COMMENTARY

# Over a Barrel: What Happens When the Cheap Oil Runs Out

*By Jim Motavalli and Kai Wu*

*"My father rode a camel; I drive a car; my son flies a jet; his son will ride a camel." --Saudi saying*

Even those of us who look down our noses at gas-guzzling SUVs have to face up to the fact that our lives are made easier by cheap oil--and it is still pretty cheap. If you think $2.50-a-gallon gasoline is expensive, just try to imagine $6 a gallon. Europeans have long lived with fuel prices that high, leading to societies far less car-centered and much more conservation-minded than the U.S.

Affordable gasoline is dependent on crude oil prices of $50 a barrel or lower, but Goldman Sachs says that in the current "super spike" period prices could rise to more than $100. Even if they were to reach $75 a barrel and stay there, economist Mark Zandi of Economy.com says the result would likely be a "slide into recession." If our energy supply begins to contract, the resulting fallout could affect our confidence, our money supply, and our growth-based economy and institutions, leading to a tsunami of debt default that would make the Great Depression seem relatively idyllic.

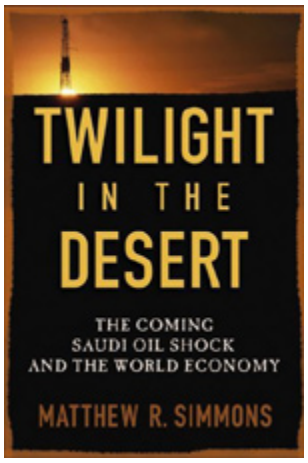
Oil controls our economy in more ways than one. One source of the dollar's stability is the fact that most oil transactions are made in U.S. currency. If OPEC, for instance, were to start trading in euros instead the result would be dramatic loss of hegemony by the U.S. Consider that the one Middle Eastern country to so far defy the dollar and trade in euros was Iraq under Saddam Hussein. Soon after Iran toyed with the same idea it was included in President Bush's "axis of evil."

We need to start thinking about the consequences of vastly higher energy prices, because we're reaching the peak of oil production, when the output of the world's wells will start to lag behind rising international demand. When that happens, prices will soar far beyond the minor shocks we're experiencing today. No less a source than ExxonMobil says that global energy demand will increase by as much as 50 percent in the next 25 years, with 75 percent of the increase in the developing world.

Of course, ExxonMobil's conclusion is that we should therefore give the oil companies license to drill wherever the "black gold" can be found, and trust them to "develop resources responsibly." But it's doubtful that, even if the Bush administration succeeds in fully exploiting the fields underneath Alaska's Arctic National Wildlife Refuge and Middle Eastern production runs full tilt, that oil resources will be available to meet the demand.

An important new book, *Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy* (Wiley) by investment banker and Bush-Cheney energy advisor Matthew Simmons persuasively argues that high-profile estimates of key Saudi oil reserves are wildly inflated. U.S. government planners and the International Energy Agency base their assumptions on Saudi Arabia producing 25 to 30 million barrels of oil a day within the next 20 to 30 years, but Simmons says that the country's actual demonstrated production capacity in 2004 was only 10 million barrels. "This is the world's number one problem, far more serious than global warming," says Simmons.

When the source is someone as establishment-friendly as Matthew Simmons, it's hard to dismiss the bearers of bad tidings. "The end-of-the-fossil-hydrocarbons scenario is not therefore a doom-and-gloom picture painted by pessimistic end-of-the world prophets," said Deutsche Bank last year, "but a view of scarcity in the coming years and decades that must be taken seriously."




President Bush can cozy up to the Saudi royal family in the hope that they will raise production, but oil prices may be out of their hands (or anyone else's). "Prices are moving independently from whatever OPEC decides," said Nordine Ait-Laoussine, OPEC president, last year. "OPEC can't do anything more today."

**Scaling the Peak**

It's not like we weren't warned. The American geologist M. King Hubbert, then a high-level employee of Shell, predicted in 1956 that U.S. conventional oil production would reach a peak around 1970 and decline, never to rise again. Despite his reputation, oil analysts who had watched oil production rise steadily, year after year, dismissed his claim, especially as 1970 drew near. Yet Hubbert was vindicated, and American oil production clearly declined from 1970 onwards, leaving the U.S. no longer the top exporter and vulnerable to OPEC sanctions.

Just like Hubbert, today's analysts and geologists follow trends in global oil field discovery and make an educated guess when the peak of production will occur. World oil discovery actually peaked in 1965, so the fact that the industry is finding less and less oil is very troubling. From the U.S. experience of a 40-year lag between peak discovery and peak production, we could infer that peak oil may be upon us as early as this year. Expert opinion varies on this, of course: Ali Samsan Bakhitari, vice president of Iran's national oil company, puts the date at 2006 or 2007; oil company geologist Colin Campbell at around 2010; the nonprofit World Energy Council says sometime

after 2010; and Royal Dutch Shell says it will be 2025 or later. Simmons believes that if the Saudis have damaged their oil fields by overproduction, then the world's oil peak may already have been passed. "The crisis is very, very near," says Bakhitari.

The fact that we could find and exploit new energy sources has always been our species' ace in the hole. Since the mid-19th century, the planet-wide explosions in human population and material wealth were enabled by ever-increasing reliance on abundant and low-priced fossil fuels. Without fossil fuel-driven farm machinery, fertilizers, food processing, transportation and storage, we'd quickly return to the agrarian life of Lincoln's day, without enough surplus wealth to create reality TV shows or titanium golf clubs.

The average citizen in North America commands an invisible cadre of energy slaves that would make a Roman nobleman feel impoverished. The typical untrained person can only produce 60 to 80 watts pedaling on a bicycle, possibly the most efficient of all human-powered machines. But that's only enough power to run one lightbulb.

**The Big Rollover**

The "American century" floated on cheap oil, and we've become so addicted to it we can't imagine losing access to it. In a report last February for the Department of Energy, Dr. Robert L. Hirsch wrote, "The problems associated with world oil production peaking will not be temporary, and past 'energy crisis' experience will provide relatively little guidance."

Hirsch called for "immediate, serious attention" to the challenge of peaking oil, but there's little likelihood that the Bush administration will turn into conservation warriors or ask Americans to compromise their "sacred way of life."

Adding to the discomfort is the lack of any immediately viable alternatives to easily available oil. If unconventional sources of petroleum (tar sands, oil shale) were simpler to recover or were cost-effective, we would have used them long ago. And although both

solar and wind have made great strides in efficiency and affordability these alternatives currently supply less than one percent of current global energy consumption and will need decades to scale up.

This cold reality, and the growing threat of global warming, is behind the cautious embrace some previous environmental opponents (including Fred Krupp of Environmental Defense and *Whole Earth Catalog* founder Stewart Brand) are giving to nuclear power. "The only technology ready to fill the gap and stop the carbon dioxide loading is nuclear power," Brand wrote in *Technology Review* .

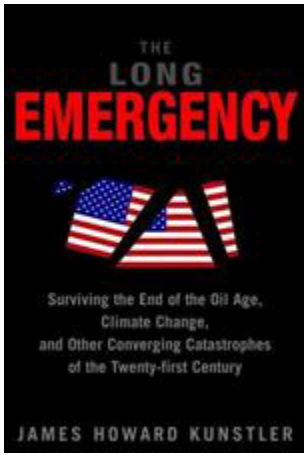
Whether it's tomorrow or in a decade, when the supply of conventional oil begins its descent, daily life will see far larger disruptions than more expensive driving. Consider that much of society's money--and dreams of family life--is invested in homes and living arrangements that take for granted 20-mile daily commutes to work and five-mile trips for food. Despite a newfound interest in urban light rail, subway-riding New York is the only major North American city that travels mainly by public transit, and has less than 50 percent car ownership.

All of us are dependent on country-wide and globe-spanning supply chains for life, work and play. Weekend sojourns to Wal-Mart and malls recognize this overarching fact. Every part of our infrastructure was built during the Age of Increase; but as fabulous as it is (and who isn't amazed by space images of the continents ablaze with electric lights at night?) there's no outward recognition of an Age of Decrease, or even Steady-State.

**The Future**

No great imagination or analytical genius is needed to see the global conflicts--both hot and cold--that are developing around the world over increasingly scarce energy resources. But the world's tactical resources might better be spent developing sustainability with teeth--an economy that can function well on its current solar income, and that can take shape despite a likely background of armed conflict and scarcity of energy, materials and money.

Some of us hold out hope for hydrogen. "We are at the dawn of a new economy, using hydrogen as the energy carrier, which will fundamentally change the nature of our financial markets, political and social institutions, just as coal and steam power did at the beginning of the Industrial Age," writes Jeremy Rifkin in his book *The Hydrogen Economy*. But although the first fuel-cell cars are already taking to American roads, they remain very expensive, with no supporting hydrogen infrastructure. The best-case scenario has Americans taking delivery of affordable, non-polluting fuel-cell cars in 15 to 20 years, and it's unlikely cheap oil will hold out that long.




In his new book *The Long Emergency*, James Howard Kunstler argues that the end of the age of cheap oil will, in effect, return us to a 19th century way of life, with far less personal mobility, and a new reliance on locally grown agriculture. "The circumstances of the Long Emergency will require us to downscale and re-scale virtually everything we do and how we do it, from the kind of communities we physically inhabit to the way we grow our food to the way we work and trade the products of our work," says Kunstler. "Our lives will become profoundly and intensely local. Daily life will be far less about mobility and much more about staying where you are. Anything organized on the large scale, whether it is government or a corporate business enterprise such as Wal-Mart, will wither as the cheap energy props that support bigness fall away."

Given that no easy energy solution is likely to maintain the Western world in the style to which we've become accustomed, we may find ourselves confronting old questions dismissed or forgotten in the flood of material wealth: Why are we here? How shall we live? We may have to take lessons from the developing world, where living on a tight energy budget has always been a necessity. Perhaps the world a century from now will see thousands of answers in the form of local and far more self-sufficient communities, leading simpler, but not lesser, lives.

***Jim Motavalli*** *is editor of* E *and of the new book* Green Living*.* ***Kai Wu*** *is a graduate student at the University of Massachusetts.*

CONTACT: Dieoff.org