

Corporate Average Fuel Economy (CAFE) Norms: CAFE-III and UPSC Relevance

The **Ministry of Power** has notified the new **Corporate Average Fuel Economy (CAFE) norms** for passenger vehicles. The **CAFE-III norms** will come into effect from **1 April 2027** and remain applicable until **31 March 2032**.

The new framework aims to improve vehicle fuel efficiency, reduce fuel consumption and encourage the adoption of **electric vehicles, hybrids, alternative fuels and energy-efficient technologies**.

The norms target an improvement of about **16.7% in fuel efficiency** over the five-year period.

What are CAFE Norms?

Corporate Average Fuel Economy (CAFE) norms regulate the **average fuel consumption of a manufacturer's passenger-vehicle fleet**, rather than imposing the same fuel-efficiency requirement on every individual vehicle.

In simple terms, the fuel consumption of all eligible vehicles sold by a manufacturer is considered together to calculate its **corporate fleet average**.

India introduced CAFE norms in **2017** under the **Energy Conservation Act, 2001** to reduce fuel consumption, oil dependence and CO₂ emissions.

What is New in CAFE-III?

The new norms will apply to **M1-category passenger vehicles** manufactured or imported for sale in India.

Progressive Fuel-Efficiency Targets

The benchmark for a fleet with the reference weight of 1,229 kg becomes progressively stricter:

Financial Year	Benchmark Fuel Consumption
2027-28	3.996 litres/100 km
2028-29	3.860 litres/100 km
2029-30	3.7585 litres/100 km
2030-31	3.5313 litres/100 km
2031-32	3.3273 litres/100 km

This represents an improvement of approximately **16.7%** between 2027-28 and 2031-32.

Key Features of CAFE-III

1. Incentive for Electric Vehicles

CAFE-III provides **super credits** for cleaner vehicle technologies.

Battery Electric Vehicles (BEVs) and Range-Extended Electric Vehicles (REEVs) receive a volume derogation factor of **3**, meaning their contribution to the fleet calculation is weighted more heavily.

Plug-in hybrids, strong hybrids and flex-fuel vehicles also receive preferential treatment.

2. Alternative Fuels

The framework recognises the contribution of **ethanol-blended petrol, biofuels and compressed biogas (CBG)** through a **Carbon Neutrality Factor (CNF)**.

This provides manufacturers with multiple pathways to meet their fuel-efficiency obligations.

3. Fuel-Saving Technologies

The number of recognised fuel-conservation technologies has been expanded from **four to twelve**.

Eligible technologies can receive concessions in the calculation, subject to an overall limit. Examples include technologies that improve vehicle efficiency, air-conditioning performance and other energy-saving features.

4. Credit Trading

Manufacturers that perform better than their prescribed targets can generate **CAFE credits**.

These credits can be carried forward under specified compliance blocks, traded with other manufacturers or otherwise used under the prescribed compliance mechanism.

This creates a market-based element within the regulatory framework.

5. Transition to Global Testing Standards

CAFE-III will involve reporting under both the **Modified Indian Driving Cycle (MIDC)** and the **Worldwide Harmonized Light Vehicles Test Procedure (WLTP)**.

This is intended to facilitate India's gradual transition towards globally harmonised vehicle-testing practices.

Why are CAFE Norms Important?

Energy Security

India imports a substantial share of its crude oil requirements. Improving vehicle fuel efficiency can reduce petroleum consumption and strengthen **energy security**.

Climate Change

Lower fuel consumption means lower **CO₂ emissions**, contributing to India's climate and decarbonisation objectives.

Cleaner Mobility

The norms encourage manufacturers to invest in:

- Electric vehicles
- Hybrid vehicles
- Flex-fuel vehicles
- Alternative fuels
- Energy-efficient technologies

Technological Innovation

CAFE-III creates incentives for automobile manufacturers to develop more efficient vehicles and adopt advanced technologies.

CAFE vs Bharat Stage Norms

UPSC aspirants should distinguish between the two:

CAFE norms primarily address **fuel efficiency and fleet-average fuel consumption**.

Bharat Stage emission standards regulate **pollutants emitted by individual vehicles**, such as NO_x, particulate matter and hydrocarbons.

Thus, both contribute to cleaner mobility but address different aspects of vehicle environmental performance.

Challenges

Implementation of CAFE-III may involve challenges such as:

- Higher technology costs
- Need for greater EV and charging infrastructure
- Cost of advanced hybrid technologies
- Measurement and compliance complexities
- Balancing affordability with environmental objectives
- Dependence on batteries and critical minerals

The policy therefore needs to be supported by charging infrastructure, clean electricity, public transport and sustainable urban mobility.

UPSC Relevance

Prelims

Remember:

- **CAFE:** Corporate Average Fuel Economy
- India introduced CAFE norms in **2017**
- Legal basis: **Energy Conservation Act, 2001**
- **CAFE-III:** 2027-28 to 2031-32
- Effective from: **1 April 2027**
- Target improvement: about **16.7%**
- EVs receive **super credits**
- Reporting uses **MIDC and WLTP**

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The topic can be linked with:

- Energy security
- Electric mobility
- Climate change
- Air pollution
- Sustainable transport
- Alternative fuels
- Automobile-sector technology
- India's energy transition

Possible UPSC Mains Question

“Corporate Average Fuel Economy norms can simultaneously address India’s energy-security and climate objectives. Discuss the significance and challenges of CAFE-III norms.”

Conclusion

The **CAFE-III norms** represent an important step towards improving the energy efficiency of India’s passenger-vehicle sector. By combining stricter fleet-average targets with **EV and hybrid incentives, alternative fuels, technology incentives and credit mechanisms**, India is encouraging a gradual transition towards cleaner mobility.

For UPSC aspirants, CAFE-III is an important case study linking **energy security, climate change, automobile technology, sustainable transportation and environmental governance**.

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