EV sales growth points to oil demand peaking by 2030. So why is the oil industry doubling down on production?

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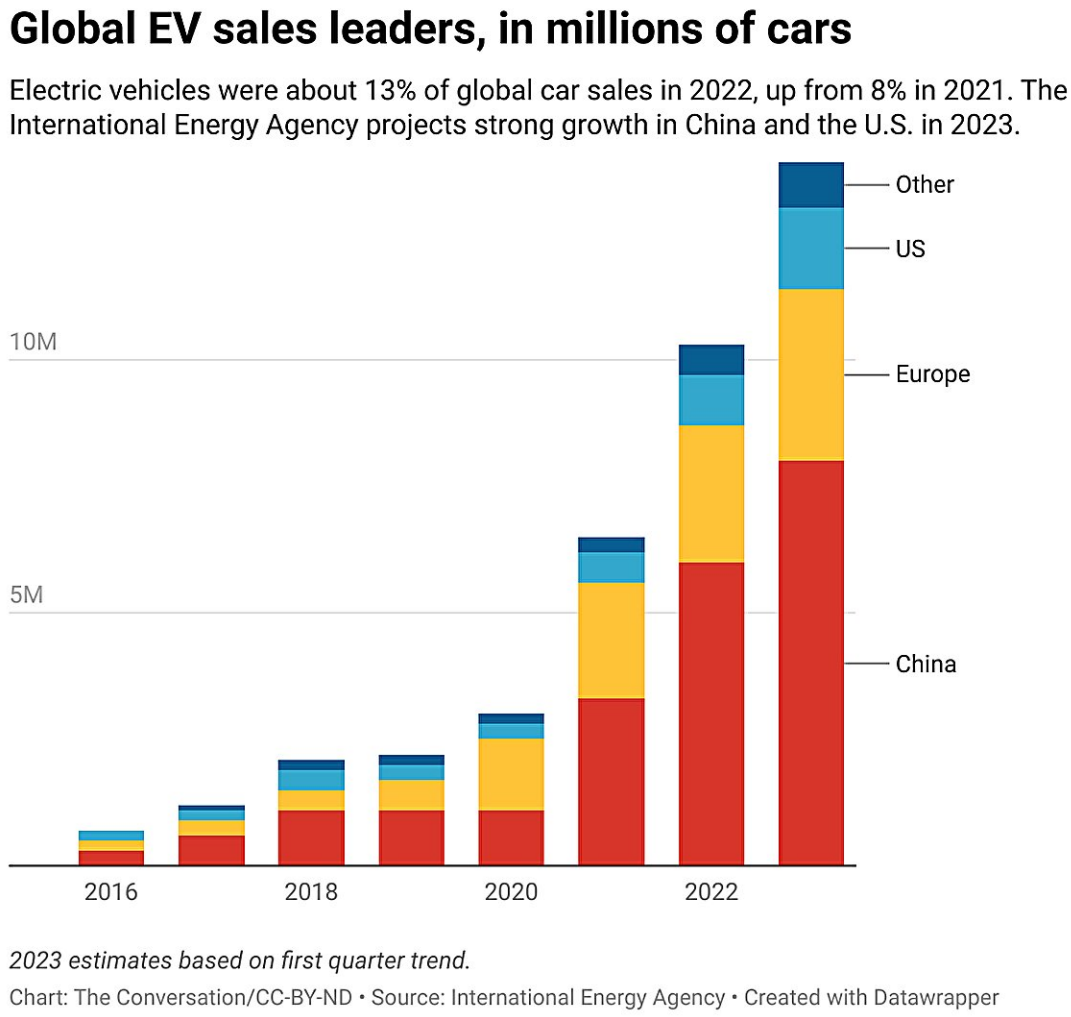

Credit: The Conversation

Electric vehicle sales are growing faster than expected around the world, and, sales of gas- and diesel-powered vehicles have been falling. Yet, the U.S. government still forecasts an increasing demand for oil, and the oil industry is doubling down on production plans.

Why is that, and what happens if the U.S. projections for growing oil demand are wrong?

I study sustainability and global energy system transformations. Let's take a closer look at the changes underway.

EVs' giant leap forward

On Sept. 12, 2023, Fatih Birol, director of the International Energy Agency, an intergovernmental organization that advises the world's major economies, drew global attention when he wrote in the *Financial Times* that the IEA is now projecting a global peak in demand for oil, gas and coal by 2030.

The new date was a significant leap forward in time compared with previous estimates that the peak would not be until the 2030s for oil and even later for gas. It also stood out because the IEA has typically been quite conservative in modeling changes to the global energy system.

Birol pointed to changes in energy policies and a faster-than-expected rise in clean technologies—including electric vehicles—along with Europe's shift away from fossil fuels amid Russia's war in Ukraine as the primary reasons. He wrote that the IEA's upcoming World Energy Outlook "shows the world is on the cusp of a historic turning point."

The United Nations also released its "global stocktake" report in early September, assessing the world's progress toward meeting the Paris climate agreement goals of limiting global warming to 1.5 degrees

Celsius (2.7 degrees Fahrenheit) compared with preindustrial temperatures. The report found serious gaps in efforts to reduce greenhouse gas emissions to net-zero by soon after mid-century. However, it noted two bright spots: The world is more or less on track in the growth in solar photovoltaics for renewable energy—and in the growth of electric vehicles.

The dynamics of EV expansion are important because each vehicle that uses electricity instead of gasoline or diesel fuel will depress demand for oil. Even though demand for petroleum products in other sectors, like aviation and petrochemicals, is still increasing, the IEA expects a decline in road transportation's 50% share of oil consumption to drive an overall peak in demand within a few years.

EVs are now on pace to dominate global car sales by 2030, with fast growth in China in particular, according to analysts at the Rocky Mountain Institute. If countries continue to upgrade their electricity and charging infrastructure, "the endgame for one quarter of global oil demand will be in sight," they wrote in a new report. As electric trucks become more common, oil demand will likely drop even faster, the analysts wrote.

Global sales of light-duty vehicles already show a decrease in internal combustion—gasoline and diesel—vehicle sales, mainly due to increasing EV sales, but also due to an overall decline in vehicle sales that started even before the pandemic.

So why is the US projecting oil demand growth?

Based on the data, it appears that global oil demand will peak relatively soon. Yet, major oil companies say they plan to increase their production, and the U.S. Energy Information Administration still projects that global demand for oil and fossil fuels will continue to grow.

Vehicles do last longer today than they did a couple of decades ago, and they are also larger, slowing down efficiency gains. But the Energy Information Administration appears to be lowballing projections for EV growth.

The Biden administration, which pushed through large U.S. tax incentives for EV purchases, has taken steps to clear the way for increasing some oil and natural gas exploration. And large government subsidies continue flowing to fossil fuel industries in many countries. These contradictions undermine the goals of the Paris Agreement and could lead to costly stranded assets.

What do these trends mean for the oil industry?

It's fair to assume that large industries should have a good handle on future developments expected to affect their fields. But they often have a competing priority to ensure that short-term gains are preserved.

Electric utilities are an example. Most didn't feel threatened by renewable electricity until penetration expanded quickly in their territories. In response, some have lobbied to hold off further progress and invented spurious reasons to favor fossil fuels over renewables.

Of course, some companies have changed their business models to embrace the renewable energy transition, but these seem to still be in a minority.

Large corporations such as BP and TotalEnergies invest in renewables, but these investments are often offset by equally large investments in new fossil fuel exploration.

Both Shell and BP recently backpedaled on their previous climate commitments in spite of tacit admissions that increasing oil production is

inconsistent with climate change mitigation. Exxon's CEO said in June 2023 that his company aimed to double its U.S. shale oil production over the next five years.

What is happening in the fossil fuel industry seems to be an example of the so-called "green paradox," in which it is rational, from a profit-maximization point of view, to extract these resources as quickly as possible when faced with the threat of future decreased market value.

That is, if a company can see that in the future its product will make less money or be threatened by environmental policies, it would be likely to sell as much as possible now. As part of that process, it may be very willing to encourage the building of fossil fuel infrastructure that clearly won't be viable a decade or two in the future, creating what are known as stranded assets.

In the long run, countries encouraged to borrow to make these investments may be stuck with the bill, in addition to the global climate change impacts that will result.

Extractive industries have known about climate change for decades. But rather than transform themselves into broad-based energy companies, most have doubled down on oil, coal and natural gas. More than two dozen U.S. cities, counties and states are now suing fossil fuel companies over the harms caused by climate change and accusing them of misleading the public, with California filing the latest lawsuit on Sept. 15, 2023.

The question is whether these companies will be able to successfully adapt to a renewable energy world, or whether they will follow the path of U.S. coal companies and not recognize their own decline until it is too late.

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