Decline in Diesel Vehicles - Assessment of Challenges and Options

What is the issue?

- Across the world, the popularity of diesel as a powertrain for passenger vehicles is on the decline.
- The government and auto makers in India should work together to ensure a smooth transition to other options.

What are the recent developments?

- Europe, diesel vehicles' biggest market (53% of all cars sold is powered by diesel), is fast giving up on diesel.
- France, where diesel cars account for 70% of its overall fleet, saw more petrol cars being sold in 2017.
- In Germany, the share of diesel cars fell from 48% in 2012 to 33% in 2018.

How is diesel use in India?

- India’s love for diesel powertrains peaked in 2012-13.
- That was a time when diesel cars accounted for 47% of all passenger vehicles sold in the country.
- The trend was driven more by cheaper diesel prices than other reasons, as it was lower than petrol by as much as Rs. 25 per litre.
- However, government de-controlled diesel prices in 2014.
- As the price differential between diesel and petrol narrowed, the preferences changed.
- Today, only 23% of the cars sold have diesel powertrains.

How have the emission norms evolved?

- Globally, the initial stages of emission norms focussed on carbon-di-oxide emission. E.g. Euro-I to Euro-IV emission norms
- So diesel engines performed well on this account as they emitted lower CO2.
- Diesel cars were increasingly promoted in most European countries with incentives.
- As emission norms evolved, it became clear that particulate matter (PM) and Oxides of Nitrogen (NOx) were equally dangerous.

- Notably, diesel engines emit higher levels of PM and Nox than petrol engines.
- So Euro-V norms were introduced in 2010 focussing on reducing PM, and Euro-VI norms came into force in 2015 targeting NOx.

What is the challenge now?

- Indian government too has decided to shift from BS-IV to BS-VI emission norms from April 2020. Click here to know more.
- This will directly impact diesel engines the hardest.
- The manufacturers have to tackle both PM and NOx in one go, with a complex exhaust system.
- This will lead to cost escalation of up to Rs. 1.50 lakh depending on the size of the engine.
- Resultantly, only costly SUVs will be able to absorb this cost and less-expensive, small, compact and entry level diesel versions will be out of the market.
- Manufacturers who have set up large diesel engine capacity will have to compensate for fall in domestic demand by pushing exports.

Is shifting to petrol feasible?

- Shifting to petrol powertrains will have another challenge for the manufacturers, which is the CAFE norms.
- The CAFE (Corporate Average Fuel Efficiency) norms came into force from April 2017.
- It requires cars to be 10% or more fuel efficient between 2017 and 2021, and 30% or more fuel efficient from 2022, in terms of CO2 emission.
- The move is targeted at reducing the carbon footprint of the automobile industry.
- Diesel cars had been helping manufacturers meet these norms.
- But the shift to petrol would increase the CO2 emission and the manufacturers would have to produce more fuel efficient petrol cars or electric/hybrid vehicles.

What lies before India?

- India will have to promote electrification and hybridisation more seriously.
- Its vision of 100% electrification of passenger vehicle sales by 2030 may be aspirational but achieving even a third of that target necessitates a massive change.
- As, in India where bulk of the cars sold is small cars, the cost of electrification may just not work out.

- Though battery costs have come down substantially over the years, it is still not low enough by Indian standards.
- Government should move forward with the Faster Adoption and Manufacturing of Electric Vehicles (FAME)-2 norms.
- This should incentivise the manufacturer rather than the buyer.
- For goods movement, the only option is to reduce the share of road transportation and to focus on coastal shipping and inland waterways.

Source: BusinessLine

