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## Ooze-Down Economics: Will Opening Global Oil Reserves Stimulate the World Economy?

Oil and gas industry analyst Jim Burkhard discusses the motivation for the release of oil from strategic reserves, starting at the end of this week

By Sophie Bushwick | June 28, 2011 | 11

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As Libya's civil war continues to disrupt its contribution to the world's oil supply, the Paris-based International Energy Agency (IEA) has taken action. The IEA, which counts the U.S. among its members, announced on June 23 that it will release 60 million barrels of oil from various governments' strategic reserves, spread out over a 30-day period. The U.S. Department of Energy is supplying 30 million barrels, half the total amount, from its 727-million-barrel [Strategic Petroleum Reserve](#) (SPR).

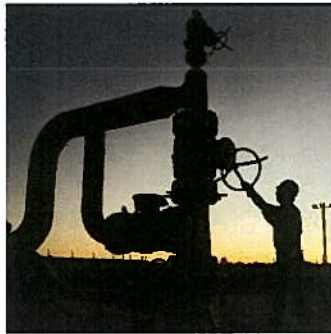


Image: U.S. Department of Energy

This release marks the third time that the IEA has opened its oil reserves in response to crises. The others occurred at the beginning of the Persian Gulf War [in 1991](#) and the aftermath of Hurricanes Katrina and Rita [in 2005](#).

Unlike those occasions, this release comes several months after the beginning of the crisis that necessitated it. In addition, it may have other motives than taking up the Libyan slack. The decision not only comes in the midst of a market downturn, reflecting worries about the sustainability and pace of the economic recovery, but it also follows an early June OPEC (Organization of Petroleum Exporting Countries) meeting that failed to reach a consensus about increasing the world oil supply.

Experts suggest that releasing the oil into the market could drive down prices and boost the shaky economy. How would this work? After all, 60 million barrels may seem like a large volume, but it's not enough to supply one full day of the [world's oil demands](#). Scientific American asked Jim Burkhard, the managing director of IHS Cambridge Energy Research Associates' Global Oil Group, to explain. Under Burkhard's leadership, the group analyzes the market for the oil and gas industry.

[An edited transcript of the interview follows.]

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**What's the purpose of the oil reserves?**

The purpose of the Strategic Petroleum Reserve is to help the U.S. economy deal with a large disruption in oil supply. The SPR was created in the mid-1970s following the oil embargo of 1973, which exposed the vulnerability of both the world and U.S. economies to a severe disruption of oil. The SPR is an insurance policy to help manage any large-scale disruption.

**How does what we're gaining from the reserves compare with what we're losing from Libya, whose civil war began in February?**

Before the civil war Libya was exporting about 1.2 million barrels per day, so the amount of oil that's part of this release—it's 60 million barrels by all IEA members, 30 million by the U.S.—doesn't compensate for all of the oil that's been lost because of the civil war in Libya. But it is nonetheless a significant amount, at least in the time window in which the release will occur. The plan is for it to be over 30 days, which would mean two million barrels per day for a month, which, at least for that time period, would temporarily increase global oil supply by about 2 to 2.5 percent.

**Do you think that the release is going to lower gas prices?**

Oil prices were already on a downward trend in mid-June, but they did fall further following the IEA's June 23 announcement. But keep in mind the oil market is influenced by a vast array of factors—power shortages in China, agricultural policy in India, the [weather](#) in northern Europe—many factors shape the price of oil, so attributing too much importance on any single factor can be a bit misleading. What we can say is that, at least immediately following the announcement, it did lower prices. But whether that's sustained is a big question mark.

**So do you think that its value might be more symbolic?**

It does have symbolic value, it does have impact on oil market psychology, because prices for any commodity are shaped by future expectations. What do we think future economic growth will be? What do we think will be the pace of automobile ownership in China? Our future expectations play a big role in determining how much we're going to pay for something today, whether it's a barrel of oil, a car or a house. What this decision signaled is that the members of the IEA are willing, at least in this instance, to use government-controlled oil reserves, even if there's not a massive large-scale oil disruption.

**What constitutes a large-scale disruption?**

When it was formed, the IEA defined a large-scale disruption as removing 7.5 percent of world oil supply. So Libya falls short of that metric, but it is nonetheless a significant disruption.

**Will opening up the Strategic Petroleum Reserve when it's not a large-scale disruption have implications for its future use?**

Let me take a step back for a second. This release does come after several months of a significant disruption. It also comes at a time when the outlooks for the global economy and the U.S. economy have deteriorated. So this release could also be viewed as a sort of economic stimulus. There aren't too many tools left in the tool kit to stimulate the economy. Most stimulus measures around the world are either being wound down or removed. If oil prices were to fall because of this release, that would be like a tax cut for consumers, which could in effect act as a stimulus. That is, if this is successful at driving down oil prices in a sustained way.

Now, your question: There's been no statement made that this is a definitive change in policy. Again, the *raison d'etre* of the SPR in the U.S. is as an insurance policy against a large scale-disruption. If it were instead to be used on a regular basis to try to influence prices, that would likely, over time, diminish the capability of the reserve to deal with a large-scale disruption.

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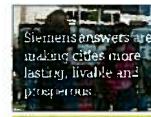
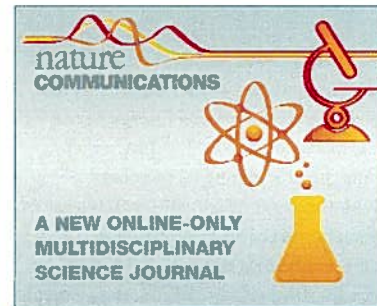
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### Why Shifting from Fossil Fuels to Cleaner Alternatives Will Require Fossil Fuels

By David Biello | Jun 29, 2011 07:00 AM | 13

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The world is waiting for a clean revolution, a shift away from the greenhouse gas-emitting, mountain-leveling, air-polluting, fossil-fuel burning way of life. The world may have to wait a long time if past energy transitions are anything to go by, according to environmental scientist Vaclav Smil of the University of Manitoba—especially since fossil fuel energy is so cheap.

"Energy is dirt cheap. Oil is cheaper than any mineral you can buy," Smil noted. "The percent of disposable income devoted to energy is about 10 percent."

Smil spoke at the recent Equinox Summit at the Perimeter Institute in Waterloo, Ontario, which was specifically charged with devising a new energy scenario for 2030, one that would cut greenhouse gas emissions while extending modern energy to the billions of people who lack it today. The summit called for a range of options, from power plants that harvest energy from hot rocks to solar-battery combos for rural electrification.

The only problem: all of those resources require fossil fuels to build in the first place. Steel and cement—the essential substrate of energy equipment and cities—require coal (or, even worse, charcoal) to be burned. Cheap plastic photovoltaics require polymers made from oil. The fertilizer that feeds a global population of seven billion requires the conversion of natural gas to more than 140 million tons of ammonia per year. Even advanced nuclear reactors would need large, oil-burning machines to mine the uranium or thorium fuel.

"A wind turbine is a pure embodiment of power from fossil fuels," Smil noted. "We are fundamentally a fossil fuel civilization. Everything around us we have fossil fuels

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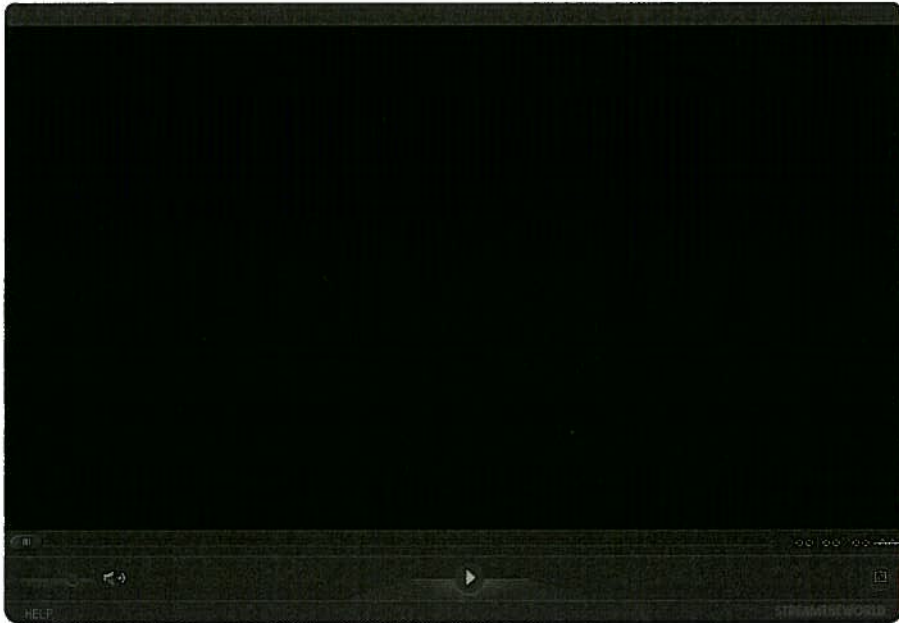
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Nor is the world in danger of finishing off the supply of fossil fuels anytime soon. "Instead of running out of gas, we ran into gas in the shale," Smil said. "We're not running out of anything on a human scale."

That may be a good thing since the alternatives currently on offer—such as biofuels to substitute for oil-derived fuels—can do more harm than good. "It's insane. It's taking food from the mouths of babies," Smil said. "It's a make work project for farmers."

Plus it took three decades, tens of billions of dollars in subsidies and a dead zone in the Gulf of Mexico (a result of fertilizer run-off) to allow ethanol from corn—the most productive per hectare crop on the planet—to supply 10 percent of U.S. car fuel. And that's relatively fast; liquefied natural gas took more than 150 years from conceptual discovery to actual shipments, a timespan similar to the shift from wood to coal, for example. "We should focus our resources and attention on what has the best chance to succeed," Smil said. "That's not biofuels, that's not wind. It is PV," or photovoltaic modules for converting light energy to electricity.

And what has an even better chance of success—and immediate impact—is reforming the current energy system, whether through better building codes that require more insulation and triple-pane windows or making the most efficient use of fossil fuels. After all, if all of Canada switched to more than 90 percent efficient natural gas furnaces, the country would produce 40 percent less CO<sub>2</sub>. "There is no renewable energy that will get you 40 percent less carbon on a scale like that," Smil said. "Changing furnaces is an energy transition."

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1. lamorpa 10:15 AM 6/29/11

'Renewable' energy source advocates almost always leave out the cost and environmental load of the development, manufacture, transport, installation, maintenance, lifespan, and disposal/recycling of their energy sources. That's why they appear so clean and efficient. I not against renewables; I just think they need to be viewed realistically.

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2. racer79 in reply to lamorpa 11:25 AM 6/29/11

While I personally agree with you, it is also the "norm" for coal fire and natural gas energy plants to leave out that kind of information as well. If you're going to take those kind of factors into account, you gotta do it across the board.

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3. sault in reply to lamorpa 12:06 PM 6/29/11

I agree with racer. You have to take ALL externalities into account, especially if you're trying to fault renewable energy for its supposed shortcomings. Mr. Smil makes the same mistake when he says, "Energy is dirt cheap." Of course it's cheap when you don't account for the healthcare and property damage costs of pollution and climate disruption. Add in the military budget allocated to securing oil from the Middle East and a gallon of gasoline should be almost \$10/gallon.

Additionally, OF COURSE we'll need fossil fuels to make renewable energy for the time being. Dirty energy supplies the most power right now, so you get into a chicken-and-egg problem if you try to power renewable energy deployment with renewable energy. As more clean energy is put in place, the amount of fossil energy in the ENTIRE economy will decline and then renewable energy will be made using renewable energy. A wind turbine may be the "pure embodiment of power from fossil fuels" for now, but I'd rather use that energy to make wind turbines than more coal power plants. That way, the current downward spiral of environmental destruction can eventually be replaced with a virtuous cycle of steadily cleaning up our act.

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**4. racer79**  
in reply to sault  
12:19 PM 6/29/11

My thoughts exactly

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**5. acosbey**  
01:03 PM 6/29/11

The article is inaccurate:

"After all, if all of Canada switched to more than 90 percent efficient natural gas furnaces, the country would produce 40 percent less CO<sub>2</sub>."

That's not what he says, and it's far from true. Canada would produce 40% less CO<sub>2</sub> \*from natural gas burned in furnaces\*. There's a BIG difference.

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**6. lamorpa**  
in reply to sault  
01:50 PM 6/29/11

Sault, you miss the point. It is possible, when all factors are taken into account, some these 'renewable' sources are net-energy negative. They can't be scaled up, because more energy is required to produce the energy than can be generated. Granted, fossil sources are consumed, but they are net-energy positive, meaning they can be scaled up. These is more than one reason for a resource to be not renewable. I hope the science behind energy production rules, not politics, blind faith or simple popularity.

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**7. balaganesh727**  
02:26 PM 6/29/11

The shift from fossil fuel to renewable energy costs much as to go with the statistics, but the alternative solution provided is Photovoltaic cells, which are in principle harvests sunlight, well differntly from how a plant system does.

The look over the promising nature of Biofuels has been changing apparently because people here need day after tomorrow solution, which is never possible in research.

The actual creepy thing about Biofuels, turning the corn into biofuel, can be changed into a biomass to energy fuel conversion system. It takes time to workout and achieve in a most probable solution, like the shift from the coal and wood to oil, where research and technology development consumed significant part.

As with Biofuels, a kind of complicated mess surrounds and it will unfold as time goes. So Biofuels are the most likely to replace our energy needs in the near future.

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