

## **Innovative controlling mechanisms of vehicular air pollution in Indian automobile sector towards environment protection**

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### **Abstract**

BS-VI fuel will bring down sulphur by 5 times from the current BS-IV levels—a whopping 80 per cent reduction that makes this fuel extremely clean. This will improve emissions from the existing fleet, even from the older vehicles on road, while allowing more advanced emissions control systems to be fitted in BS-VI vehicles when they begin to roll. Full advantage of this move will be possible only when vehicle technology moves to BS-VI. Industry must also step up its act and show leadership to fast forward the change. The Union Ministry of Petroleum and Natural Gas (MoPNG) has announced a 2-year advancement of the introduction of Bharat Stage (BS)-VI fuel norms from April 1, 2018 in Delhi, currently suffering from its worst smog crisis in years. BS-VI norms are scheduled to be implemented across India in April 2020. BS-VI fuel will bring down sulphur by 5 times from the current BS-IV levels—a remarkable 80 per cent reduction and would make fuel extremely clean.

### **Challenges for Indian cities**

Even in cities with Bharat Stage IV limits, there have been challenges ensuring the dominance of compliant vehicles. Some of these challenges include: --

- \*\* Exemptions granted to some specialty vehicle (e.g., taxis) manufacturers,
- \*\* Registration of Bharat Stage III vehicles by vehicle owners outside of their place residence due to loopholes in residential proof,
- \*\* Registration of commercial vehicles outside of the Bharat Stage IV zones and insufficient availability of some specialty vehicles (e.g., garbage trucks) in Bharat Stage IV configurations.

### **Worldwide innovative practices in controlling vehicular air pollution**

Many countries have already adopted a number of measures to control air pollution caused by diesel vehicles. In Brazil, such cars are not allowed at all because taxes are kept low for public transport. In China,

less than 1 per cent of cars are diesel ones. Beijing has stopped the plying of diesel cars since 2003. Sri Lanka has imposed several times higher import duty on diesel cars which has reduced sales. Several European countries like Denmark and Germany have a higher tax for diesel as compared to petrol. Paris does not allow diesel cars when pollution levels increase like when there is smog. It has even announced a gradual phase-out of diesel cars by 2020 as part of its anti-pollution drive. The UK has vehicle-targeted incentives. In 1998-99, the country reduced vehicle excise duty for heavy-duty diesel vehicles with particulate filters and other technologies to cut down on pollution. Japan gives incentives to refineries for reducing sulphur content in diesel while Hong Kong gives tax differential (difference between tax on petrol and diesel cars) in favor of clean fuel.

### **Results and Conclusions**

Air quality is an issue of social concern worldwide in the backdrop of rising industrial and vehicular air pollution. In Global Burden of Disease 2010 (GBD), outdoor air pollution is among top 10 risks worldwide and among the top five or six risks in the developing countries of Asia. The air quality level in India is also reached alarming stage and it requires some urgent measures at policy levels. In view of the severe pollution issue, Government of India has decided to shift to Bharat Stage - VI (is equivalent to Euro-VI) emission standard for various category vehicles by 2020 directly. This is a great move and showing the commitment of Government of India to curb air pollution.

**Keywords:** Bharat Stage (BS)-VI fuel norms, auto fuel policy, subsequent legislative action, NO<sub>x</sub> emission limit, European emission and fuel regulations.