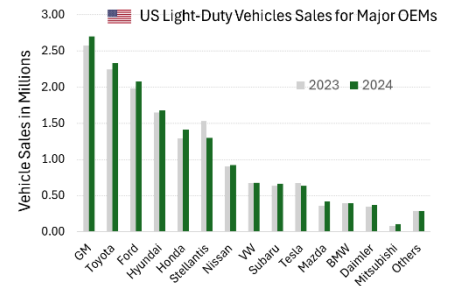


Sign-up and previous newsletters: <https://mobilitynotes.com/home/newsletters/>

Market

U.S. 2024 light-duty sales up, approaching pre-pandemic levels

All major OEMs have announced their Q4 2024 and year-round sales of passenger cars and light-duty vehicles. Nearly 16 million cars and light-trucks were sold in the US in 2024, an increase of 2.2% compared to 2023. At an OEM level, sales increased for all compared to 2023, except for Stellantis and Tesla. EVs accounted for ~ 8% of the sales.



Electric vehicle sales were dominated by China – and plug-in hybrids – in 2024

The 2024 Volta battery [report](#) is out. A few takeaways -



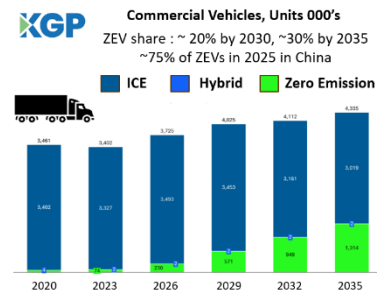
- Globally, 17.7 million electric vehicles were sold, a 25% increase over 2023. However, plug-in hybrid electric vehicles (PHEVs) have shown surprisingly resilient growth. Of total EV sales, 37% were plug-in hybrids. Sales of battery electric vehicles increased by 14% compared to 2023, while that of PHEVs increased by 51%.
- China continued to dominate EV sales. In 2024, 12.9 million or 40.9% of total vehicle sales were new energy vehicles. This accounted for nearly three-quarters of global EV sales. On the other hand, the European EV market share decreased from 18% in 2023 to 17% in 2024, and the share of EVs in the US was ~ 8% as noted above.

- In 2024, battery cell production reached 1.5 TWh, of which 80% went into EVs and 59% were LFP chemistry.
- The decline in battery prices in 2024 is attributed to severe overcapacity in battery production and helped by significantly lower labor and energy costs in China (vs. the west).
- The disparity in battery prices is reflected at the vehicle-level: while EVs have reached price parity in China, they are 43% and 75% more expensive in the US and Europe compared to conventional ICE vehicles on a sales weighted basis

Projection for Zero-Emission Powertrain Share for Heavy-Duty

KGP Powertrain Intelligence has [published](#) its latest projections for zero-tailpipe emission (ZE) powertrain market share for commercial and non-road machinery. For commercial vehicles, ZE share is projected at ~ 20% by 2030 and ~30% by 2035. In the near-term, ~75% of ZE sales in 2025 are expected in China. The recent change in the US administration and the regulatory agenda is expected to increase the uncertainty with the projections.

For non-road, ZE equipment share is projected at ~ 5% by 2030 and ~13% by 2035.



Regulations

President Trump's Executive Order and Implications for Transport

On day one, newly elected President Trump signed an [Executive Order](#), "Unleashing American Energy", with far-reaching [implications](#) for transport. Some of these include:

- No EV sales mandates → implications for the Advanced Clean Trucks (ACT) rule, and the ZEV portion of California's Advanced Clean Cars II regulations.
- Review of all existing regulations which limit consumer choice of vehicles → NHTSA ordered to re-open fuel economy standards (see below).
- Revocation of California waiver requests → California has already withdrawn request for ACF (see below)
- Review of the endangerment findings associated with GHG emission → Weakening or delay of CO₂ emission limits of EPA's MY 2027 multi-pollutant rule and GHG Phase 3 standards for heavy-duty trucks.



The executive order calls for a freeze on federal funding allocated through the IRA and other programs, although a court order has found that unconstitutional, adding to the confusion. We will be following this closely.



California withdraws waiver request for Advanced Clean Fleets (ACF)

California Air Resources Board (CARB) withdrew its request for a waiver to implement the ACF rule, which would have required public fleets to transition to zero-emitting vehicles.

The waiver had a slim chance of getting EPA approval under the new administration. Note that the EPA has already granted a waiver for the Advanced Clean Trucks (ACT) program which mandates "

U.S. fuel economy standards to be re-opened

Citing President Trump's executive orders calling for "removing barriers for motor vehicle access", the newly appointed US Secretary of Transportation Sean Duffy has [directed](#) the National Highway Traffic Safety Administration (NHTSA) to review fuel economy standards for passenger cars and light trucks set previously for MY 2024 - 2026 and future [MY 2027 and beyond](#) vehicles. The standards will be reviewed for vehicles produced starting MY 2022. Presumably, this affects the credits accumulated by automakers for those previous years. The revision of fuel economy standards.

Electrification, Hydrogen



New vehicles – H₂-ICE and Battery Electric – featured at the Indian Expo

Tata Motors unveiled its first H₂-ICE truck, the "Tata Prima H.28" at the Bharat Mobility Expo 2025. Tata Motors, along with Indian Oil Corporation, will run a 12- 18 month [pilot](#) test of this truck, to analyze both the performance and the refueling infrastructure.

Also shown at the expo was Eicher Motors' Pro X Range, its first electric vehicle in small commercial vehicles (SCVs). This is Eicher's entry in the 2 - 3.5 ton segment, a key segment in the last-mile logistics. A 40-kWh battery pack powers the vehicle at 80kW peak power, and 1.76 ton payload capacity. While the price is yet to be announced, a competitive vehicle, the Switch Motors IeV, is priced in Rs. 11-15 lakh range (\$13K - \$18K).



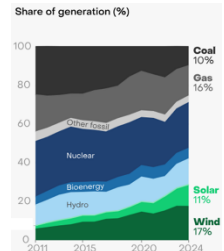


Details of IRA Section 45W for Commercial Clean Vehicle Credit published

Section 45W of the US Inflation Reduction Act (IRA) provides an income tax credit for the purchase of qualified clean commercial vehicles – these are plug-in battery electric, plug-in hybrid or fuel cell vehicles – produced from Jan 2023 to end of year 2032. A credit up to \$7,500 may be claimed for cars and light-duty trucks, or up to \$40,000 for heavier vehicles like buses and semi-trucks. A summary of the eligibility and calculations published [here](#).

Electricity generated by solar exceeds that from coal for first time in Europe

A transition to electrification must be coupled with reduced carbon intensity of electricity. A review of European electricity generation was published and shows that the region continues to transition away from fossil fuels. Solar generation increased by 22% in 2024 and for the first time had higher share compared to coal. The power sector CO₂ emissions have reduced to half those of 2007-levels.



Renewable / Low Carbon Fuels

Details of IRA 45Z Clean Fuel Production Credit published

Section 45Z of the US Inflation Reduction Act (IRA) provides an income tax credit to produce qualified clean fuels produced between 2025 – 2027. Sustainable aviation fuels and low GHG transportation fuels, with GHG emissions < 50 kg-CO_{2,e} per mMBTU qualify for the credits. Other details are explained [here](#).



Details of IRA 45V Clean Hydrogen Production Tax Credit published



Section 45V of the US Inflation Reduction Act (IRA) provides an income tax credit to produce qualified clean hydrogen. The Department of Treasury has finalized the rules, providing clarity on eligibility requirements of various hydrogen production pathways, and the methodology for tax credit evaluation. The credit amount scales with the amount of H₂ produced and the lifecycle emissions through the point of production, to be determined using the “45VH2-GREET” model. More details on the calculations and eligibility [here](#).

India advances ethanol blending

India has set ambitious targets to increase the blending of ethanol with gasoline to reduce fuel imports and decrease pollution. It achieved 10% ethanol blending in mid-2022, and set a target of 20% blending in 2025, which looked unachievable till a few months ago. The Union Minister for Petroleum and Natural Gas announced at a recent international symposium, Thriving Eco-Energy in Mobility, that the target will be achieved in February. Major OEMs such as Tata Motors, Mahindra & Mahindra, Maruti Suzuki and Hyundai Motors have started manufacturing vehicles that run on 100% bio-ethanol.

European Maritime Regulation takes effect



The FuelEU Maritime Regulation is being [implemented](#) starting this year. It targets a reduction in GHG intensity of energy used by ships > 5,000 gross tonnage at EU ports, from -2% in 2025 to -80% in 2050, vs a 2020 baseline. This is to be achieved through an increased uptake of renewable fuels.

Something to think about -

New York has implemented “congestion pricing”, a \$9 toll for driving during peak congestion hours. The first results of the impact of this tool are in. According to the NY MTA, many traffic hotspots are already seeing faster driving times, and mass transit ride usage has increased by 12% on weekends. Imposing a fee to reduce driving is one way to reduce pollution, but perhaps not the most popular, as evidenced by lawsuits set in motion.



Conferences 2025

Here are some upcoming conferences to consider attending –

Emissions Analytics Tire Emissions & Sustainability Europe, February 11 – 12, Prague

[Tyre Emissions and Sustainability Europe 2025](#)

National Ethanol Conference, February 17 – 19, Nashville, Tennessee

<https://nationalethanolconference.com/>

TMC's Annual Meeting & Transportation Technology Exhibition, March 10 – 13, Nashville, Tennessee

<https://tmcannual.trucking.org/>

Hydrogen for Sustainable Mobility Forum, March 11 – 12, Politecnico di Torino

<https://www.eventleaf.com/e/H2SMForum2025>

On-Board Diagnostics Symposium-Europe, March 11 – 13, Porto, Portugal

<https://www.sae.org/attend/obd-europe>

International Battery Seminar & Exhibit, March 17 – 20, Orlando, FL

<https://www.internationalbatteryseminar.com/>

Thank you to our sponsors who help make this content free!



This newsletter reaches thousands of professionals across the world. If you would like to highlight your organization and technology, [get in touch](#).