



## 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.

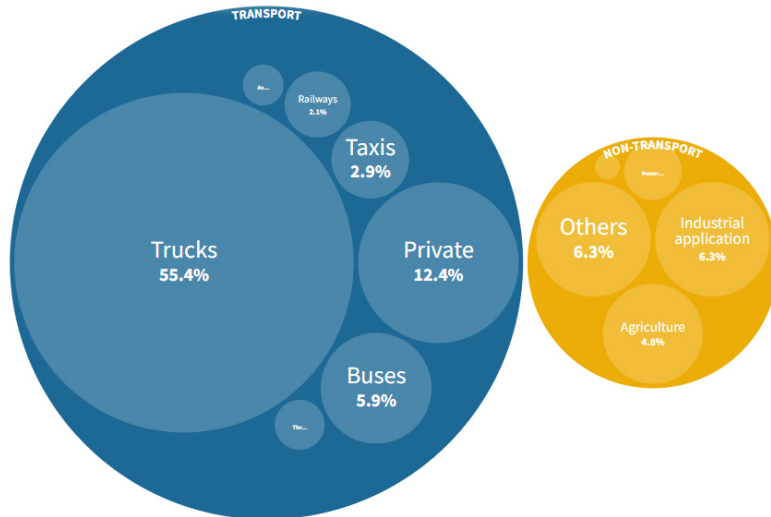
## What about Diesel Consumption in India?

### ▪ 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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