



Advisory Committee Suggests Ban on Diesel 4-Wheelers

For Prelims: [National Hydrogen Energy Mission](#), [FAME scheme](#), [net-zero goals for 2070](#), [electric vehicles](#)

For Mains: [India's transition to renewable energy](#) and electric vehicles, Impacts of diesel-powered vehicles, Strategies for achieving India's net-zero goal for 2070.

Why in News?

Recently, the **Energy Transition Advisory Committee** formed by **Union Ministry of Petroleum and Natural Gas** has recommended that India should **ban diesel-powered 4-wheeler vehicles by 2027** and switch to electric and gas-fuelled vehicles in **cities with more than a million people** and polluted towns **to reduce emissions**.

- The Committee, headed by former petroleum secretary **Tarun Kapoor**, also suggested **phasing out motorcycles, scooters, and three-wheelers with internal combustion engines by 2035**.

What are the Recommendations of the Committee?

- **Move Towards Renewable Energy:**
 - India is **one of the largest emitters of greenhouse gases globally**, and to achieve its [net-zero goal for 2070](#), it wants to produce **40% of its electricity from renewables**.
 - In line with this, the panel report suggests that **no city buses should be added that are not electric by 2030**, with **diesel buses for city transport not to be added from 2024 onwards**.
 - It called to **partially shift to electric and partially to ethanol-blended petrol** with almost **50% share in each category**.
- **Incentives to Boost EV Use:**
 - To boost [electric vehicle \(EV\)](#) use in the country, the report calls for the targeted extension of incentives under the [Faster Adoption and Manufacturing of Electric and Hybrid Vehicles scheme \(FAME\)](#).
- **Transition to Gas-Powered Trucks and Railways:**
 - The panels also recommended that **new registrations of only electric-powered city delivery vehicles should be allowed from 2024**, with higher use of railways and gas-powered trucks for the movement of cargo.
 - The **railway network** is anticipated to be **fully electric in two to three years**. The panel recommended that long-distance buses in India be powered by electricity in the long term, with gas used as a transition fuel for 10-15 years.
- **Increase in Share of Gas in its Energy Mix:**
 - India aims to raise the [share of gas in its energy mix](#) to **15% by 2030** from the **current 6.2%**.
 - To achieve this goal, the panel suggests building **underground gas storage equivalent to two months' demand**.
 - The panel also recommends the use of **depleted oil and gas fields, salt caverns, and**

aquifers for building gas storage with the participation of foreign gas-producing companies.

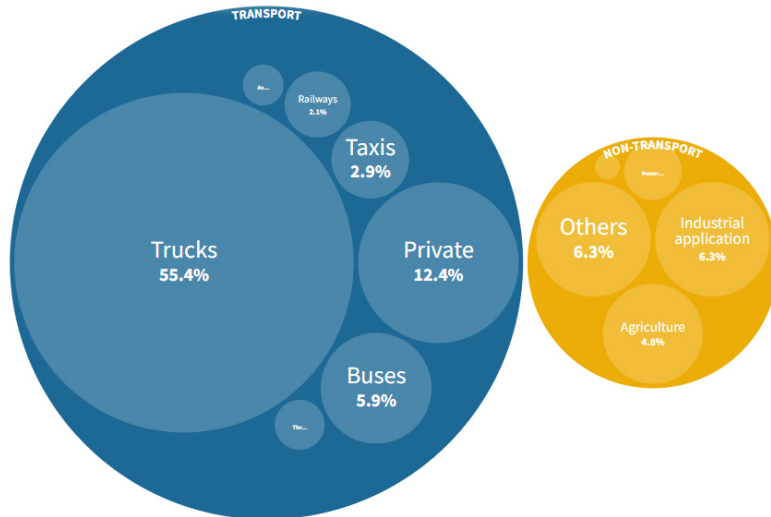
What about Diesel Consumption in India?

▪ Consumption Trends:

- **Diesel currently accounts for about 40%** of India's petroleum products consumption with 80% of that being used in the transport sector.
- **Petrol and diesel demand in India is expected to peak in 2040** and decline post that due to **electrification of vehicles**.

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Sector-wise Diesel Consumption (2021)



▪ Reasons for High Preference of Diesel:

- The **higher fuel economy of diesel engines over petrol powertrains** is one factor. This stems from the **greater energy content per litre of diesel**, and the inherent efficiency of the diesel engine.
- **Diesel engines do not use high-voltage spark ignition** (spark plugs), and thus **use less fuel per kilometre**, as they have higher compression ratios, making it the **fuel of choice for heavy vehicles**.
- Also, diesel engines **offer more torque** (rotational or turning force) and **are less likely to stall** as they are controlled by a mechanical or electronic governor, thereby proving to be **better for haulage**.

▪ Impact of Diesel-Powered Vehicle:

- **Air Pollution:**
 - Diesel engines emit **higher levels of particulate matter and nitrogen oxides**, which contribute to air pollution and can have negative health impacts on **humans and wildlife**.
- **Greenhouse Gas Emissions:**
 - While diesel engines are **more fuel-efficient**, they also **emit higher levels of carbon dioxide**, which contributes to **climate change**.
- **Noise Pollution:**
 - Diesel engines are **typically louder than gasoline engines**, which can contribute to noise pollution and negatively impact quality of life in urban areas.
- **Environmental Damage:**
 - **Diesel spills** can cause significant environmental damage, especially if they occur near **water sources or sensitive ecosystems**.

Why is Implementing a Diesel Ban for Commercial Vehicles Challenging?

▪ Practicality and Implementation:

- Uncertainty about **the practicality of the proposed ban vis-a-vis medium and heavy commercial vehicles.**
- It may result in **disruption in the transport of goods and public transportation services.**
- **Dominance of Diesel in Transport Segment:**
 - High dependency on diesel for long-haul transportation and city bus services.
 - **Diesel sales account for around 87% in the transport sector;** trucks and buses contribute to **approximately 68% of diesel fuel sales.**
- **Conversion Challenges:**
 - Transitioning diesel trucks to [compressed natural gas \(CNG\)](#) poses limitations.
 - **CNG usage is primarily suited for shorter distances and has lower tonnage carrying capacity.**
- **Compliance with Current Emission Norms:**
 - Automakers argue that diesel vehicles comply with existing emission norms.
 - Significant investments made by car manufacturers to **transition diesel fleets to [BS-VI emission norms](#);** diesel ban might imply that all the time, money and efforts were in vain.

What are India's Initiatives for a Renewable Energy based Transport Sector?

- **[FAME Scheme:](#)**
 - Provides fiscal incentives for **EV manufacturing and adoption.**
 - Aims to achieve **30% EV penetration by 2030.**
 - Supports **deployment of charging technologies and stations in urban centers.**
- **[National Mission on Transformative Mobility and Battery Storage:](#)**
 - Aims to **improve air quality, reduce oil import dependence,** and enhance uptake of renewable energy and storage solutions.
 - Drives strategies for transformative mobility and phased manufacturing programs for EVs, EV components and batteries.
- **Customs Duty Exemption for Lithium-ion Cell Batteries:**
 - The government has **exempted the import of lithium-ion cell batteries from customs duties** to bring down their cost and scale up their production in India.
- **[National Green Hydrogen Mission:](#)**
 - This mission aims to develop **green hydrogen as a clean and affordable energy source** for various sectors such as industry, transport, and power.
 - It envisages setting up of green hydrogen production plants, storage and distribution infrastructure, and end-use applications.
- **[Ethanol blending](#)**
 - It involves **mixing ethanol with petrol to reduce reliance on fossil fuels and decrease greenhouse gas emissions.**
 - The level of **ethanol blending in petrol in India has reached 9.99%.** The target for **20% ethanol blending** in petrol (also called **E20**) has been advanced to 2025 from 2030.
- **Incentives under [PLI Scheme:](#)**
 - It has been rolled out for **various industries** including the **automobile and auto-component industry.**
 - Around Rs.18,000 crore was approved for development of **advanced cell chemistry battery storage manufacturing.**
 - These incentives further aim to **encourage indigenous development of [Electric Vehicles \(EVs\)](#) so as to bring down their upfront cost.**
- **[SATAT Scheme:](#)**
 - Sustainable Alternative Towards Affordable Transportation (SATAT) **initiative aims to promote [Compressed Bio-Gas \(CBG\)](#) as an alternative, green transport fuel.**

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. "Access to affordable, reliable, sustainable and modern energy is the sine qua non to achieve Sustainable Development Goals (SDGs)". Comment on the progress made in India in this regard. **(2018)**

[Source: TH](#)

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