5-Min Monthly Read November 2025

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Trump Administration resets fuel economy standards

The National Highway Traffic Safety Administration (NHTSA) has published a Notice for Proposed Rulemaking (NPRM) resetting the CAFE standards for Model Years 2022 to 2031 Passenger Cars and Light Trucks. The new rule builds upon the previous interpretive rule by NHTSA which concluded that factoring in EVs led to overly stringent standards.

The rule makes significant changes, including changing the definition of passenger cars and light-duty trucks, and requires a 0.25 - 0.5% improvement in fuel economy through 2031.

Table IV-15: Estimated Required Average Fuel Economy (MPG), Total Light-Duty Fleet

Model Year	2024	2027	2028	2029	2030	2031
No-Action	38.8	46.8	46.9	48.0	48.9	49.9
Alternative 1	38.8	29.6	33.3	33.4	33.5	33.6
Alternative 2	38.8	30.4	34.2	34.4	34.4	34.5
Alternative 3	38.8	32.3	36.4	36.8	37.2	37.5

EPA Keeps 2027 Truck NO_x Deadline in Place

The EPA has rejected trucking industry requests to delay its 2027 heavy-duty NO_x emissions rule, confirming the tighter standards will take effect as scheduled. The rule requires more than an 80% cut in NO_x and tougher durability and warranty requirements.

EPA says it may adjust some compliance details in 2026, but the 2027 start date will not change — signaling continued pressure on manufacturers and fleets to prepare for cleaner heavy-duty engines.

Policies, Regulations, Reports

CARB Proposes New Pathways for Reducing Emissions from HD Trucks

California Air Resources Board (CARB) held the "Drive Forward" Workshop on Heavy-Duty standards, outlining key concepts it is evaluating to address emission reductions following the recent changes that limit its authority to set independent standards.

Key elements presented include:

- Alignment with EPA Low NOx rule while incentivizing early adoption and providing CO2 and NOx credits for ZEVs
- New methods for real world testing
- Continuing with trailer standards (removed by EPA) and
- Standards for non-exhaust emissions from brakes & tires

Earlier, CARB postponed action on three major items—the Heavy-Duty Omnibus rule, LCFS amendments, and Emergency Vehicle Emissions regulations—originally scheduled for its November 20, 2025 meeting.

CARB had planned to align heavy-duty NOx standards with the federal 2027 rule, expand LCFS crediting for RNG-powered truck charging, and make its emergency emissions rules permanent to ensure regulatory continuity amid ongoing Clean Air Act litigation. A new date for the postponed items will be announced later.

Why India's AQI Stops at 500 — Even When Pollution Soars

As smog blankets northern India, air quality readings vary widely. Official monitors like SAFAR and SAMEER cap the Air Quality Index (AQI) at 500, while private trackers such as IQAir often exceed 600 or even 1,000.

The 500 ceiling, set over a decade ago to avoid public panic, now masks the true severity of pollution. Levels above 500 are treated the same, even as health risks keep climbing.

India's limits are also looser than WHO standards—hazardous PM2.5 levels start at 15 µg/m³ under WHO guidelines, versus 60 µg/m³ in India. Official data rely on Beta Attenuation Monitors, while global platforms use sensor-based devices not yet approved by India.

Experts urge the government to update the AQI system, lift the cap, and integrate new technologies to reflect real conditions.

It is common to see articles ascribing much of the pollution in Delhi to crop / trash burning and other sources from adjacent areas. A recent article challenges that notion, and suggests that the transport sector is the main contributor to urban pollution.

Electrification

Nio Pulls Back on 150 kWh Semi-Solid Battery Amid Weak Demand

Nio has quietly discontinued production of its flagship 150 kWh semi-solid-electrolyte battery pack, less than two years after touting it as a breakthrough in ultra-long-range EVs. The battery — which promised up to 1,000 km+ range per charge — saw only a few hundred units produced before the automaker halted manufacturing.

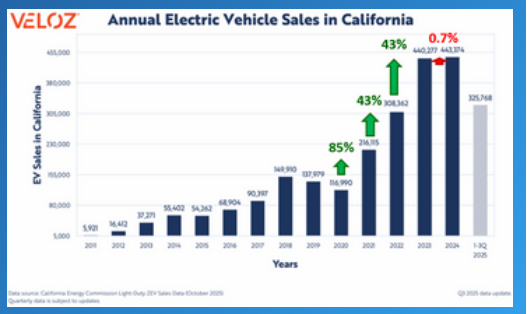
According to CEO William Li, low adoption stemmed from high cost and limited real-world demand. In a market supported by a robust battery-swap network, most users preferred standard 75 kWh or 100 kWh packs instead of paying more for long-distance capacity.

China pushes connected vehicles, EV manufacturers warn of EV slowdown

China will reduce the exemption of NEV (new energy vehicle) purchase tax from 100% to 50% exemption starting Jan 1, 2026, with further incentive phase-outs being considered. Major EV manufacturers such as Li Auto and NIO have warned that this move away from a policy-driven market could result in a potential slowdown for the EV market. Li Auto expects the first decline in EV sales in 2025, with Q4 sales slumping by 37% year over year.

In the meantime, China's Ministry of Industry and Information Technology (MIIT) and other government agencies have released a proposal outlining conditional approval for Level 3 autonomous vehicle production and encouraging revisions to road safety and insurance laws. Several automakers are accelerating the testing of autonomous vehicles, with commercialization expected in 2026 for some models.

Tesla Turns to Rentals as EV Sales Slow



With U.S. demand slumping after federal tax credits expired, Tesla has begun offering short-term rentals at select California stores—$60–$90/day with free Supercharging and access to Tesla's Full Self-Driving (Supervised) mode. The strategy aims to move inventory and boost interest by letting customers try before they buy, backed by a $250 purchase credit.

EV sales in California have stagnated in recent months - according to the database maintained by Veloz, EV sales increased by only 0.4% in 2024 and are headed for a decrease if current sales are extrapolated to end of 2025.

Tesla isn't doing great in Europe either: excluding Norway, sales in November are down by 36.3%.

UNEP Concludes Freight Electrification Pilot in India

UNEP has wrapped up its freight electrification pilot in Surat, showcasing how electric light-commercial vehicles can cut emissions in one of India's busiest logistics hubs. With 7,500 trucks making 21,000 daily trips, the city offered a real-world testbed for cleaner freight movement.

The pilot confirmed that e-LCVs perform reliably in daily operations, delivering measurable air-quality benefits. UNEP also trained drivers and fleet operators on charging, EV maintenance, and efficient fleet management.

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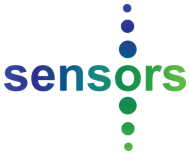

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GET IN TOUCH

Fuels & Engines

EU Unveils Investment Plan to Scale Clean Aviation & Shipping Fuels

The European Commission has launched a new Sustainable Transport Investment Plan to accelerate renewable and low-carbon fuel production for aviation and maritime sectors.

The roadmap supports the ReFuelEU Aviation and FuelEU Maritime targets, requiring ~20 million tonnes of sustainable fuels by 2035. It estimates a need for €100 billion in public–private investment, with €2.9 billion already set to be mobilized by 2027.

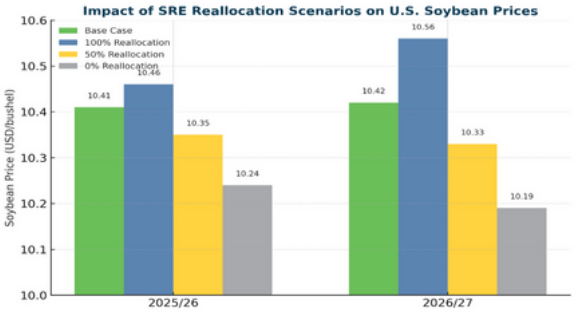
Industry Calls for Use of "Carbon Correction Factor" for Renewable Fuels in EU

FuelsEurope is urging the EU to update its CO_2 standards for cars and vans to formally recognize renewable fuels—including advanced biofuels and e-fuels—as compliant pathways alongside electrification.

The group argues that a technology-neutral approach would accelerate decarbonization, support investment, and allow both new and existing vehicles to contribute to emissions cuts, rather than relying solely on zero-tailpipe EVs under the current 2035 phaseout framework. It proposes the use of a "carbon correction factor" which accounts for the share of renewable fuels to adjust the tailpie CO2 emissions. Read the published article here

Clean Fuels Presses EPA on 2026–27 RFS Rule

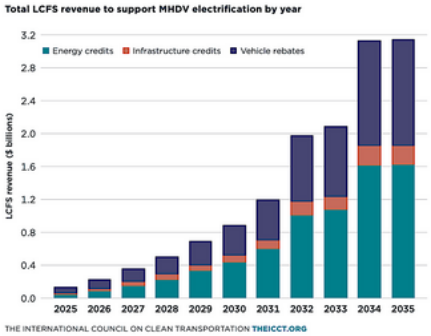
Clean Fuels Alliance America is urging EPA to finalize the delayed 2026–27 Renewable Fuel Standard rule and fully reallocate all Small Refinery Exemptions (SREs). The group warns that unaccounted exemptions could slash demand for biodiesel and renewable diesel by billions of gallons and cost farmers up to 40 cents per bushel of soybeans. Read more



LCFS Amendments Could Deliver Billions for Electric Trucks

A new ICCT analysis finds that California's updated Low Carbon Fuel Standard could generate $4–16 billion for medium- and heavy-duty truck electrification through 2035, depending on credit prices.

Under mid-range conditions, the LCFS could provide $8.4 billion for charging infrastructure and $6 billion for point-of-sale truck incentives — far more than past funding levels.



Fuels & Engines

Hyundai Launches 1 GW Green Hydrogen Project, Targets Electrolyzer Exports

Hyundai Motor Group has unveiled a major push into green hydrogen, announcing a 1 GW production project in southwestern South Korea and plans to mass-produce PEM electrolyzers for domestic and global markets. The initiative is part of an $86 billion national investment program to accelerate clean-energy growth.

A new Ulsan facility, set to open in 2027, will produce 30,000 fuel-cell units a year alongside the country's first large-scale electrolyzer manufacturing line. Hyundai aims to build a full hydrogen value chain—leveraging renewables, refueling infrastructure,and export capacity.

ExxonMobil Advances Low-Emission Hydrogen Production

ExxonMobil is accelerating its low-emission hydrogen strategy partnering with BASF to scale methane pyrolysis, a process that produces hydrogen without CO_2 by converting methane into solid carbon. A new Baytown, Texas demo plant will produce 2,000 tons of H2 annually.

The company is also testing hydrogen-ready industrial burners at Baytown that can cut CO_2 emissions by up to 90%.

Industry calls for Acceleration of H2 Technologies for Trucking in Europe

Hydrogen Council

More than 200 CEOs and senior executives from the world's leading businesses in hydrogen met in Seoul for the Hydrogen Council's Global CEO Summit 2025. The leaders signed a message highlighting the need for stronger policy action to increase demand, pragmatic regulations, building out infrastructure, alignment on global standards, and the need for strong public-private partnerships.

H2Accelerate

The H2Accelerate collaboration has released a whitepaper urging Europe to support H_2-ICEVs as a rapid, cost-effective path to decarbonizing heavy-duty transport. H_2-ICEVs now count as zero-emission under EU CO_2 rules. H2Accelerate calls for equal incentives, tax treatment, and infrastructure access for H_2-ICEVs, along with continued R&D support.

Brazil Commits to Quadrupling Sustainable Fuels by 2035

Brazil has announced the Belém 4× Pledge, a new commitment— joined by countries including India, Italy, and Japan — to quadruple global production and use of sustainable fuels by 2035. A recent report from the International Energy Agency (IEA) shows that such a scale-up is technically & economically feasible.

World Resources Institute (WRI) notes the need to balance decarbonization benefits with sustainably sourced feedstocks to avoid impacts on land use & food.

A new study concludes that Brazil's demand for ethanol and renewable natural gas (RNG) could more than double by 2040 to support decarbonization in transport, aviation, & shipping.

- Ethanol demand could more than double to 52.2 billion liters, driven by exports and growing use in sustainable aviation and marine fuels.
- Aviation & shipping could require ethanol amounting to 80% of road-transport use.
- Biomethane demand may climb to 120 million m^3/day, enough to displace up to 70% of diesel usage in heavy-duty transport.

Did you know ?

Pirelli's Cyber Tire Expands from Supercars to Smart Roads

Credit: Getty Images

Pirelli's Cyber Tire, first seen on high-end cars like McLarens and Paganis, is evolving into a broader mobility tool. The smart tire sends real-time data on pressure, temperature, and tire type—allowing automakers to fine-tune ABS and stability control for better braking, traction, and driver feel. Automakers from Europe to China, including Aston Martin, are now testing the system

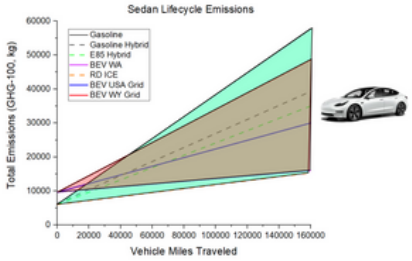
Beyond vehicles, Cyber Tires are being used in Italy's Apulia region to map road damage by combining tire-sensor data with camera inputs. This approach helps detect potholes, cracks, and surface hazards more accurately.

Italy's next step: feeding this data into a national smart-roads program to enable dynamic speed limits and real-time warnings for risks like aquaplaning.

Watch Webinar Online

Energy Realism vs. Decarbonization: Is it an either-or choice?

Engine Technology Forum hosted a webinar where we discussed the recent policy shift and its implications for fuels and technologies that power key sectors of the economy. There is a rich presentation by Dr. Graham Conway followed by a panel discussion. Watch the recorded webinar here.



UPCOMING EVENTS

SAE Govt. Industry Meeting, January 20-22, 2026, Washington DC

Symposium on International Automotive Technology (SIAT 2026), January 28-30, 2026, Pune, India