Probing Question: Is peak oil a myth?

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Image: Jason Jones

Unprecedented summer gasoline prices are squeezing Americans' wallets and also expanding their vocabularies, as terms like "peak oil" gain common usage.

Peak oil, economists say, is the point at which oil production maxes out: The easily available reserves are gone, and the cost of extracting and refining the remaining stuff exceeds the price it fetches on the open market. After the peak, the theory goes, production starts to fall.

Experts worry that if such a decline in production happens too rapidly, it could outpace the development of viable energy alternatives, resulting in a drastic spike in prices. Others believe that peak oil is a myth, that we could never drain the world's oil supply to the point of such a crisis.

Tim Considine, a former professor of natural resource economics at

Penn State, falls somewhere in the middle.

"In any geographic area, it's a natural phenomenon for oil to peak at some point," Considine said. He pointed to the United States reaching its own oil peak in 1971. From the late 19th century until that year, the United States was the world's largest producer of crude oil, he noted. But in 1971, U.S. oil production peaked at 10 million barrels per day, and it has been dropping ever since, to a current level of 5 million barrels per day. "The peak oil theory looks at the U.S. experience and believes the world will peak also," explained Considine. "The biggest question is when."

Some economists predict the peak has already occurred; Princeton's Kenneth Deffeyes says it happened in 2005. Other experts, like Matthew Simmons, chairman of Simmons & Co. International, an energy investment company, estimate that the world is peaking right now. Exxon Mobil and other oil companies have projected a peak at 2030 or beyond.

According to Considine, the world's oil peak can be hastened or delayed by market forces and geopolitics. Lifting the U.S. ban on offshore drilling, producing oil from shale in the Green River Basin of Wyoming, allowing oil production in the Arctic National Wildlife Refuge, and coal-to-liquids production, he noted, could dramatically increase U.S. liquid fuel production, boosting it beyond the peak reached in 1971. But such a change is unlikely, he added, because a political consensus for aggressive energy production does not exist.

Today, with Saudi Arabia as the world's largest oil producer and a turbulent Middle East providing most of the world's oil, politics will undoubtedly play a role, as will economics. As rapidly developing giants like China and India require more energy to fuel their economies, the world demand for oil continues to outpace the growth in supply .

But that doesn’t necessarily mean we're going to run out of oil, Considine said. "Peak oil is a moving target," he notes. "As demand increases, prices increase. And when prices increase, companies develop and produce more oil, which can slow the peak. We're getting better at finding oil and more efficient at drilling it."

Peak oil prediction is also elusive, he added, because though oil producers announce how much oil they are putting onto the market, they don't announce when the supply from a given oil field is drying up.

When the peak hits, will a crisis ensue? Not necessarily, said Considine. "I don’t believe in the cataclysm. If you have a sharp drop in production and prices increase, you will get major substitutions in the demand for oil," he suggested.

The United States has already begun to see these substitutions, he noted, as American motorists scrap their SUVs for smaller cars in an attempt to cut down on their gasoline costs. But what would have still greater impact is a shift to energy sources beyond oil.

"The problem with the transportation sector is that oil supplies 97 percent of its energy, and there's no viable substitute -- unless the price of oil gets high enough. It's knocking at that door now, and we're starting to see tangible indicators of a switch," said Considine.

Unconventional sources of oil, such as Canadian tar sands, ultra-deep-water drilling and natural gas and coal-to-liquid plants, Considine suggested, also will help offset peak oil and help meet energy needs after the peak is hit. Among renewable energy sources, solar power, wind power, hydropower, biomass and geothermal also could lessen the world's need for oil and push the peak farther away.

No matter what alternatives emerge, he stressed, there will be an ever-

increasing global demand for resources, which will impact the American lifestyle. "Americans are competing with Asia and the rest of the world not just for fuel, but for materials and food as well. That's the world we're in," he noted.

With the world economy shifting and gasoline prices surging, Americans may find themselves asking, "when will peak oil hit, if it hasn't already?"

"As was the case with the U.S. oil peak -- we won't actually know until it is in our rearview mirror," said Considine.

Source: By Bethany Parker, Penn State