



## POTEN TANKER OPINION



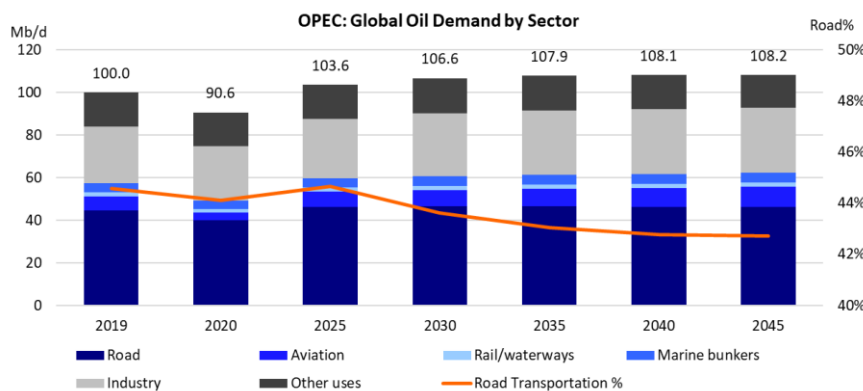
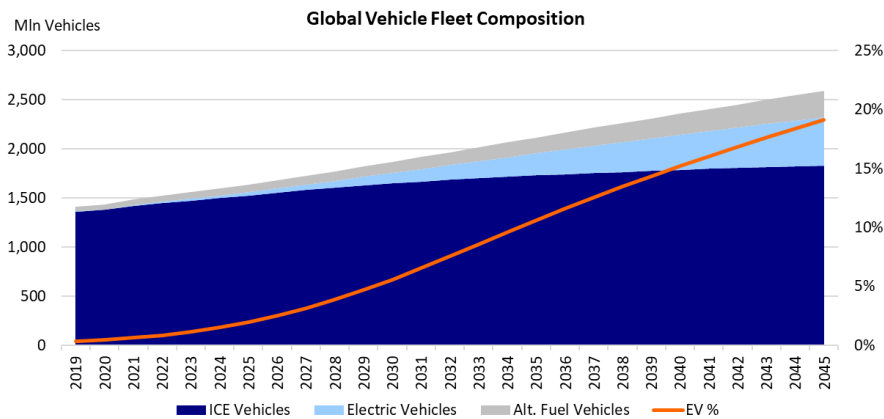
## Pulling The Plug On Gasoline

## The impact of electric cars on future gasoline demand

Transportation fuels make up more than 55% of global oil demand and if the world population switches from cars, trucks, planes and ships powered by fossil fuels to ones that use batteries or – in the case of airplanes and ships – non-fossil fuels, it will have a dramatic impact on global oil demand. Over the years, the debate has switched from *if* that will happen to *when* it will happen. The situation in shipping and aviation is complicated. In the shipping industry there is no clear frontrunner with respect to the energy source that will replace fuel oil as bunker fuel. In aviation we are even further away from a credible and scalable alternative to jet fuel. The situation in cars and light trucks is different. Electric vehicles (EVs) are the clear alternative to the gasoline and diesel-powered cars and sales have accelerated in recent years. However, the question remains: how quickly will electric cars replace vehicles with internal combustion engines (ICE) and where will that happen first?

The impact of EVs on the future of oil demand is driven by two factors: (1) overall growth in mobility, i.e. the increase in global car ownership; and (2) the speed at which electric cars are replacing ICE cars. In general, one can assume that in the developed countries replacement demand is driving car sales, while increasing car ownership will be more important in the developing world. Tightening environmental regulations and an increasing acceptance of EVs has encouraged a growing number of car manufacturers to tap into this market. The success of Tesla Motors, which delivered more than 200,000 vehicles worldwide in Q2 2021, is well documented. Most traditional car manufactures, including Ford, GM, Volkswagen, Toyota, Honda and Nissan have ambitious plans to transition away from ICE vehicles to EVs. However, it is important to note that despite all the ambitious EV plans, most manufactures give themselves some wiggle room. Volkswagen, for example, has announced that it will stop selling internal combustion engine vehicles in Europe between 2033 and 2035. However, a VW board member has been quoted saying that the company will continue to sell ICE vehicles in the U.S. and China until “somewhat later” and will keep ICE vehicles on the market “a good deal longer” in South America and Africa.

Sales of EVs are growing rapidly, but they are still a small proportion of total vehicle sales. In 2020, more than 3 million EVs were sold globally, bringing the total number of EVs in use globally to 6.8 million. This compares to total vehicle sales of 63.8 million and a global passenger car stock of 1.2 billion units. China and Europe are the leading markets for EVs, with the U.S. a distant third. In Europe, government incentivizes EV sales through subsidies, exemptions from tolls and parking fees. In



Source: OPEC

China, EVs count for 12% of sales, while in the U.S. only 3% of car sales are EVs.

Projections for EV sales and market penetration in the future vary widely. In their latest long-term outlook, OPEC expects that EVs will reach a market share of 10% in 2035 and 20% by 2045. By that time, there will be 500 million electric vehicles on the road, OPEC forecasts. However, that means that there will still be more than 2 billion conventional cars on the road at that time, generating 46.2 million barrels per day (Mb/d) of oil demand, 1.6 Mb/d higher than 2019. The EIA expects a 31% penetration of EVs by 2050. Similar to the OPEC projections, this means that transportation fuels will remain strong for several decades to come. The EIA forecasts overall oil demand to grow from 92.1 Mb/d in 2020 to 125.9 Mb/d in 2050, a surprisingly strong growth trajectory given the focus on climate change and the need to reduce carbon emissions.

The above projections seem to indicate that road transportation will continue to drive demand for crude oil and refined products for decades to come. However, there are downside risks associated with this forecast: There could be a tipping point in the next 10-15 years, where electric cars will become cost-competitive with “regular” cars. If electric cars become the vehicle of choice, EV penetration could grow much more quickly than OPEC and EIA currently project, dampening future oil demand.