



FOREIGN
AFFAIRS

Published by the Council on Foreign Relations

The Myth of U.S. Energy Dependence

What We Got Wrong About OPEC's Oil Embargo

By Gal Luft and Anne Korin

OCTOBER 15, 2013

The first U.S. energy secretary, James Schlesinger, observed in 1977 that when it comes to energy, the United States has “only two modes -- complacency and panic.” Today, with the country in the middle of an oil and gas boom that could one day crown it the world’s largest oil producer, the pendulum has swung toward complacency. But 40 years ago this week, panic ruled the day, as petroleum prices quadrupled in a matter of months and Americans endured a traumatic gasoline shortage, waiting for hours in long lines only to be greeted by signs reading “Sorry, no gas.”

The cause of these ills, Americans explained to themselves, was the Arab oil embargo -- the decision by Iran and the Arab members of the Organization of Petroleum Exporting Countries (OPEC) to cut off oil exports to the United States and its allies as punishment for their support of Israel in the 1973 Yom Kippur War. And the lessons they drew were far-reaching. The fear that, at any given moment, the United States’ oil supply could be interrupted by a foreign country convinced Washington that its entire approach to energy security should center on one goal: reducing oil imports from that volatile region.

But Americans were wrong on both counts. The embargo itself was not the root cause of the energy crisis. Contrary to popular belief, the United States has never really been dependent on the Middle East for its supply of oil -- today only nine percent of the U.S. oil supply comes from the region. At no point in history did that figure surpass 15 percent. Rather, the crux of the United States’ energy vulnerability was its inability to keep the price of oil under control, given the Arab oil kingdoms’ stranglehold on the global petroleum supply. Nonetheless, for the last four decades, Washington’s energy policy has been based on the faulty conclusion that the country could solve all its energy woes by reducing its reliance on Middle Eastern oil.

Where did this conclusion come from? By the time the six-month embargo was lifted, in March 1974, the global economy lay in ruins. In the United States, unemployment had doubled and GNP had fallen by six percent. Europe and Japan had fared no better, and struggling, newly created countries in Asia and Africa took the worst hits. Countries completely dependent on energy imports found themselves heavily in debt, and millions of unemployed poor had to migrate from the cities back to their villages.

What Americans import from the Persian Gulf is not oil but its price.

The crisis also dealt a blow to American prestige. At the height of the Cold War, the United States essentially proved that without oil it was a paper tiger. The worried secretary of state, Henry Kissinger, indicated that the United States was prepared to send military forces to the Persian Gulf to take over whatever country was needed to keep the oil flowing. Since 1973, the United States has sent forces to the Middle East time and again in the name of energy security. Moreover, the embargo created a deep sense of vulnerability from which the United States has never recovered. The country has been portrayed that way by its own leaders: in 2006, Senator Joseph Lieberman called it “a pitiful giant, like Gulliver in Lilliput, tied down and subject to the whim of smaller nations.”

The only proper response, it seemed, was to stop importing so much Middle Eastern oil. Every U.S. president since the embargo, from Richard Nixon to Barack Obama, has sought the elusive goal of “energy independence,” either by increasing domestic oil supply (Republicans) or by constraining demand through a gasoline tax and improving the standards for cars’ fuel efficiency (Democrats). Americans have been led to believe that the vulnerabilities associated with oil dependence would be alleviated if only oil imports decreased. Furthermore, they have been promised that import reduction would yield lower crude prices and thus lower prices at the pump.

Those assertions were wrong 40 years ago and they are even further off the mark today. The long race for energy self-sufficiency reflects a systematic failure to grasp the meaning of the events of 1973 -- specifically the exact role that OPEC played during this episode and over the subsequent four decades. It is time to take a fresh look at those events, to rethink the U.S. national fixation with energy self-sufficiency, and to focus on solutions that actually have a chance of getting the United States -- not to mention the rest of the world -- out of the mire.

THE EMBARGO SYNDROME

The first clue that the oil embargo did not cause the United States’ energy woes is that the real (inflation-adjusted) price of oil barely dipped when the embargo ended and did not

again hit the pre-embargo lows until the late 1990s. The fundamental driver of the rise in oil prices was rather a structural shift in the oil market, which transformed it from a buyer's to a seller's market. From the mid-1940s to the 1970s, oil markets were dominated by the so-called Seven Sisters, investor-owned Western oil companies that controlled the global petroleum industry. They were replaced by a cartel of 12 governments.

OPEC was initially created in 1960 by five member states that were frustrated. They felt that they earned too low a share of oil revenues, and they were irritated by oil import quotas set by the United States in 1959 that lowered oil prices outside North America while keeping them high for the benefit of domestic drillers. Moreover, they were intent on changing the balance of power between themselves and the investor-owned oil companies. But the organization did not garner real power until the following decade, after the United States became a net energy importer in 1971.

OPEC's founders understood that by consolidating control over a large portion of the world's oil reserves and colluding to suppress oil production, they could drive prices up to a level more to their liking. In the three years prior to the embargo, OPEC members worked hard and fast to seize control over the international oil market. They taxed and nationalized their oil assets and implemented arbitrary production cuts and sharp increases in prices to offset the loss of their income caused by the decline in the value of the dollar. These measures effectively doubled the price of crude oil between 1970 and 1973.

A sense of impending doom was in the air. In an influential April 1973 *Foreign Affairs* article, James Akins, a White House oil expert who was appointed U.S. ambassador to Saudi Arabia a month before the embargo began, predicted an oil crisis. In the absence of adequate uses for their oil wealth, the Arabs would likely conclude that oil in the ground was just as good as money in the bank and that they should produce less rather than more, despite the blistering growth in global demand. Before the Arabs and the Israelis exchanged a single bullet, OPEC was already working hard to drive oil prices up.

Then came the actual embargo. On October 19, 1973, the Arab members of OPEC and Iran decided to stop sending oil to the U.S. market as a punishment for President Richard Nixon's appeal to Congress to appropriate \$2.2 billion in emergency aid for Israel. What mattered most, however, was not the decision to cut off exports but the cartel's throttling down of oil production.

The oil market is like a pool into which producers pour oil and from which consumers take it out. It does not matter so much who purchases which oil from whom. If the embargo simply consisted of a ban on exports to particular countries, it would not have had much of an impact on prices, since those countries would have purchased from an alternate supplier

and OPEC's oil would have flowed elsewhere. Yet a reduction of supply in the face of the same level of demand was guaranteed to drive prices up globally -- for everyone -- not just to those countries targeted by the embargo. What really happened was that key members of OPEC took advantage of geopolitical events to shift to a lower level of supply and to send prices up to what they perceived as a more just level. In total, five million barrels per day were withdrawn from the market, and OPEC's posted price of crude doubled yet again, from \$5.12 to \$11.65 per barrel.

For the last four decades, Washington's energy policy has been based on the faulty conclusion that the country could solve all its energy woes by reducing its reliance on Middle Eastern oil.

Meanwhile, in the United States, another policy had already set the stage for the snaking gas lines and desperate drivers. The Economic Stabilization Act of 1970 gave the president control of wages, rents, and prices across the American marketplace, including the price of fuel. Whereas in 1970, the Mandatory Oil Import Quota Program had kept U.S. oil prices about 2.5 times higher than global prices, and politicians said nothing, the major price spike following OPEC's 1973 production cuts sent the political and regulatory machinery into a spin. Politically unable to unwind fuel price controls and let the price of gasoline go up in sync with rising global oil prices, the U.S. government had made selling fuel in the United States a losing proposition for some refiners. This caused a reduction in domestic fuel supply. Demand did not drop because the government prevented prices from rising in a way that reflected market realities. The result was shortages at the pump, a spread of panic and uncertainty among buyers, and a doubling down by the government: the Emergency Petroleum Allocation Act, passed in November 1973, enabled the administration to embark on Soviet-style allocation and rationing of petroleum products.

Energy security is traditionally defined as the availability of sufficient supply at affordable prices. The collective memory of the embargo and the U.S. response to it were mostly shaped by the events that were perceived to affect availability -- the embargo and the gas lines -- rather than OPEC's change of the supply-demand balance, which for decades has affected the affordability side of the ledger. Nixon's response to the crisis, Project Independence, aimed at achieving energy self-sufficiency for the United States by 1980, but it ignored the real story: the cartelization of the world's most important commodity and the new balance of power that had been established between consumers and producers.

THE ANATOMY OF A CARTEL

Analysts tend to discount OPEC's role in the modern energy market, deriding it as a dysfunctional and irrelevant group that long ago lost its sway in setting oil prices. Watching

OPEC's conduct on a week-by-week basis, especially the internal disputes among its members, that conclusion seems plausible. But looking at the cartel's overall performance since 1973, one can appreciate the precision of Akins' observation that for OPEC, oil in the ground is as good as oil in the bank. In the past 40 years, the world's population has grown from four billion to seven billion, the number of vehicles in the world has quadrupled, and the Chinese economy has risen from its slumber. All these trends have caused global oil demand to spike from 55 million barrels a day in 1973 to 88 million barrels a day today.

Although the United States and other non-OPEC producers have been increasing their production, OPEC, which holds some three-quarters of the world's conventional oil reserves and has the lowest per-barrel production costs in the world, produces today the exact amount of oil it did four decades ago: 30 million barrels a day, accounting for about a third of global supply. In other words, OPEC deliberately produces much less oil than its reported reserves would allow in order to keep prices higher than they would otherwise be. If investor-owned oil companies such as Exxon, BP, Shell, and Chevron were sitting on top of three-quarters of the world's conventional oil reserves, they would be supplying something around three-quarters of the world's oil. And if not, they'd be slapped with an antitrust lawsuit. Antitrust lawsuits, however, don't work against sovereign governments, and sovereign governments are what constitute OPEC.

At the same time, the Arab OPEC members today face growing budgetary obligations as a result of the Arab Spring's unrest. They need to maintain an oil price high enough to ensure that they will have enough money to distribute to keep the masses from storming the palaces. To make matters worse, Persian Gulf countries are also among the world's fastest-growing oil consumers -- Saudi Arabia, for example, is the sixth-largest oil consumer, using more oil than Germany, South Korea, or Canada -- which means they have less oil for export as their domestic demand grows. What OPEC terms the "fair price" or the "reasonable price" of oil -- which in practice means whatever price its members require to balance their national budgets -- will remain high in order to ensure political stability. "In 1997, I thought \$20 was reasonable. In 2006, I thought \$27 was reasonable," the Saudi oil minister, Ali al Naimi, said in March this year. "Now, it is around \$100 ... and I say again, 'It is reasonable.' "

The financial obligations of OPEC members are likely to continue to inflate, and so OPEC's response to the oil boom in the Western Hemisphere, which has the potential to drive down energy prices, will need to be corresponding to cuts in production. This has been the cartel's modus operandi since its inception. When non-OPEC producers such as the United States or Norway increase their production, OPEC can respond by decreasing supply accordingly, keeping the overall amount of oil in the market the same. With annual

revenues exceeding \$1 trillion, OPEC members seem unconcerned by the pain they have inflicted on the global economy, not to mention the world's poorest nations, with oil's meteoric price rises.

Put simply, what Americans import from the Persian Gulf is not so much the actual black liquid as its price. As long as oil is essentially the world's sole transport fuel, neither expanded domestic oil production nor improvements in the efficiency of cars will change this reality. Such remedies may have a positive impact on our trade balance and the environment, but they will have little bearing on the economic burden of importing oil or the price that consumers will face.

COMPETE, BABY, COMPETE

Half a century of a global transportation sector dominated by OPEC has led us to accept the cartel's price-over-volume strategy as a *fait accompli*. We shouldn't. In a modern global economy defined by free trade, open markets, and antitrust laws, no cartel should be allowed to dominate any commodity, not least the most strategic one of all. That most OPEC members adhere to the World Trade Organization's obligations and that one of them, Qatar, is even home to the WTO's current trade negotiations round only highlight the inconsistency.

What can be done? A breakup of OPEC is unlikely, since all its members are in the same boat, and holding on to the cartel is their only way of remaining economically viable and maintaining domestic stability.

But the United States now has a unique opportunity to stabilize oil prices -- and to do so in a fairly short period. To see how, one can look to salt, the commodity that for most of human history held the same strategic importance that oil holds today. Just as oil has a virtual monopoly over transportation fuel, salt was for centuries the only means of food preservation. As a result, the pursuit of salt was a matter of war and peace and a source of real conflict. This grip was broken with the invention of competing methods of food preservation, such as canning and refrigeration. Salt's strategic importance was eliminated not because countries stopped importing or using salt -- in fact, the United States imports and uses more salt than ever before -- but because there were other options. Oil's strategic importance can be similarly reduced.

In every sector in which oil has faced competition from substitute commodities, it has lost market share due to its high price. For example, until 1973, most industrialized countries, and certainly the developing ones, used oil to generate electricity. As much as a quarter of U.S. electricity and 70 percent of Japan's was generated from petroleum. But the

emergence of civilian nuclear power in the 1970s, followed by the increase in the use of natural gas for power generation, effectively pushed oil out of the electricity mix. Today, in the United States, only one percent of electricity comes from petroleum, and only one percent of U.S. petroleum demand is due to electricity generation. Despite popular claims that drawing electricity from wind turbines, solar panels, and nuclear power would reduce the world's oil dependency, today in most countries, including China, the electricity sector is decoupled from oil.

Such a transformation has yet to happen in the transportation sector, which remains as dominated by oil as it was four decades ago. Other energy commodities, such as natural gas and coal and the fuels that can be made from them, are much less costly than oil and oil-based fuels. Yet so long as cars are made and certified to run on nothing but petroleum fuels, oil will continue to be an uncontested master and will not face competition at the pump. Should cars be open to a variety of fuels, however, oil would be forced to compete for market share, and this competition would force oil prices down even as it drove the price of other energy commodities higher.

The ubiquity of the petroleum-only vehicle, despite the existence of cheaper non-petroleum fuel, is partially a result of the challenge of coordinating between fuel stations, fuel makers, and vehicle manufacturers, and partially due to entrenched regulatory advantages petroleum has accumulated over the years. These can and must change.

PITTING NATURAL GAS AGAINST OIL

The recent proliferation of fracking and horizontal drilling technologies has unleashed such substantial quantities of tight oil and natural gas in North America that it has become a cliché to proclaim an “energy revolution.” But if this development is to have any real and lasting impact on the security of the global oil supply, it will stem from unconventional natural gas production rather than from unconventional oil. Increases in domestic oil production are, after all, trivial for OPEC to counter. Low-cost natural gas is another story.

At current oil and natural gas prices, oil costs five times more than natural gas on an energy equivalent basis. But despite its low cost, less than one percent of U.S. natural gas is used to fuel automobiles. There are a number of paths to making use of natural gas in transportation. Some would allow for cheap fuel but would increase the cost of vehicles; others would be able to keep down the cost of both. For example, using compressed natural gas to power vehicles, while quite cheap on the fuel side, would make cars more expensive, since a gaseous fuel under pressure requires a much more expensive fuel tank than a liquid fuel for safety reasons. Electricity generated from natural gas could power plug-in hybrids and electric vehicles -- also somewhat costly on the vehicle side and quite cheap on the

fuel side. Natural gas could also be converted to liquid fuels such as gasoline, ethanol, and methanol, all of which could be used by engines capable of working on any blend of gasoline and alcohol. This last option would add roughly \$100 to the cost of a vehicle.

Methanol offers a particularly appealing alternative because of its affordability (it sells today for a dollar less than a gallon of gasoline on an energy-equivalent basis), scalability, and the very low cost of enabling vehicles to use it. All that is needed to enable a car to run on methanol are a fuel sensor and a corrosion-resistant fuel line. And in fact, China has opened its transportation fuel market to methanol and has become the world's largest producer and user of the fuel, which in China is primarily made from coal. The fuel's economics are so attractive that illegal blending of methanol and gasoline is rampant.

Opening vehicles to fuel competition would pit cheap and abundant commodities such as natural gas and coal against one whose supply is chronically constrained by a cartel and whose price is consequently inflated. The subsequent increase in production capacity of non-petroleum fuels, and the ability to shift on the fly among different fuel sources at the pump depending on their per-mile pricing, would finally allow market competition to drive down the price of oil.

The realities of geology and the comparative marginal cost of production in different regions make it extremely unlikely that OPEC can be knocked out of its monopolist position in the global oil market. But fuel-competitive vehicles would make the cartel just another purveyor of commodities when it comes to the transportation fuel market. For this to happen, the United States first needs to realize that its current approach might bring oil self-sufficiency, but it will get the country nowhere near energy security. True energy security would not require the United States to shield itself from the rest of the world. Rather, it would require the United States to apply to the transportation fuel sector the economic principles it has always cherished: consumer choice, open markets, and vigorous competition.

GAL LUFT and ANNE KORIN are Co-Directors of the Institute for the Analysis of Global Security and Senior Advisers to the United States Energy Security Council. They are the co-authors of *Petropoly: The Collapse of America's Energy Security Paradigm*.