that neither efforts to expand petroleum supply nor those to crimp petroleum demand will be enough to materially address America’s strategic vulnerability, although they can help on an interim basis with such issues as the effects of our huge balance of trade deficit. But such solutions do not address the root of our energy vulnerability: oil’s monopoly in the transportation sector is the reason oil is a strategic commodity. This monopoly gives intolerable power to OPEC and the nations that dominate oil ownership and production over the consuming nations’ economies. Policies that only perpetuate the petroleum standard, doing nothing to address the lack of transportation fuel choice, would therefore

guarantee a worse future dependence on the oil cartel as the non-OPEC nations' share of the world's oil reserves and production further shrinks.

Not long ago, technology broke the power of another strategic commodity. Until around the end of the nineteenth century, salt had such a position because it was the only means of preserving meat. Odd as it seems today, salt mines conferred national power and wars were even fought over control of them. Today, no nation sways history because it has salt mines. Salt is still a useful commodity for a range of purposes. We import some salt, so if one defines independence as autarky we are not "salt independent." But to most of us there is no "salt dependence" problem at all—because canning, 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. When the British Navy made the shift from coal to oil, then First Lord of the Admiralty Winston Churchill famously remarked, "Safety and certainty in oil lies in variety and variety alone." To diminish the strategic importance of oil to the international system it is critical to expand the Churchillian doctrine beyond geographical variety to a variety of fuels and feedstocks.

Ensuring that new cars sold in the U.S. and, by extension, the rest of the world, are platforms on which fuels can compete will spark a competitive market in fuels made from a wide array of energy sources, thus breaking oil's transportation fuel monopoly and eventually stripping oil of its strategic status.

Rather than highflown rhetoric about Manhattan projects and a propensity to wait, endlessly, for the perfect technology and a whole new energy infrastructure (e.g., hydrogen fuel cells for the family car and the fueling stations they would require), it is critical to focus on the deployment of fuel choice, enabling technologies that are available today, since fleet turnover takes over 16 years. Ninety percent of new cars sold in Brazil this year are flex-fuel vehicles. This lets Brazilian consumers and the market choose the winning fuels and feedstocks based on economics. For a cost of less than \$100 more than a gasoline-only vehicle, automakers can make virtually any car a flex-fuel vehicle, capable of running on combinations of gasoline and a variety of alcohols, such as ethanol and methanol, and in the future butanol, made from a variety of feedstocks. These can include agricultural residues and grasses, animal and municipal waste, and even carbon dioxide (as Japan's Mitsui Chemicals plans to do)—elegant possibilities for using reform of transportation to deal with greenhouse gas emissions. There are many possibilities in the works—indeed, alcohol does not just mean ethanol, and ethanol does not just mean corn.

At present, the U.S. domestic alternative fuel industry faces a blend barrier—non-flexible cars can only handle up to 10 percent alcohol fuel, a capacity the domestic industry has already achieved. An open fuel standard requiring new cars to be flex-fuel vehicles, which can handle up to 85 percent alcohol, will eliminate this blend barrier and, beyond encouraging the domestic industry to expand, make it politically realistic to open developed world transportation fuel markets to alternative fuels imported from developing countries. For example, we could speed

development by removing the protectionist 54 cents a gallon U.S. ethanol tariff.

Further, since relatively little electricity is generated from oil, using electricity as a transportation fuel enables the full spectrum of electricity sources to compete with petroleum. Plug-in hybrids (PHEVs) do just that. These vehicles have an internal combustion engine and liquid fuel tank and so provide the range of a standard car. They also have a battery that can be charged from a standard electric outlet and provide up to 40 miles of electric driving power, depending on the battery's capacity, so local miles can be driven on electricity. U.S. Department of Energy laboratory studies estimate that there is sufficient off-peak reserve power generation capacity that over 70 percent of the U.S. vehicle market could shift to PHEVs without there being any need to install additional baseload power plants for that reason. PHEVs can reach oil economy levels of over 100 miles per gallon of gasoline without compromising the size, safety, or power of a vehicle. A PHEV which is also a flexible-fuel vehicle powered by 85 percent alcohol and 15 percent gasoline could reach oil economy levels of over 500 miles per gallon of gasoline without major investments in new infrastructure—each gallon of gasoline being stretched with both electricity and alternative liquid fuels.

A nationwide deployment of flex-fuel cars, flex fuel plug-in hybrids, and alternative fuels could take place within two decades. And it need not require either increased gasoline taxes or high oil prices. It is certainly the case that the low oil prices of the mid-80's and the late 90's discouraged the development of alternative fuels. They were especially effective in such discouragement because of the two truly bad judgments made by the US Government in picking winners for transportation fuel—via the Synfuels Corporation in the early 1980's and via steering the family car toward the "Hydrogen Highway" at the beginning of the current decade. Neither of these extremely expensive fuel programs chosen by the government had a chance competing against oil products in the absence of very high oil prices. But just because it's impossible to break oil's monopoly with expensive government-picked winners doesn't mean the task is hopeless. Breaking the oil monopoly without increased taxes or very high oil prices requires vehicles to be platforms for fuel competition. Opening the fuel market lets the market determine which feedstocks, fuel-generation processes, and fuels are most competitive at any given price point. It also overcomes the chicken-and-egg issue of waiting for specialized alternative fuel infrastructure before deploying dedicated alternative fuel vehicles. Such a transformation will not occur by itself. In a perfect world, government would not need to intervene in the energy market, but in a world controlled by a cartel married to a monopoly, it is the responsibility of government to step in and break the barriers to competition.

Every year that passes without Congressional action to ensure that new cars sold in America are platforms on which fuels—in the form both of electricity and of various liquids—can compete is another year in which millions of gasoline-only vehicles roll onto U.S. roads, further binding us to foreign oil and OPEC's whims.