

## HDFC Mutual Fund's Tuesday Talking Point: Electric Vehicles - The Way Forward

Globally, the adoption and penetration of electric vehicles (EVs) is growing steadily. Europe and China have lead the way in terms of encouraging their vehicles to make the switch – gasoline and diesel cars are planned to be phased out by 2030 in the UK, Israel, the Netherlands, and Sweden; by mid 2030s in Japan and China; and by 2040 in France and Canada. India too, is doing its bit, and aims to become a 100% EV nation by 2030.

The Government is taking several steps to speed-up this shift. The Government adopted the Faster Adoption and Manufacturing of Hybrid and EV (FAME) scheme in 2015 with an outlay of INR 895 crore, which provided subsidies for electric two and three-wheelers, hybrid and e-cars and buses. The scaled up FAME II, effective from April 2019, has an outlay of INR 10,000 crore to be used for upfront incentives on the purchase of EVs and for supporting the deployment of charging infrastructure for the EVs. The Union Minister for Road Transport and Highways (MoRTH), Nitin Gadkari announced in Parliament last month that the FAME-II scheme would plan to support 15.62 lakh EVs through subsidies, which include 15 lakh electric three and two wheelers, and 62,000 electric passenger cars.

In his speech, the Minister has also announced the Government's plan of supporting the creation of a charging infrastructure to address the range-anxiety among users of EVs. The Minister, in November, 2020, had announced that the Government plans to install at least one EV charging kiosk at each of a 69,000 petrol pumps across the country.

India also aims to work out a policy to institutionalise research and development on the next generation of battery technologies for EVs, like metal-ion, metal air, hydrogen fuel cell, etc, to replace lithium-ion batteries and reduce India's dependence on other countries for its import within this decade.

The Government has also taken efforts to attract investment, both internally and from abroad. For example, Tesla, one of the largest EV makers in the world, is setting up a best-in class manufacturing facility in Karnataka. Ola too, has announced the setting of a mega-factory in Tamil Nadu, which can produce 10 million e-scooters every year.

Overall, there is a strong push for adoption of EVs, both in India and abroad. According to BloomberNEF's Electric Vehicle Outlook report in 2020, the cost of making battery packs may fall below USD 100 per kilowatt hour (kwh) by 2023, which may help EVs achieve cost parity with Internal Combustion Engine (ICE) vehicles. This cost may fall to as low as USD 61 per kWh by 2030. The manufacturing of EVs, therefore, is likely to be more and more cost effective with time and technological developments. Hence, it will be interesting to observe the development, and the pace of adoption, of EVs in the coming years. Moreover, for a country like India, which is heavily dependent on imported oil to fulfil its energy requirements, the development of electric vehicles may have a wide-ranging impact on the economy, including a reduced current account and fiscal deficit, lower inflation, increased immunity to geo-political uncertainties, a more stable currency, etc. In other words, this may pave the way for a more self-reliant growth for India's economy.

## Sources: Bloomberg NEF, and other publicly available information

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