Finalising CAFE standards: Missing piece in India's green transport puzzle

By Amitabh Kant

Last month marked a watershed moment in India's journey towards sustainable transportation. Two landmark policy interventions underscored the government's commitment to decarbonise freight movement—one of India's fastest-growing and most emissions-intensive sectors.

First, the Ministry of Heavy Industries rolled out the much-anticipated e-Truck scheme under the PM e-DRIVE initiative, allocating ₹500 crore to incentivise the adoption of electric trucks. Second, the Bureau of Energy Efficiency (BEE) issued a draft proposal for revised fuel efficiency norms that, for the first time, include Medium- and Heavy-Duty Vehicles (MDVs and HDVs), alongside Light-Duty Vehicles (LDVs). Together, these crucial interventions could reshape India's carbon-intensive freight ecosystem.

India's transportation sector carries a heavy carbon footprint. Responsible for an estimated 300 million tonnes (Mt) of CO_2 emissions in 2019, the sector ranks as the third-largest contributor to national greenhouse gas (GHG) emissions, trailing only electricity generation and industry. The trajectory is alarming: according to The Energy and Resources Institute, this figure could quadruple to 1,200 Mt by 2050 under business-as-usual scenarios. Freight transport, dominated by diesel-powered trucks, accounts for more than 60% of energy use. Targeted policy interventions are both urgent and strategically sound.

However, these landmark policies remain incomplete. One missing piece could determine the success or failure of India's entire transport decarbonisation agenda: the finalisation of India's Corporate Average Fuel Efficiency (CAFE) standards for passenger cars. This is not just a parallel requirement; it is the cornerstone of effective transport regulation. BEE's proposed HDV fuel efficiency regulation follows the same regulatory and institutional path as CAFE norms for cars. If CAFE remains trapped in bureaucratic limbo, HDV fuel efficiency standards face the same fate. This would represent a stunning policy failure, stalling both critical policy instruments precisely when India needs bold, decisive action. Until we finalise and complete the twin pillars of CAFE and HDV fuel efficiency norms, the promise of meaningful decarbonisation for India's transport sector will remain unfulfilled.

Why CAFE Matters

CAFE standards are the regulatory backbone of automotive efficiency. They require carmakers to achieve specific average fuel consumption and emissions targets across their fleets. This market-based mechanism drives innovation by allowing manufacturers flexibility in how they meet targets, whether through advanced engine technologies or accelerated electric vehicle adoption. India first introduced CAFE norms in 2017; Stage 1 targets became effective in 2017–18, followed by Stage 2 norms in 2022–23. Yet while BEE released draft Stage 3 norms in June 2024, these critical norms are still languishing in draft form more than a year later. Automakers are left to operate in a regulatory vacuum, uncertain about future expectations.

The ramifications extend far beyond administrative delays—they cascade through India's entire clean mobility ecosystem in three critical ways.

Unchecked emissions growth: India's passenger vehicle segment is expanding rapidly, fuelled by rising prosperity and urbanisation. Without modern fuel efficiency mandates,

emissions from this segment will grow unchecked, effectively negating the gains achieved through freight sector reforms.

Innovation paralysis: Regulatory uncertainty is the enemy of innovation. When automakers cannot predict future regulatory requirements, they defer investments in breakthrough technologies like electric vehicles. The CAFE delay sends contradictory market signals, undermining investor confidence and slowing domestic roll-out of globally competitive clean vehicle technologies.

Institutional gridlock: Most critically, stalled CAFE norms threaten to derail HDV fuel efficiency standards (still in draft form) through institutional inertia. Both policies share identical compliance mechanisms, monitoring systems, and enforcement frameworks. Without CAFE Stage 3 in place as a proven precedent, implementing freight fuel efficiency norms becomes exponentially more complex and uncertain.

The Cost of Delay

The opportunity costs of delay mount daily. Without strong fuel economy standards, India's automotive market drifts towards fuel-guzzlers, which deteriorate average fleet efficiency. This trend creates a vicious cycle of higher emissions, greater dependence on foreign oil imports, and deeper energy security vulnerabilities.

Equally troubling is India's vulnerability to becoming a dumping ground for obsolete vehicle technologies. As global markets embrace modern fuel efficiency and emissions standards, India risks becoming a destination for inferior, inefficient vehicles that no longer meet regulations elsewhere. A comprehensive CAFE framework protects Indian consumers and positions the country's auto industry to compete globally.

The Way Forward

To build a comprehensive, future-ready transport decarbonisation strategy, finalising CAFE and fuel efficiency standards must be a priority. These are not isolated technical regulations—they are foundational pillars that will enable the transition to cleaner mobility.

Three decisive actions are needed:

1. Notify CAFE Stage 3 norms immediately: These should include realistic but ambitious targets that push manufacturers towards fuel-efficient and low-emission technologies, including rapid adoption of EVs.

2. Accelerate the finalisation of fuel efficiency norms for HDVs: With CAFE as the blueprint, BEE should move quickly to notify and implement fuel efficiency norms for freight vehicles, ensuring institutional capacity is ready for compliance tracking.

3. Build synergy between policies: Rather than treating demand incentive schemes like PM e-DRIVE and fuel efficiency standards as separate silos, align them under a unified transport decarbonisation framework. Support both with fiscal incentives, consumer awareness, and infrastructure investments like electric vehicle charging and green logistics hubs.

The window for low-cost, high-impact climate intervention is narrowing rapidly. India's transport sector stands at an inflection point where the next 12–18 months will determine whether we lead the global clean mobility revolution or remain perpetually reactive to technological changes shaped elsewhere.

The recent e-Truck scheme and draft HDV efficiency standards demonstrate genuine governmental commitment to emission reductions. Yet we risk losing momentum without the regulatory foundation of modern CAFE norms. We cannot afford a scenario where freight decarbonisation progresses while passenger vehicle emissions continue their unchecked upward trajectory.

The moment for incremental action has passed. Only integrated, ambitious policy implementation can secure India's position as a clean mobility pioneer. CAFE norms are not just another regulation; they are the cornerstone that will determine whether India's transport sector becomes a climate solution or remains a persistent problem.