Q & A: What does being energy independent really mean?

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The rapid rise in gas prices following Russia's invasion of Ukraine has renewed calls for the U.S. to become "energy independent."

While President Joe Biden has called for stepping up our transition away from fossil fuels and toward an energy system that relies more on the sun, wind, and other renewable sources, others have blamed the president for the rising prices at the pump and called on him to "say yes to American oil" or "drill, baby, drill." Some Republicans credit former President Trump with achieving "energy independence" during his presidency, because the U.S. became a net exporter of crude oil during his last year in office.

But what exactly is "energy independence?" Andrew Campbell, executive director of the Energy Institute at Haas, explains.

"'Energy independence' is a political slogan, not an economic or technical concept with a clear definition," Campbell said in a recent interview for Reuters Fact Check. "I understand that politicians use the term 'energy independence' to imply that a country is insulated from global energy markets. However, this is rarely the case."

The recent spike in U.S. gas prices—despite robust U.S. oil production—is a case in point, Campbell said.

"If a country produces all of the energy that it consumes, does not participate in international trade in energy, does not import energy-intensive products, and does not send energy-related pollution to its neighbors or the atmosphere, then I would consider it energy independent. I don't think any country meets that definition."

Q: The U.S. is a net exporter of coal and natural gas, and in 2020 we also exported more oil than we imported. Does that mean we were no longer dependent on foreign oil?

A: It's true that in 2020 the U.S. was a net exporter of oil and petroleum.

However, the U.S. was still highly dependent on imports of foreign oil and petroleum. Imports equaled 43% of U.S. consumption in 2020. The U.S. was a net exporter that year because of a steady increase in oil production each year since 2008, as well as a decrease in demand as people stopped moving around and consuming transportation fuels due to the COVID-19 pandemic. The increase in oil production was driven by hydraulic fracturing (fracking), a technological innovation that was not attributable to President Trump.

Q: Why would we rely on imports if we have excess oil to sell?

A: The U.S. can simultaneously be a net exporter of petroleum and highly dependent on imports for a couple reasons. One is geographic. Domestic oil production tends to occur in the middle of the US, and is connected to Midwest, Gulf Coast, and East Coast refineries, but not West Coast refineries. West Coast refineries import lots of oil from overseas. In the eastern U.S., there can be transportation bottlenecks or high transportation costs that mean it's cheaper to buy from overseas than domestic producers.

A second reason is that refineries are fine-tuned to process certain types of crude oils—for example, heavier versus lighter or oils with higher or lower sulfur content. Getting the most appropriate types of crude oil to each refinery involves selling U.S. crude oil that U.S. refineries cannot process to foreign countries, and buying the right kind of foreign crude oil. The U.S. benefits tremendously from being connected to global energy markets.

Q: If we're producing so much oil, why did the Ukraine war cause such an immediate spike in gas prices?

A: Crude oil and transportation fuels are traded in global markets. The U.S. allows its producers and consumers to buy and sell oil and petroleum in these global markets. This means that domestic prices, including prices for gasoline refined in the U.S. from oil produced in the U.S., are closely tied to global prices. One advantage of being a net exporter is that there are U.S. companies and regions that benefit from high global prices. Profits for U.S. oil companies are very high now, and economic activity is increasing in oil-producing areas. At the same time, many households and parts of the economy are experiencing the downside of high energy prices. Conversely, when global oil prices drop, the U.S. households and businesses have access to the least expensive oil from around the world, which may not be produced in the U.S.

Q: What can we do to become more independent, and insulate consumers from price spikes driven by events across the globe?

A: The U.S. can begin to escape the impacts of global oil markets and become more energy independent by moving away from oil and toward other energy sources such as electricity produced by renewable energy, and, to some extent, natural gas (which is becoming increasingly global) and nuclear (which involves imported uranium).

Provided by University of California - Berkeley

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