

CAFE-3 Norms

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Why in News?

Recently, the Centre has notified new CAFE norms, tightening fuel-efficiency targets for passenger vehicles.

Corporate Average Fuel Economy (CAFÉ)

- This standard regulates the **average fuel consumption across a car manufacturer's entire fleet**, rather than evaluating each vehicle individually.
- **Objective** - To **improve fuel efficiency and reducing CO₂ emissions** from passenger vehicles.

CAFE-3: KEY TARGETS

(Corporate Average Fuel Efficiency Standards – Phase 3)



Parameter	CAFE-3
Validity	2027–28 to 2031–32
Effective period	1 Apr 2027 – 31 Mar 2032
Reference vehicle weight	1,229 kg
Fuel consumption target (2027–28)	3.996 L/100 km
Fuel consumption target (2031–32)	3.3273 L/100 km
Improvement	~16.7%
Driving cycle	Modified Indian Driving Cycle (MIDC)



Vehicle Multipliers

For CAFE fleet calculations, cleaner vehicles are given higher weightage.

Vehicle	Counted as
Battery EV / Range-extended EV	3 vehicles
Plug-in hybrid / Flex-fuel strong hybrid	2.5 vehicles
Strong hybrid	1.6 vehicles
Flex-fuel ethanol vehicle	1.1 vehicles

Carbon Neutrality Factors

CAFE-3 provides emission-related benefits for cleaner fuels.

Vehicle/Fuel	CO ₂ reduction factor
E20 or higher ethanol-blended petrol	8%
Flex-fuel ethanol vehicle	22.3%
CNG	5% or notified CBG blending %, whichever is higher
Diesel	Actual biofuel-blending percentage



CAFE Credit System

- CAFE credits function as **compliance points within the regulatory framework.**
- **Manufacturers are permitted to:**
 - Earn credits by performing better than the prescribed target.
 - Carry forward credits or debits within the designated compliance block.

- **Engage in credit trading** - Purchase credits from the **Bureau of Energy Efficiency (BEE)** to offset any deficits.
- **Key Provisions**
 - Unused credits expire **at the conclusion of the compliance block**.
 - The credit trading and buyout window is open from 1 to **31 October** of each assessment year.
 - Credit Buyout Price
 - **₹2,500/g CO₂/km** in 2027-28.
 - **₹4,500/g CO₂/km** in 2031-32.

Measurement of Fuel Consumption

- **Modified Indian Driving Cycle (MIDC)** - It is utilized to calculate fleet average fuel consumption.
 - Fuel consumption is expressed in petrol-equivalent litres per 100 kilometers.
 - Various fuels are converted to petrol-equivalent values using standardized conversion factors.
- **Electric Vehicles (EVs)** - EV Energy consumption for electric vehicles is measured in kilowatt-hours per 100 kilometers (kWh/100 km).

- **Efficiency Technologies** - Manufacturers are permitted to claim a reduction of 1 g CO₂/km for each eligible efficiency technology.
- **Examples of eligible technologies include:**
 - Start-stop systems
 - Tyre-pressure monitoring systems
 - Regenerative braking systems
 - High-efficiency alternators
 - LED lighting systems
 - Electric water pumps
- The total maximum allowable benefit is 9 g CO₂/km.
- **Compliance Verification**
 - **1st compliance phase** - Manufacturers may self-declare claims during this phase.
 - **2nd compliance phase** - Claims must be substantiated by validated test results during this phase.

Reference

[The Hindu | CAFE-3 Norms](#)



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