



The End of the Oil Age Is Upon Us

A new report suggests that over the next 30 years, at least 80 percent of the oil industry will be wiped out.

by [Nafeez Ahmed](#) August 26, 2020, 6:00am



IMAGE: [SANJAY ACHARYA](#) VIA WIKIMEDIA COMMONS

The oil industry is on the cusp of a process of almost total decimation that will begin over the next 30 years, and continue through to the next century. That's the stark implication of a new forecast by a team of energy analysts led by a former US government energy advisor, seen exclusively by Motherboard.

2020, the forecast suggests, will go down in history as the final point-of-no-return for the global oil industry—a date to which we will look back and remember how the production of oil, as well as other fossil fuels like gas and coal, underwent a slow, but inexorable and largely irreversible decline.

Along the way, some 80 percent of the industry as we know it is going to be wiped out.

Of course, the COVID-19 pandemic is likely to be recognized as a principal trigger for this decline. The new era of oscillating social distancing rules and remote working has crushed once rocketing demand, at least temporarily.

But in reality, the broad contours of this decline were already set in motion even before the pandemic hit. And the implications are stark: we are in the midst of a fundamental energy transition which will see the bulk of the fossil fuel industry gradually eclipsed in coming decades.

The end of the line

These conclusions are laid out in a soon-to-be-published analysis written by a former top strategy advisor to the US Department of Energy, Rodrigo Villamizar Alvargonzález—previously



Columbian Minister of Energy, World Bank senior economic consultant, an advisor to the Dutch Ministry of Foreign Affairs, and energy expert for the Texas State Senate Economic Development Committee and Texas Public Utility Commission.

I obtained the draft manuscript, titled *Energy and Power Futures*, from the authors earlier this year when it was first finalized in January—just before the COVID-19 pandemic came on the scene. Villamizar’s forecast placed “the start date of oil’s decline at around 2020”—described as a “tipping point” for world oil production which, from then on “will go down. Nowhere in sight is the possibility of going over the all-time production high of 35.7 billion barrels per year (or 100 million barrels per day) beyond 2020.”

Villamizar is currently Head of Strategy for the Americas at Kaiserwetter Energy Asset Management, an energy investment firm based in Hamburg, Madrid, and New York. His analysis is co-authored with Randy Willoughby, a professor of political science at San Diego University, and Vicente Lopez-Ibor Mayor, previously founding Chairman of Europe’s largest solar energy company Lightsource BP (owned by oil and gas giant BP) and a former Commissioner at Spain’s National Energy Commission. Their study is due to be published later this year by Durham University’s School of Government and International Affairs.

After the COVID-19 crisis, they revised their forecasts—finding that the pandemic has reinforced the trends they had previously identified. In their updated text, they argue that the remaining years of the 21st century and beyond will be marked by a “slow but permanent decline in demand for plenty of oil resources.”

The new forecast is in broad agreement with the predictions of several other agencies, including the Norwegian energy consultancy [DNV GL](#), the US financial consultancy [McKinsey](#), and even oil and gas giant [BP](#), which similarly portend a relentless decline in oil demand out to 2050.

But unlike those predictions, the forecast shows this decline could be faster, with huge ramifications for global oil production.

Too much oil?

In the view of Villamizar, Willoughby and Mayor, this is not an oil scarcity crisis, but a demand crisis. They write: “Perhaps we were the first to notice that, even before COVID-19, the year 2019 would be the last ever to register daily production of oil closer to 100 million barrels. Indeed, before the coronavirus landed in Italy, the size of the oil market had already started its permanent slippery downward slide towards an uncertain future.”

In this analysis, oil demand was seen to peak at the end of 2019 and early 2020. “I thought we had a glitch in our forecasting model,” explained Villamizar. “But all the revisions pointed to a similar result.”

Among the factors behind the portended decline are a combination of “climate change action initiatives” demanding a brake on fossil fuel production; a shift toward more electric cars and other forms of transport; the persistence of lower oil prices undermining oil industry profitability; and a decrease in investment in new oil infrastructure and technology:

“Our results showed petroleum consumption reduced 31 percent by 2050 and 60 percent by 2100. That means that 2019 was the highest ever production level reached (100 million barrels per day, mbd).”

Villamizar and his colleagues point out that oil will still be needed for many key industries, including petrochemicals and plastics.

And there are vast reserves of oil still in the ground. So the industry will not simply disappear. But most of the world’s oil assets will, in their view, become ‘stranded’—left alone because global demand for it gradually evaporates.



The overall prognosis—that we are now moving into the second and final half of the oil age—is sobering: “Oil will not die anytime soon but it is already on a downward slippery slope.”

Natural selection

While the oil industry as such will not simply collapse, these experts believe it is now entering a protracted period of terminal decline over the next three decades. What emerges as a consequence will be a very different type of industry.

“We forecast a long-term Darwinian transformation in the future oil sector,” write Villamizar, Willoughby, and Mayor. “The new market structure rising from the old oil reality will be dominated by an oil troika made up of US, Saudi Arabia, and Russia.”

Only 20 percent of industry players will survive by 2050, they forecast. And the oil market will be “one-third smaller than today.”

This drop in demand means, of course, that global oil production will also decline because it is no longer needed. According to the authors, production will decline from 100 million barrels per day (mbd) to 68-69 mbd by mid-century, and 40 mbd by 2100.

The world will simultaneously see a dramatic reduction of exports from 46 mbd to about 25 mbd by 2050, and a reduction in the number of exporting countries from today’s 58 to about 15.

These projected declines in global oil production by a third, and in global oil exports by nearly half—within the next 30 years—comprises a colossal collapse by any standard.

The analysts compare this sweeping oil sector transformation to the decimation of the tobacco industry. This time, the result will be “fewer players, shrinking markets and lots of enemies everywhere accusing the companies of selling an environmentally poisonous product... With less water in a shrinking pond, the bigger fish will

push the smaller out and regroup in isolated sections of what’s left.”

Climate danger

But it is too early to rejoice that the coming decimation of the oil industry will happen sufficiently fast to save us from dangerous climate change.

Villamizar, Willoughby, and Mayor point out that “this future lower level of oil supply is still much higher than what the Paris Agreement on climate mitigation expects to be produced to maintain the world’s average temperature above no higher than 2 degree Celsius from the level registered during the Industrial Revolution.”

So it would be a huge mistake to sit back and wait casually for the oil industry to slowly die out. That approach would put us on a path to breach the [scientifically recognized 2C safe limit](#). Beyond that level, scientists warn that we will experience an increasingly deadly and unpredictable climate.

And some scientists warn that even now, due to the uncertainties in predicting how tightly interconnected complex ecosystems might unfold, we may already be [on the brink](#) of triggering a runaway warming process that could culminate in an uninhabitable planet.

This predicament puts the task of rapidly decarbonizing our economy at the forefront of global priorities. That will, according to Villamizar and his co-authors, require huge investments in “areas like electrification, affordable long-term energy storage, and regenerative agriculture.”

It also means a change in investor mindsets, and thus a shift to a slower but perhaps more stable economy—instead of expecting quick bucks for the next quarter, investors should recognize the need to wait 10-15 years for returns, they argue.

Supply or demand?

While the demand slump is right now the big factor in the global oil crisis, several other studies



have pointed out that the oil industry was overdue a reckoning due to the increasing costs of oil production and how this might impact supply relative to profits.

Earlier in February, I [reported](#) on a major study by the Geological Survey of Finland which assessed the implications of the fact that conventional oil production began to plateau around 2005. After this point, the world has become increasingly dependent on unconventional oil and gas supplies. Since 2008, the rise in demand has been met almost entirely by more expensive and difficult to extract sources such as shale oil, tar sands and offshore drilling.

While market prices have remained too low for oil companies to make a meaningful profit relative to rocketing extraction and production costs, they have ramped up billions of dollars in debt to keep the show on the road: all enabled by massive post-2008 quantitative easing. Thus, the study warned:

“The era of cheap and abundant energy is long gone. Money supply and debt have grown faster than the real economy. Debt saturation and paralysis is now a very real risk, requiring a global scale reset.”

In June, a peer-reviewed [study](#) led by Dr Roger Bentley of the Petroleum Analysis Centre in Ireland found that global conventional oil production had indeed reached a “resource-limited plateau” from 2005 onwards. Although this was relieved by the rise in US shale oil, even before the pandemic there were signs that the shale boom “may be fairly short-lived.”

The new forecast from Villamizar and his co-authors, when taken into context with such studies, suggests that the oil industry now faces a perfect storm of crises affecting both supply and demand.

Production was increasingly uneconomical due to the transition to more expensive and difficult to extract unconventional oil and gas. The

unsustainable debt-drenched economics of unconventional resources mean that, however vast those reserves are, it was increasingly unviable to continue extraction without even more unsustainable levels of debt. Meanwhile, global demand was already set to begin a slow but precipitous decline from 2020 onwards. But the pandemic accelerated that collapse in demand, and we have reached the point-of-no-return.

If this analysis is right, then the end of the oil age is in full swing. The real question is, how fast can we transition to what comes next?