

# COULD PANDEMIC-RELATED TRENDS SHIFT THE FOSSIL-FUEL PARADIGM?

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The nature of a recovery for the post-pandemic global economy is an unknown entering the fall of 2020. That uncertainty has caused some climate observers to wonder if trends in economic and social behaviors—modified, at least temporarily, by pandemic-based restrictions—may lead to reduced fossil fuel consumption, ultimately leading to greenhouse gas (CO<sub>2</sub>) emission reductions.

Due to the global economic impacts of COVID-19, oil demand is expected to decline from 100.3 million barrels per day (bpd) in 2019 to 91.9 million bpd in 2020, based on forecasts from International Energy Agency (IEA), the Organization of the Petroleum Exporting Countries (OPEC) and the U.S. Energy Information Administration (EIA). This is down significantly from the initial forecast of a 1 to 1.5 million bpd increase heading into 2020. While all three agencies expect a rebound in demand in 2021, oil demand is expected to be roughly 98.3 million barrels per day, 2 million barrels per day below 2019 demand.

Beyond 2021, the outlook for oil demand remains highly uncertain. The IEA said, “accelerating number of COVID-19 cases is a disturbing reminder that the pandemic is not under control and the risk to our market outlook is almost certainly to the downside.” OPEC noted, “the outlook for 2021 remains dependent on the considerable uncertainties in 2020, both to the upside and the downside.”

There are several headwinds facing oil demand, which we believe will permanently reduce demand for oil going forward. These include the electrification of transportation around the globe, behavioral shifts stemming from COVID-19 such as reduced air travel and an increased proliferation of remote work, as well as changing regulatory environments which could penalize fossil fuel usage.

Even prior to the impacts of COVID-19, the date of peak oil demand has been consistently reduced, with Norwegian consulting firm DNV GL forecasting peak oil demand in 2023.<sup>1</sup>

As investors that integrate environmental, governance and social (ESG) factors into security analysis, oil demand trends and outlooks can be material considerations when we invest in oil and gas companies. Our ESG analysis can help us identify companies that may be better prepared for transitions in energy demand and use. Trends we are currently monitoring are explored in greater detail in this article.

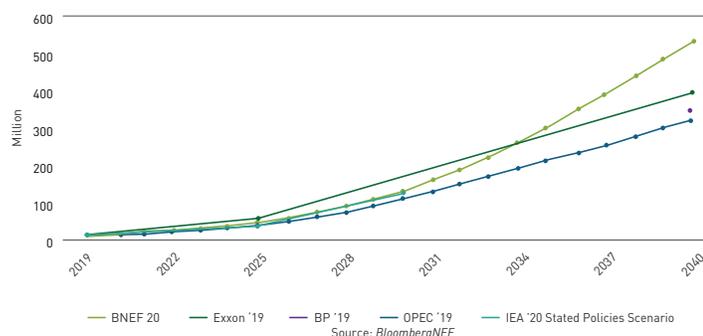
## ELECTRIFYING TRANSPORTATION

Currently, road transportation such as passenger vehicles, buses, and trucks account for around 50 percent of oil end use demand. However, a large portion of that demand could ultimately be replaced over time by electric cars, scooters, trucks, and buses as well as the use of bikes.<sup>2</sup>

*BloombergNEF (BNEF)*, which provides research on clean energy and advanced transport among other subjects, recently published forecasts of adoption of electric vehicles (EVs), shared mobility and autonomous vehicles through 2040.<sup>3</sup> Both *BNEF* and IEA forecast that EV sales will recover in the next two years at a rate faster than sales of internal combustion engines. *BNEF* forecasts passenger EVs will grow from 3 percent of passenger vehicle sales in 2020 to 10 percent in 2025 and 28 percent in 2030, and ultimately accounting for 58 percent of overall passenger vehicles sales by 2040. EVs will also make up 67 percent of all municipal buses on the road by 2040, plus 47 percent of two-wheelers and 24 percent of light commercial vehicles, based on *BNEF* predictions.<sup>4</sup>



**FIGURE 1: ELECTRIC VEHICLE FLEET FORECASTS BY VARIOUS ORGANIZATIONS SHOW STRONG GROWTH**



Additionally, IEA forecasts at least 140 million EVs in 2030 under its “Stated Policies Scenario,” and close to 250 million EVs by 2030 in its “Sustainable Development Scenario.” This compares to 1.3 billion cars globally as of 2016.<sup>5</sup>

### BEHAVIORAL CHANGES REDUCE FOSSIL-FUEL DEMAND BUT, FOR HOW LONG?

The economic and social restrictions put in place with a goal of reducing spread of the COVID-19 virus suppressed economic demand in many sectors of the economy. *BNEF* forecasted a 10% decline in global kilometers driven for 2020 relative to 2019. Additionally, the journal *Nature Climate Change* reported that daily global CO<sub>2</sub> emissions from the onset of the global pandemic in December 2019 through early April 2020 decreased by 17 percent compared with 2019 levels, with just under half of the decrease due to changes in transport activities.<sup>6</sup>

It is difficult to predict whether these changes suggest a permanent reduction in travel and related fuel consumption. In its report, *Nature Climate Change* acknowledged that past declines in fossil-fuel consumption related to reduced economic activity, such as the Great Financial Crisis in 2008-2009, rebounded quickly following disruptions.

In addition to reduced oil demand from electrifying transportation, a report in *Scientific American*,<sup>7</sup> suggests that if remote work remains a permanent fixture for more people in a post-COVID-19 world, it could help put a dent in CO<sub>2</sub>, one of the U.S.’s largest sources of planet-warming emissions.

“The extent of the emissions reductions that can be gained from remote work in any particular city depends on a number of factors,” *Scientific American* stated, including “whether most commuters drive cars or take public transit to what electricity sources the city uses.”

*Scientific American’s* analysis revealed that “telework could be more of a boon in fighting climate change in some places than in others,” with emissions in Los Angeles likely declining to a greater extent than those in Chicago. The analysis found that roughly 70 percent of the people who worked in the L.A. drove alone in their commute; only about 9 percent took public transit. In contrast, 34 percent commuted by public transit in Chicago.

### REGULATORY CHANGES TO COMBAT CLIMATE CHANGE

We think there are longer-term headwinds for oil demand due to changing regulatory environments.

For example, *Barron’s* reported in August 2020 that governments in Europe and other regions are increasingly investing in electrical infrastructure.<sup>8</sup> According to the report, the initiatives are “both for political goodwill—since public opinion in the continent favors greener energy—and to capitalize on next-generation technologies. The European Union recently authorized 750 billion euros (one euro equals \$1.18 as of August 26) to be spent on an ‘EU Green Deal’ to help countries recover from COVID-19 and upgrade to cleaner technologies.”

Additionally, presidential candidate Joe Biden has announced a comprehensive clean energy plan calling for substantial investments in EV manufacturing in the U.S. and a long-term goal of net-zero emissions economy-wide by 2050.<sup>9</sup>

### CONCLUDING THOUGHTS ON CURRENT TRENDS

While the outlook for oil demand is highly uncertain, it is possible that peak oil demand occurred in 2019. Businesses and individuals, prompted by unprecedented changes associated with the pandemic, may find alternatives to long-held behaviors and consumption patterns, including those related to fossil fuels. Additionally, changes in the regulatory environment and the strong demand for EVs will also have a major impact on future oil demand. As they do, the energy sector, particularly the oil exploration and production industry, may find current drilling, extraction and refining activities subject to changes in their traditional business models.

We will continue to track these trends and influences on energy sector investments as we build and manage investment grade bond portfolios. Climate transition risk remains a key ESG factor across several industries, with significant implications for the long-term credit quality of many companies within the energy sector.



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#### FOOTNOTES:

1. "Ready for an oil demand peak in 2023?," Bjorn K. Haugland, DNV GL Group, September 30, 2018.
2. "Oil Market Update 2020: The Year of the BAT," Rystad Energy, April 2020.
3. "Comparing Long-Term Electric Vehicle Outlooks 2020," Corey Cantor, *BloombergNEF*, August 12, 2020.
4. "Long-Term Electric Vehicle Outlook 2020," *BloombergNEF*, May 19, 2020.
5. "How many cars are there in the world?," Andrew Chesterton, *CarsGuide*, August 6, 2018.
6. "Temporary reduction in daily global CO2 emissions during the COVID-19 forced confinement," Corinne Le Quéré et al, *Nature Climate Change*, May 19, 2020.
7. "COVID Pandemic-19 Shows Telecommuting Can Help Fight Climate Change," Ainslie Cruickshank *Scientific American*, July 22, 2020.
8. "The Electrification of the Industrial Economy Is Accelerating. 5 Stocks That Will Benefit," Daren Fonda, *Barron's*, August 26, 2020.
9. "The Biden Plan to Build a Modern, Sustainable Infrastructure and an Equitable Clean Energy Future," <https://joebiden.com/clean-energy/#>, August 2020.

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