ऊर्जा दक्षता ब्यूरो
(भारत सरकार, विद्युत मंत्रालय)
BUREAU OF ENERGY EFFICIENCY
(Government of India, Ministry of Power)

आज़ादी का अमृत महोत्सव

F No: BEE/Transport/Passenger-Cars/2025/3707-29 **25th September 2025**

Office Memorandum

विषय: CAFE 3 **मानदंडों (2027-28 से 2031-32) के संशोधित मसौदा पर टिप्पणियां आमंत्रण हेतु / Inviting comments on the revised draft CAFE 3 norms for next cycle (2027-28 to 2031-32) - reg**

The Bureau of Energy Efficiency (BEE) initiated process of formulating future Corporate Average Fuel Efficiency (CAFE) norms, viz. CAFE-III and CAFE-IV, in year 2023. In this regard, extensive consultations were carried out by BEE with all concerned stakeholders, including Original Equipment Manufacturers (OEMs) engaged in the sale of M1 category vehicles in the Indian market, the Ministry of Road Transport & Highways (MoRTH), the Society of Indian Automobile Manufacturers (SIAM), testing agencies such as Automotive Research Association of India (ARAI) and International Centre for Automotive Technology (iCAT), and think tanks.

Pursuant to the above deliberations, a draft proposal was also shared with relevant stakeholders and line ministries like Ministry of Road Transport & Highways, the Ministry of Heavy Industries (MHI), and designated testing agencies on 7th June, 2024 for their views/suggestions.

Inputs received from stakeholders, including OEMs, research organisations, testing institutions, multilateral bodies, and international agencies were examined through a series of inter-ministerial consultations. Accordingly, the draft published in June, 2024 has been updated. This updated draft norms are now having several additional provisions which include aspects related to testing cycle, derogations, compliances etc. Accordingly, it has been found prudent seeking inputs of all the stakeholders on the aforesaid updated draft CAFE 3 norms for next cycle (2027-28 to 2031-32).

The aforesaid updated draft CAFE 3 norms for next cycle (2027-28 to 2031-32) is hereby enclosed inviting inputs/suggestions, if any, within twenty-one (21) days of the issuance of this OM. Stakeholders may kindly send their comments/suggestions through email to spandita@beeindia.gov.in, deepak.suri@beeindia.gov.in and rahul.juyal@beeindia.gov.in. The aforesaid draft CAFE 3 norms are also available for download on the website of Bureau of Energy Efficiency (i.e. https://www.beeindia.gov.in)

समीर पंडिता

चौथा तल, सेवा भवन, आर० के० पुरम, नई दिल्ली-110 066, वेबसाईट/Website : www.beeindia.gov.in
4th Floor, Sewa Bhawan, R.K. Puram, New Delhi-110 066, दूरभाष/Tel. : 91 (11) 26766700, फैक्स/Fax : 91 (11) 20867402

Alternatively, hard copies of the inputs/suggestions may be addressed to the following:

Shri. Sameer Pandita,
Director, BEE
4th Floor, Sewa Bhawan,
Rama Krishna Puram,
New Delhi 110066

यह ऊर्जा दक्षता ब्यूरो के महानिदेशक के अनुमोदन से जारी किया गया है।

सादर,

समीर पंडिता

(समीर पंडिता)
निदेशक

To:

All Stakeholders (as per list enclosed at Annexure B)

Copy to:

1. Sr. PPS to Secretary, Ministry of Road Transport and Highways
2. Sr. PPS to Secretary, Ministry of Heavy Industry
3. Sr. PPS to Secretary, Ministry of Power
4. Sr. PPS to Secretary, Ministry of Petroleum & Natural Gas
5. Sr. PPS to Secretary, Ministry of Environment Forest and Climate Change

Encl: Annexure – A, B

ANNEXURE – A

DRAFT CAFE 2027

New Delhi, the 25th September, 2025

The draft Corporate Average Fuel Efficiency (CAFE) standards for four-wheeled motor vehicles, other than quadricycles are hereby published for inviting public comments. These standards shall supersede the standards notified vide S.O. 1072(E), dated 23rd April, 2015 & vide S.O. 5020(E), dated 6th December, 2021.

1. **Short Title and commencement:** (1) These standards may be called Corporate Average Fuel Consumption Standard 2027-32 herein after called as CAFE 2027.

   (2) These standards shall come into force from 1st April 2027 until 31st March 2032.

2. **Applicability:** (1) These standards shall be applicable to M1 category motor vehicles (passenger cars with seating capacity not exceeding nine persons including the driver and gross vehicle weight not exceeding 3,500 kg), type approved under the CMVR 1989 manufactured or imported for sale in India, for the purpose of regulating fleet-average fuel consumption in accordance with prescribed standards.

   (2) Following vehicles are exempted from applicability of this procedure:

   a. "Invalid Carriage" as defined in The Motor Vehicles Act 1988, Chapter 1, Section 2 (18), as amended from time to time.

   b. "Special purpose vehicle (SPV)" as defined in AIS-053:2005, as amended from time to time.

   c. Vehicles exempted by Government of India from type approval for compliance to CMVR, 1989, as amended from time to time.

3. **Definitions:**

   a. "**Annual Average Fuel Consumption Standard**" means the weighted Average Fuel Consumption permitted in respect of said motor vehicles and is calculated in accordance with the section 4 (1) of the CAFE 2027. It is expressed in litres/100 kilometres and rounded up to three decimal places.

   b. "**Annual Average of Actual Fuel Consumption**", means the weighted average petrol equivalent fuel consumption of all said motor vehicles during a reporting period by any manufacturer and is calculated in accordance with the section 4 (2) of the CAFE 2027. It is expressed in litres/100 kilometres and rounded up to three decimal places.

   c. "**Assessment year**" is the year following the reporting period, during which the complied data under CAFE 2027 is verified and reported to the Ministry of Power and Bureau of Energy Efficiency.

   d. "**CO_2 reducing technology derogation factor (c_i)**" shall be as per section 4 (4) of the CAFE 2027.

   e. **"Flex fuel ethanol vehicle"** means a flex fuel vehicle that can run on gasoline or a mixture of gasoline and ethanol up to 85 per cent blend or 100 per cent ethanol (E85 or E100).

   f. "**Manufacturer**" means an organization engaged in the manufacture and/or import of motor vehicles which are subjected to type approval and intended for sale in India.

g. "**Manufacturer Declared CO_2 performance (p_i)**" means the specific emission of CO_2 in gram per kilometre declared by a manufacturer and verified during type approval for a said motor vehicle model 'i' and its variant(s).

h. **"Modified Indian Driving Cycle (MIDC)"** is a chassis dynamometer test cycle defined under the Automotive Industry Standards (AIS) to reflect Indian driving conditions.

i. "**Petrol Equivalent Fuel Consumption (FC_i)**" means the petrol equivalent fuel consumption in litres per 100 kilometres for a said motor vehicle model 'i' and its variant(s). It is equal to Manufacturer's Declared CO_2 value in gram per kilometre divided by 23.7135 for a said motor vehicle model and its variants.

j. "**Reporting period**" means the twelve-month period starting from 1st April to 31st March of the preceding assessment year under CAFE 2027, both dates inclusive.

k. "**Small Volume Manufacturer**" means the manufacturer whose manufactured / imported volume of all said motor vehicle model and their variant(s) is less than 1,000 units in a reporting period (sales year).

l. "**Type Approval Agency**", means the testing agencies notified by the Central Government as per rule 126 of the Central Motor Vehicles Rules (CMVR), 1989 for the purpose of conducting tests and granting type approval certificates to motor vehicles and their components, to ensure compliance with the provisions of the Motor Vehicles Act and the CMVR.

m. "**Volume (n_i)**" means the total number of manufactured / imported vehicles of a type approved model 'i', including its variant(s) in a reporting period as declared by the manufacturer for which excise duty or GST / customs duty has been paid.

n. "**Volume derogation factor for super-credits (v_i)**" means the factor as per section 4 (6) of the CAFE 2027.

o. **"Worldwide Harmonized Light Vehicles Test Procedure (WLTP)**" is a test proposed to be adopted in India replacing MIDC, when notified by MoRTH for purpose of CAFE 2027.

4. Norms and standards

(1) Each manufacturer of the said motor vehicles shall comply with energy consumption standard in terms of Average Fuel Consumption Standards as provided below:

(a) **The Annual Average Fuel Consumption Standard = a x (W - b) + c,**

where,

Annual Average Fuel Consumption Standard = Annual Average Fuel Consumption Standard of manufacturer in petrol equivalent litre per 100 kilometres (l/100km);

a = Constant Multiplier;

b = Fixed Constant;

c = Fixed Constant;

W = weighted average of unladen mass in kilogram (kg) of all said motor vehicles, manufactured or imported for sale by the manufacturer in the reporting period;

(b) the constant multiplier and the fixed constants shall be determined from Table 1 as given below depending upon the year of manufacturing or import of the said motor vehicles in India,

Table 1

(From fiscal year 2027-28 to 2031-32)

Year	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32
a (litres per 100 kilometres)	0.002				
b (kilograms)	1170				
c (litres per 100 kilometres per kilograms)	3.7264	3.5737	3.4573	3.2224	3.0139
Average Fuel Consumption Standard for Manufacturer in petrol equivalent (litres per 100 kilometres)	[0.002 x (W – 1170) + c]				

(c) where weighted average unladen mass (W) for a manufacturer is calculated as per the following formula:

$$W = \frac{\sum n_i W_i}{\sum n_i}$$

where,

n_i = number of the said motor vehicle manufactured or imported for sale in India of a model i in the respective fiscal year;

W_i = Unladen mass in kilogram of a said motor vehicle model i in the respective fiscal year.

(2) The Annual Average of Actual Fuel Consumption shall be determined as per the following procedure:

Annual Average of Actual Fuel Consumption in petrol equivalent litre per one hundred kilometres for a manufacturer is the weighted average fuel consumption of all the said motor vehicles, manufactured or imported in a fiscal year and shall be determined as per the following formula: -

$$\text{Annual Average of Actual Fuel Consumption} = \frac{\sum v_i n_i c_i FC_i}{\sum v_i n_i}$$, wherein c_i is in %

or

$$\text{Annual Average of Actual Fuel Consumption} = \frac{\sum v_i n_i (FC_i - c_i)}{\sum v_i n_i}$$, wherein c_i is in l/100 km

where,

n_i = number of the said motor vehicles manufactured or imported for sale in India of said model i in the respective fiscal year;

v_i = volume derogation factor for super credits for said motor vehicle model i as defined in Table 3 under section 4 (6) of CAFE 2027;

FC_i = Petrol equivalent fuel consumption in litre per 100 kilometres of said motor vehicle model i;

c_i = CO_2 reducing technology derogation (c_i) factor for said motor vehicle model i as defined in section 4 (4) of CAFE 2027

(3) The Fuel Consumption (FC), in litre per one hundred kilometres, of each motor vehicle model shall be determined as per the formula prescribed under the Central Motor Vehicle Rules, 1989, as amended from time to time.

The said formula is derived from the procedure relating to standards for tailpipe emissions of petrol, diesel, LPG and CNG engine vehicles, and the corresponding test procedure notified therein.

With effect from 1st April, 2026, every manufacturer shall report to the Bureau of Energy Efficiency (BEE) the performance p_i (MIDC) in g CO_2/km. The performance p_i (WLTP) in g CO_2/km for each said motor vehicle model on WLTP shall also be reported when notified by the Ministry of Road Transport and Highways (MoRTH).

(a) the actual fuel consumption of each said motor vehicle model in terms of the litre per one hundred kilometre (in the case of petrol, LPG or diesel) and in kilogram per one hundred kilometre in the case of CNG shall be calculated by the following formulae:

$$\mathbf{FC_{Petrol} = 0.04217 \times CO_2}$$
$$\mathbf{FC_{Diesel} = 0.03776 \times CO_2}$$
$$\mathbf{FC_{LPG} = 0.06150 \times CO_2}$$
$$\mathbf{FC_{CNG} = 0.03647 \times CO_2}$$

where,

CO_2 = the measured emission of carbon dioxide in gram per kilometre as per type approval;

(b) the actual fuel consumption of every electricity driven model shall be measured in terms of kWh per one hundred kilometre as per type approval;

(c) the actual fuel consumption in petrol equivalent for diesel, LPG, CNG and electricity driven motor vehicles shall be obtained by multiplying the actual fuel consumption referred to in (a) and (b) above with the conversion factors specified below:

Table 2

Fuel type	Conversion factor to petrol equivalent
Diesel (litres/100 km)	1.1168
LPG (litres/100 km)	0.6857
CNG (kg/100 km)	1.1563
Electricity (kWh/100 km)	0.1028

(4) The manufacturer shall demonstrate the savings to the Type Approval Agency for CO_2 reducing technology derogation (c_i) factors. These CO_2 reducing technologies shall not be completely driver dependent and must achieve minimum reduction of 1 g CO_2/ km on MIDC or WLTP when notified by MoRTH.

While demonstrating the CO_2 savings on chassis dynamometer, a comparison should be made between the same vehicles with and without the CO_2 reducing technologies. The testing methodology should provide verifiable, repeatable and comparable measurements. On satisfactory demonstration of savings using a technology or a combination of technologies, the Test Agency shall certify the savings from the said technology or the combination of technologies.

The CO_2 savings may be certified as a factor ranging from 0 to 1 or in absolute terms i.e. in g CO_2/km, as per the discretion of Test Agency. In case, the CO_2 savings of a technology or a combination of technologies has been already certified elsewhere, the demonstration may be on the basis of appropriate documentation supporting the manufacturer's claim. In such a case, the Test Agency will have the right to decide on the adequacy / appropriateness of the documentation submitted by the manufacturer, or else, may ask for demonstration using suitable test methodology. Manufacturer may use the certified savings for calculation of its performance (p_i) for each said motor vehicle model using the specific technology.

Considering the limited potential for efficiency improvements in petrol vehicle models with an unladen mass up to 909 kg, engine capacity not exceeding 1200 cc and length not exceeding 4000 mm, said motor vehicle model 'i' shall be eligible to claim, in addition to certified technology-based savings, a further reduction of 3.0 g CO_2/km in its manufacturer-declared CO_2 performance (p_i) for calculation of performance under CAFE 2027.

Provided, no such model 'i', including its variants, shall be permitted to claim a cumulative reduction exceeding 9.0 g/km of CO_2 in any reporting period under CAFE 2027.

(5) Carbon Neutrality Factor (CNF) shall be applicable on Petrol, CNG & Flex Fuel Ethanol Vehicles, discounting manufacturer declared CO_2 (p_i), for a said motor vehicle model 'i' as follows:

(a) For Petrol vehicles (E20 to E30) 8% CNF on tailpipe CO_2.

(b) For Flex Fuel Ethanol Vehicles & Strong Hybrid Electric Vehicles (Flex Fuel Ethanol) 22.3% CNF on tailpipe CO_2.

(c) For CNG vehicles CNF of 5% or CBG blending percentage notified by MoPNG whichever is higher.

(6) For the purpose of calculating the Corporate Average CO_2 Performance (P), a manufacturer may consider using the Volume Derogation factor for super credits (v_i) for each said motor vehicle model as given in Table 3 below:

Table 3

S. No.	Vehicle type	Volume derogation factor for super credit (v_i)
1	Battery Electric Vehicle / Range-Extender Hybrid Electric Vehicle	3.0
2	Plug in Hybrid Electric Vehicle / Strong Hybrid Electric Vehicle (Flex Fuel Ethanol)	2.5
3	Strong Hybrid Electric Vehicle	2.0
4	Flex Fuel Ethanol Vehicles	1.5

The effective Volume (N_i) of said motor vehicle model 'i' and its variant(s) shall be calculated as below:

$$N_i = v_i \times n_i$$

(7) The Central Government may, by notification, in consultation with the Bureau of Energy Efficiency, revise the value of 'b' as specified in Table 1 provided the average unladen mass of all the vehicles manufactured or imported during the calendar year 1st January, 2026 to 31st December, 2026 is less than one thousand one hundred and seventy

kilograms, in which case the average unladen mass of all the vehicles in the said period will be the value of 'b'.

(8) Manufacturers shall declare the Performance p_i (MIDC) & Performance p_i (WLTP) (in g CO_2/km) for said motor vehicle models sold from 1st April 2026 onwards, tested on both existing Modified Indian Driving Cycle (MIDC) and Worldwide Harmonized Light Vehicles Test Procedure (WLTP) when notified by MoRTH, to Bureau of Energy Efficiency. The conversion factor for CAFE 2027 targets from MIDC to WLTP shall be separately notified by the Ministry of Power in consultation with Bureau of Energy Efficiency.

(9) In any fiscal year commencing from the 1st day of April, 2027 onwards, the Annual Average of Actual Fuel Consumption as specified in sub-paragraph (2) of paragraph 4 shall be less than or equal to Annual Average Fuel Consumption Standard as specified in sub-paragraph (1) of paragraph 4 of the respective fiscal year.

5. Implementation

The Ministry of Road Transport and Highways shall enforce provisions related to testing and calculation methodologies, reporting, conformity of production, derogation, carbon neutrality factor for use of biofuels, volume derogation factor for super-credits (v_i) and CO_2 reducing technology derogation factor (c_i) for alternative fuel motor vehicle under the Central Motor Vehicle Rules, 1989, in consultation with Ministries concerned.

6. Compliance

Compliance of these provisions shall be enforced by Ministry of Power in consultation with Bureau of Energy Efficiency, in accordance with the extant provisions conferred under Energy Conservation (Compliance Enforcement) Rules 2025, of the Energy Conservation Act, 2001 (52 of 2001), as amended from time to time.

7. Pooling

For the purpose of meeting their Annual Average Fuel Consumption Standard, manufacturers (not more than 3) of said motor vehicles may decide to conclude a pool. A pool shall be considered as 'one manufacturer' for the purpose of compliance with Annual Average Fuel Consumption Standard. A manufacturer can only be member of one pool in a given reporting period. Manufacturer nominated as the 'pool manager' will be the contact point for the pool and will be responsible for paying any penalty imposed on the pool in accordance with Energy Conservation Act, 2001 (52 of 2001).

8. Small volume manufacturers are exempt from meeting specific emission target under CAFE 2027.

9. Power to relax: The Ministry of Power, in consultation with the Bureau of Energy Efficiency, may modify, amend, or rescind any provision of the CAFE 2027, as may be deemed necessary for its effective implementation.

ANNEXURE -B

List of Stakeholders

	Designation	Organisation
1.	Director	International Centre for Automotive Technology (iCAT), Manesar
2.	Director	Automotive Research Association of India (ARAI), Pune
3.	Director	Indian Institute of Petroleum - Dehradun
4.	President	Society of Indian Automotive Manufacturers- New Delhi
5.	Director	Automotive Component Manufacturers Association of India (ACMA), New Delhi
6.	Managing Director	BMW India Pvt Ltd
7.	Managing Director	Corporate group- FCA India Automobiles private limited
8.	Managing Director	Honda Cars India Limited
9.	Managing Director	Isuzu Motors India Pvt. Ltd
10.	Managing Director	Tata Motors Passenger Vehicles Limited (Jaguar Land Rover Ltd)
11.	Managing Director	Kia India Pvt Ltd (erstwhile KIA Motors India Pvt Ltd)
12.	Managing Director	Mahindra & Mahindra, Mumbai
13.	Managing Director	Maruti Suzuki India Limited, New Delhi
14.	Managing Director	Mercedes-Benz India Pvt Ltd
15.	Managing Director	MG Motor India Pvt. Ltd
16.	Managing Director	Nissan Motor India Pvt. Ltd
17.	Managing Director	Force Motor Limited, Pune
18.	Managing Director	Renault India Private Limited
19.	Managing Director	Skoda Auto Volkswagen India Private Limited
20.	Managing Director	Corporate Group- Tata Motors Limited,
21.	Managing Director	Toyota Kirloskar Motor Pvt. Ltd
22.	Managing Director	Volvo Auto India Pvt. Ltd
23.	Managing Director	Hyundai Motor India Limited