Driving Progress on the Zero-Emission Vehicle Transition

COP30 PROGRESS UPDATE

November 2025

Acknowledgments

This report was prepared by the Accelerating to Zero Coalition, in partnership with CALSTART/Drive to Zero, Climate Group, First Movers Coalition, and Smart Freight Centre, as empowered by the Breakthrough Agenda.

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The Evolving Global ZEV Transition Landscape

The global transition to zero-emission vehicles (ZEVs)[1] has reached a pivotal phase, showing both strong momentum and emerging challenges since COP29. While the collective vision for a sustainable road transport future is solidifying, the current landscape is marked by notable divergences in policy and market dynamics. This report highlights the progress made to date, showcasing a story of cautious optimism driven by a growing network of global initiatives and collaborations.

A swift and accelerated transition to ZEVs is critical to fully align with the Paris Agreement's objective of limiting global warming to well below 2 °C. Achieving this accelerated pathway will require that leading markets reach 100% ZEV sales for new light-duty vehicles (LDVs) by 2035 and for medium- and heavy-duty vehicles (MHDVs) by 2040, with other countries transitioning within a 5- to 10-year period. As of November 2025, 55 countries had committed to a Paris-aligned timeline for light-duty vehicles, and 42 countries had done the same for MHDVs.

This collective commitment, along with complementary measures like avoid-and-shift policies and efforts to decarbonize the electricity grids used to power ZEVs, is projected to prevent up to 31 gigatons of CO_2 emissions between 2024 and 2050.[2] To put that in perspective, this is nearly double the total annual greenhouse gas emissions of China, the world's largest emitter. This is a testament to the massive scale of climate action that can be achieved through a coordinated global transition to ZEVs.

Progress Toward a Paris-Aligned ZEV Transition

55
countries

representing 29% of global LDV sales have adopted binding policies or set voluntary commitments to achieve 100% ZEV sales on a Paris-aligned timeline.

42
countries

representing 28% of global MHDV sales have set voluntary commitments to achieve 100% ZEV sales on a Paris-aligned timeline.

While the push for ZEVs is accelerating, the e-mobility landscape has been marked by policy uncertainties and shifting market priorities over the last year. In major markets like the United States and Europe, the pace of transition is facing new hurdles, including the threat of policy rollbacks. Other established markets, like Norway and the United Kingdom, are continuing to show strong momentum. Emerging economies, including Colombia and Vietnam, are also quickly rising to become new centers of growth.

This highlights a crucial trend: even as the industry faces global uncertainty, the fundamental shift toward electric mobility remains strong. This has been propelled by proactive subnational policies, supply-side regulations, and targeted incentives, and is also increasingly underpinned by technological maturation. Significant breakthroughs in battery chemistry, manufacturing efficiency, and powertrain design have precipitated a decline in electric vehicle prices, making ZEVs a more viable option for a wider range of consumers.

A global network of initiatives is tasked with navigating this market uncertainty and intensifying competition to support the transition. These collaborative platforms are doubling down their efforts to provide crucial support to their members in overcoming these challenges and realigning their strategies in different markets.

The following initiatives are working to accelerate the ZEV transition:

- EV100
- First Movers Coalition trucking commitment
- Fleet Electrification Coalition, under the Sustainable Freight Buyers Alliance
- Global Memorandum of Understanding on Zero-Emission Medium- and Heavy-Duty Vehicles
- Zero Emission Vehicles Declaration

At this critical stage of the ZEV transition, it is crucial to highlight implementation success stories and the tangible progress being made in diverse markets around the world. This report analyzes progress since last year's update. By highlighting the growth of ZEV sales in emerging markets, alongside evolving strategies in advanced markets, we showcase the real-world impact of these global initiatives and their collective progress towards a Paris-aligned emissions pathway.

Global ZEV Progress

Navigating the transition to a sustainable transportation future is a complex endeavor, with policy developments and investment strategies around the world reflecting a mix of ambitious goals and pragmatic adjustments. This evolving landscape is most evident in major markets where regulatory dynamics are reshaping the pace of ZEV adoption.

In the United States, federal regulatory rollbacks are backsliding on progressive vehicle emissions policy, though a countervailing wave of action from states is creating positive momentum for cleaner transportation. At the federal level, the administration weakened major vehicle regulations by overturning waivers that allowed California's Advanced Clean Car II (ACC II) and Advanced Clean Trucks (ACT) regulations to be adopted by other states, a move currently being challenged in court.[3] The administration also weakened corporate average fuel economy (CAFE) standards by eliminating civil penalties for non-compliance.[4] Despite these federal actions, many states are pushing forward with their own initiatives. The Affordable Clean Cars Coalition, a multi-state initiative launched in May 2025 under the U.S. Climate Alliance, exemplifies this momentum; its 13 members are working to keep the United States on track for cleaner vehicles. Furthermore, states are independently advancing policies to accelerate charging infrastructure deployment and grant funds for electric school buses.[6]

In Europe, the policy landscape for vehicle emissions is also evolving, albeit in a different context. In a move to grant automakers greater flexibility in regulatory compliance, the European Union amended its CO_2 emission standards for new passenger cars and vans in May 2025, allowing automakers to meet their targets by averaging their fleet-wide CO_2 emissions over the 2025–2027 period.[7] While this new provision offers automakers more time to adjust their fleet composition, it could effectively weaken emission reduction targets and slow down the pace of ZEV adoption in the near term.

Amidst these policy refinements, however, ZEV adoption remains strong across Europe, driven by targeted, national-level financial incentives.[8] For instance, Spain has extended its MOVES III incentive program, which includes an additional €400 million in funding to support purchase incentives and infrastructure buildout.[9] France is bolstering its market through a new round of its social leasing scheme, along with a new €1,000 bonus for EVs produced in Europe.[10] In Eastern Europe, Slovenia has introduced a new €9.2 million subsidy scheme for the purchase of new and used EVs, and Croatia has launched a €21.2 million program to promote the purchase of ZEVs by companies, with incentives up to €9,000 per vehicle.[11] These targeted incentives underscore the role of national policies in accelerating consumer and corporate ZEV adoption.

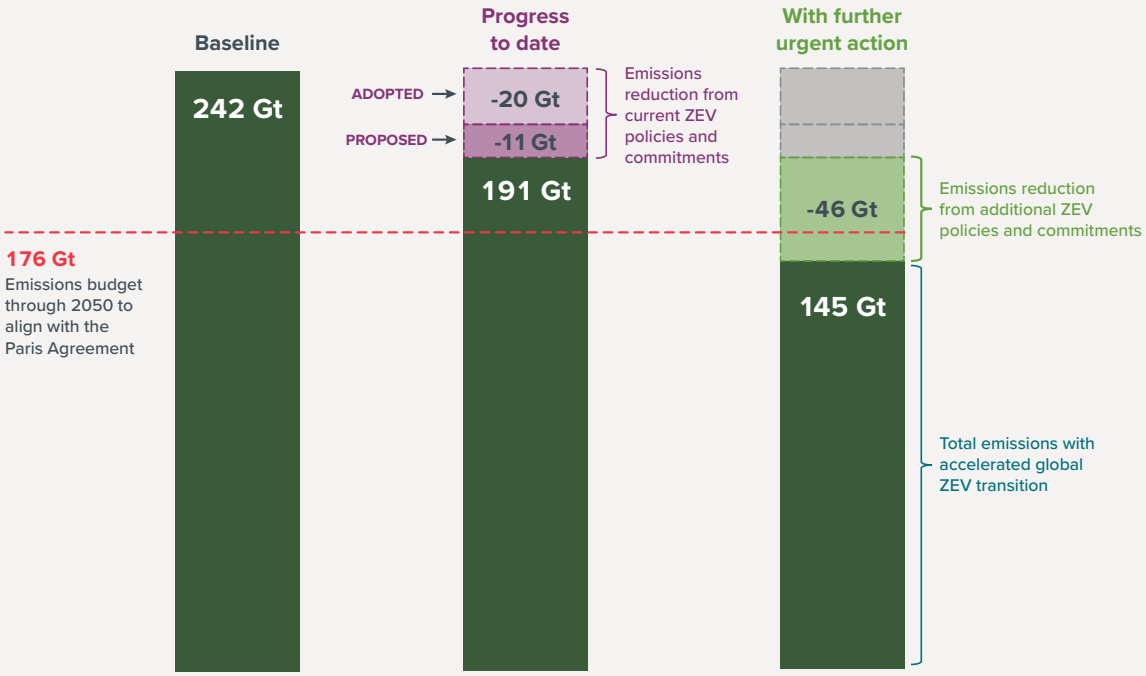
Supply-side regulations have continued to be a key driver of market growth, as seen in the context of the ZEV sales requirements in the United Kingdom and Canada. Both countries recorded strong sales growth in 2024: the United Kingdom emerged as Europe's top EV market with a 20% sales volume increase, and Canada achieved a remarkable 66% jump in sales compared to the previous year.[12] However, to address short-term market pressures, both countries have recently introduced new flexibilities to their policies.[13] The United Kingdom, for example, has proposed a credit trading and borrowing mechanisms until 2029, which aim to provide greater flexibility for automakers but also raise questions about the pace of the transition leading up to the country's 2035 target.[14]

Similarly, Canada is waiving the 2026 sales target under its Electric Vehicle Availability Standard (EVAS) as a part of a policy review in response to the United States' trade actions and tariffs, a decision that could potentially delay the policy's long-term goal of reaching 100% ZEV sales for light-duty vehicles by 2035.[15] These policy shifts reflect an ongoing tension between the desire to meet ambitious long-term electrification goals and the need to address the concerns of the automotive industry.

Recent developments in ZEV policy and market trends indicate a more tempered trajectory towards a Paris-aligned ZEV transition. Adopted policies are projected to avoid nearly 20 gigatons of CO_2 emissions between 2024 and 2050, with an additional 11 gigatons in CO_2 reductions possible through the full implementation of proposed policies and voluntary targets (Figure 1).

Figure 1. Progress towards a Paris-aligned ZEV transition

Cumulative well-to-wheel CO_2 transportation emissions (Gt) projected from 2024 to 2050



Red line indicates 2024–2050 carbon budget from IPCC Sixth Assessment Report, assuming 67% likelihood and 21% share of all emissions from road vehicles. The baseline scenario accounts for the projected effects of policies as of August 2021 and anticipated market development affecting ZEV sales through 2050.

A considerable gap remains to align the road transport sector with the climate goals of the Paris Agreement. To achieve an emissions pathway compatible with limiting warming to under 2 °C, it is estimated that an additional 46 gigatons of CO_2 emissions would need to be avoided through further commitments in countries that have not yet adopted Paris-aligned policies. International frameworks, such as the Zero Emission Vehicles Declaration and the Global MOU, serve as critical mechanisms for aligning efforts and fostering the collaborative investment required to accelerate the global transition and facilitate the adoption of zero-emission technologies in emerging economies.

Driving the Next Phase of the Global ZEV Transition

The global ZEV transition is gaining momentum through a convergence of maturing policies and market diversification. This section highlights two key market trends: the strong momentum in established ZEV markets, where policies are shifting from broad incentives to fiscally sustainable frameworks, and the exponential growth in Latin America and Southeast Asia, which demonstrates that emerging economies are becoming a driving force in the global transition. We also showcase the electrification of India's 2- and 3-wheelers and the rapid deployment of charging networks globally to show how targeted policies are building a viable EV ecosystem from the ground up.

Policy Tools and Financial Incentives for Maturing Markets

Key Takeaways:

- As ZEV adoption accelerates, Nordic countries and the Netherlands are strategically shifting from broad consumer subsidies to more refined policy tools, supporting long-term fiscal stability while maintaining a strong push for electrification.
- The new policy frontier is defined by the "polluter pays" principle, which places taxes on high-emission vehicles to make ZEVs more competitive and drive market change.
- A mix of policy instruments, including feebates, registration tax systems, and corporate fleet incentives, is proving effective, allowing governments to tailor strategies to specific market conditions and stages of maturity, setting a valuable precedent for other nations to follow.

As the global ZEV transition progresses, advanced European markets are providing models for the next phase of policy development. Having achieved high rates of ZEV adoption through comprehensive policy frameworks, Norway, Sweden, Finland, Denmark, and the Netherlands, all signatories to the ZEV Declaration, are now adapting their strategies to support long-term market and fiscal sustainability. Their evolving approaches to encourage continued momentum offer valuable examples for other countries that will soon enter this next phase.

Norway set an ambitious goal to reach 100% electric new car sales by 2025, 10 years ahead of the ZEV Declaration's 2035 target. The country's sales share increased from 79% in 2023 to 80% in 2024, and 87% in the first half of 2025.[16] Although the country fell just short of its target, its success is credited to a long-standing policy package that addressed both the upfront cost and operational expenses of owning an EV, with measures such as full exemptions from purchase taxes and value added tax (VAT), as well as significant discounts on road tolls, ferry fares, and annual road tax.

As its market matures, Norway is now demonstrating how to adjust such policies while still spurring consumer demand. A key reform in 2024 modified the VAT exemption, applying it only to the first NOK 500,000 (approximately €44,000) of a vehicle's purchase price.[17] This adjustment reduced the subsidy for high-priced luxury EVs while maintaining the core "polluter pays" principle, under which substantial taxes on internal combustion engine (ICE) vehicles continue to drive the market toward its 100% electric target.

This strategic adjustment of incentives is not unique to Norway. Denmark has also demonstrated significant progress: its EV market share was just shy of 50% in 2024 and rose to 62% in the first half of 2025.[18] This growth has largely been driven by a vehicle registration tax system that is heavily weighted by a car's CO_2 emissions, increasing the cost of high-emission vehicles while offering significant tax reductions for ZEVs.[19] This has been supplemented by tax benefits for corporate EV fleets, which account for a majority of new EV sales in Denmark.

This trend of evolving policies in response to market saturation has also been seen in other countries. In 2022, Sweden modified its "bonus-malus" system,[20] which now levies a significant tax on new high-emission vehicles to make ZEVs a more appealing option.[21] The country reached a 54% EV sales share in 2024 and 58% share in the first half of 2025. Finland, which boasted a 45% EV sales share in 2024 and 50% share in the first half of 2025, pairs consumer-facing tax benefits with public procurement programs to accelerate ZEV uptake.[22] The Netherlands, which attained a 40% EV sales share in 2024 and 56% share in the first half of 2025, has made extensive use of fiscal incentives for its corporate fleet, whereby favorable taxation rates make electric company cars a preferred option for private companies.[23]

Collectively, these countries demonstrate a diverse range of effective fiscal policy tools—from feebates and registration taxes to corporate incentives and procurement mandates—that can be adapted to a country's unique stage of market maturity. The strategic adjustment of these tools is essential for achieving long-term fiscal stability and offers a critical roadmap for others to follow.

The Exponential Rise of Emerging Markets

Key Takeaways:

- Emerging economies in Latin America and Southeast Asia are establishing themselves as leaders in ZEV adoption, with markets like Colombia and Vietnam outpacing many major developed nations in EV sales share.
- The surge in these markets has been driven by a combination of fuel economy standards, fiscal incentives that lower upfront costs, and the increasing availability of affordable, locally manufactured or imported EV models.
- Companies like VinFast and BYD are expanding local production hubs and offering vehicles tailored to these markets, demonstrating that successful ZEV adoption is driven by strategically integrated ecosystems.

A remarkable trend is reshaping the global ZEV transition: emerging economies are leapfrogging older technologies and embracing electric mobility at an increasingly fast pace. Particularly in Latin America and Southeast Asia, these regions are experiencing a surge in ZEV adoption, propelled by a powerful mix of ambitious government policies, plummeting battery costs and other favorable market conditions, and the increasing availability of cheaper, domestically produced EVs.

In South America, recent sales figures showcase the region's booming electric market. Brazil's electric light-duty vehicle sales soared by 143% in 2024 compared to the previous year, while Colombia and Chile, both ZEV Declaration signatories, saw impressive increases of 127% and 116%, respectively.[12] This growth came as a result of fuel economy standards and fiscal incentives, such as reduced VAT and import duties, that have lowered the upfront cost of EVs and made them more cost competitive with ICE vehicles. The increasing availability of new and more affordable electric models has been a significant catalyst, broadening consumer choice and driving sales growth across the region.

As the host of COP30, a spotlight has been placed on Brazil's sustainable policies. The Brazilian government's Green Mobility and Innovation (MOVER) Program provides vital incentives to produce low-emission vehicles, boosting both demand and local manufacturing.[25] A key feature of the Brazilian market is the increasing availability of affordable and feature-rich EV models.[26] Brazil's EV sales share has nearly tripled in just two years, climbing from 2% in 2023 to 5% in 2024, and reaching 6% in the first half of 2025.[27] To strengthen its market position and meet this rising demand, a wave of investment in local production facilities is underway, with BYD investing US$1 billion for its new factory complex in Bahia and General Motors committing around US $1.4 billion to bolster its production capacities. Both companies are signatories to the ZEV Declaration.[28] This influx of capital is not only focused on vehicle assembly but also on creating a robust local supply chain

for core components, positioning Brazil as a key hub for EV manufacturing and export throughout Latin America. However, Brazil's strong emphasis on biofuels and flex-fuel plug-in hybrid vehicles presents a significant climate risk, as these have lower potential to reduce emissions than a full transition to battery-electric.[29]

Colombia also has emerged as a regional leader in the ZEV transition, driven by clear national targets and a strategic, multi-pronged policy approach. As a signatory to both the ZEV Declaration and Global MOU, the country's commitment is solidified by Law 1964, its first national EV policy, which offers fiscal incentives like tax breaks and preferential parking to EV drivers, and requires all urban bus purchases to be zero emission by 2035.[30] Crucially, the government is developing fuel efficiency standards for light-duty vehicles, a measure that will compel the market toward cleaner alternatives and help meet the ZEV goals outlined in its international commitments.[31] This strategic push is showing growing momentum: Colombia's EV sales share jumped from 3% in 2023 to 7% in 2024, and rose to 8% in the first half of 2025.[32] Moreover, this multi-pronged policy approach has already had a major impact on public bus fleets: Bogotá now has one of the largest electric bus fleets outside of China. This rapid adoption demonstrates how focusing on electrifying public transport can improve air quality and set a strong example for the region.

Similarly, Chile has cemented its role as a regional climate leader by backing its ambitious 100% zero-emission vehicle sales target for light-duty vehicles by 2035 with a new fuel economy standard.[33] The Energy Efficiency Law 21305 took effect for passenger cars in January 2024, requiring that all automakers meet fleet-wide average fuel economy standards that progressively tighten in stringency through 2030.[34] The law's immediate impact was significant: the average energy performance of the light-duty vehicle fleet improved by 8.5% in its first year.[35] The total EV sales share demonstrated accelerating adoption, rising from 0.2% in 2021 to 3% in the first half of 2025.[36] Like Colombia, Chile has also made significant progress in electrifying its public bus fleet, with Santiago having the largest electric bus fleet outside of China. This combination of clear targets, fuel economy standards, and a sustained commitment to electrifying public transport has established Chile as a key player in the regional ZEV market.

In Southeast Asia, key markets are outpacing the EV sales shares of larger economies like the United States and India. This is particularly evident in Vietnam, which recorded a remarkable 35% EV sales share in the first half of 2025, and in Thailand, where EVs accounted for 22% of new vehicle sales during the same period.[37] These countries are successfully accelerating EV adoption through government incentives, while manufacturers have increased the availability of more affordable models.

In Thailand, BYD has emerged as a major player, capturing over a third of the EV market share in 2024. BYD inaugurated its first EV plant outside of China in Rayong, Thailand, in July 2024, a $490 million investment to produce 150,000 vehicles annually and create around 10,000 jobs. This BYD factory represents a fraction of the over $1.44 billion in investment from Chinese EV automakers that are leveraging Thai government subsidies and tax incentives.[40]

A key driver of Vietnam's rapid EV transition has been domestic all-electric car manufacturer Vinfast, which has established itself as a market leader, capturing 18% of the country's car market in 2024.[41] Translating this domestic success into a global strategy, Vinfast is building a comprehensive regional green mobility ecosystem. In India, the company announced a major new manufacturing facility in Tamil Nadu, backed by an initial $500 million investment.[42] In Indonesia, VinFast officially began construction of a new EV plant in Subang, West Java, in July 2024, presenting an initial investment of around $200 million for a facility with an annual capacity of 50,000 vehicles scheduled to commence operations in the last quarter of 2025.[43] Vinfast's sister company, V-Green, is actively supporting this expansion by deploying charging infrastructure across Southeast Asia, including a plan for over 60,000 charging points in Indonesia.[44]

The Electrification of India's 2- and 3-Wheelers

Key Takeaways:

- India has established itself as the world's leading market for electric 3-wheelers, commanding an impressive 57% of the global sales share in 2024.
- Targeted government schemes like the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) and PM E-Drive programs have been instrumental in lowering the upfront cost of electric 2- and 3-wheelers, making them price-competitive with ICE equivalents.
- The transition has been powered by a strong collaboration between government and the private sector, particularly in last-mile delivery, where companies are adopting EVs for cost savings and working with rental partners to build out the ecosystem.

India is pioneering a highly scalable and replicable model for the electrification of its most prevalent vehicle segments: 2- and 3-wheelers. Given that these vehicles constitute two-thirds of all vehicles on India's roads and are integral to the rapidly expanding last-mile delivery and logistics sector, their electrification is a critical pathway for the nation to achieve its climate objectives.[45]

India has become the global leader in the electric 3-wheeler market, commanding an impressive 57% sales share in 2024. Its electric 2-wheeler segment has also grown substantially, reaching a 6% sales share, establishing India as the second-largest market for these vehicles behind China.[46] This successful market transformation has been underpinned by targeted government incentives that have enabled electric models to achieve price parity with their ICE counterparts, a decisive factor for a large portion of consumers. Foundational support was provided through the FAME I and II schemes between 2015 and 2024.[47]

Building on this momentum, the new PM E-Drive Scheme aims to further accelerate adoption by incentivizing the sale of approximately 2.5 million electric 2-wheelers and 320,000 electric 3-wheelers, supported by subsidies estimated at US$315 million.[48] By providing robust financial

support for both the purchase of vehicles and the buildout of charging infrastructure, the government has created a self-reinforcing cycle of EV adoption and charging network expansion.

As one of India's largest food delivery platforms, Zomato has leveraged this strategic policy environment to invest in its own corporate electrification. The company has committed to transitioning 100% of its delivery fleet to electric by 2030 and was the first online food delivery service to join the EV100 initiative.[49] Transitioning to a fully electric model will allow Zomato to achieve operating cost savings of up to 90% due to the high and volatile cost of fuel. Earlier this year, Zomato launched an electric rental bike fleet for its delivery partners in the Delhi National Capital Region to help facilitate this transition. A pilot program of 300 bikes will offer drivers a low-cost alternative, while also helping the company to achieve its ambitions.

As the Zomato model exemplifies, this synergy in which government policy enables and encourages private sector investment provides a powerful and holistic model for how emerging economies can build comprehensive market momentum from the ground up.

From Policy to Charging Infrastructure: Building the Backbone of Electric Mobility

Key Takeaways:

- The rapid global expansion of EV charging networks has been driven by supportive policies, with Europe's reliance on deployment targets and India's use of targeted incentives demonstrating two effective and scalable models.
- The deployment of charging infrastructure for HDVs relies on robust public-private partnerships, with green shipping corridors and joint industry ventures demonstrating that success requires collaboration among governments, manufacturers, and private businesses.
- Global standards facilitate a streamlined EV charging ecosystem, with the EU-U.S. commitment to the Megawatt Charging System (MCS) highlighting the importance of standardization to ensure interoperability and a predictable charging experience for HDVs.

The global transition to electric mobility is critically dependent on the timely and effective deployment of charging infrastructure, which serves as the essential backbone for a viable EV ecosystem. The number of public charge points more than doubled globally between 2022 and 2024, surpassing 5 million and indicating a substantial acceleration in infrastructure development.[50] This expansion is not a spontaneous occurrence but rather the outcome of deliberate and innovative policy strategies implemented by governments and industries worldwide.

Through its landmark Alternative Fuels Infrastructure Regulation (AFIR), the European Union established a regulatory framework for charging network expansion, moving beyond encouragement to legal mandates.[51] This policy utilizes a dual-pronged approach to ensure both sufficient capacity and comprehensive coverage by setting fleet-based and distance-based targets for light- and heavy-duty vehicle charging infrastructure along the EU's main transport corridors. This strategy is designed to create a predictable, interoperable, and reliable charging foundation.

India also has employed a strategic, incentive-led approach to market acceleration, in which its ₹10,000 crore (approximately US$1.2 billion) FAME II program acted as a powerful catalyst.[52] This policy focused incentives on vehicle segments with the highest potential for impact, while pairing vehicle subsidies with dedicated funding for charging infrastructure. This has been further complemented by the PM-EDRIVE initiative, which provides an additional ₹2,000 crore (~US$240 million) to strategically develop charging networks in dense urban areas and along major highway corridors.[53] By simultaneously fostering both the vehicle market and its charging ecosystem, India's model provides a framework for how emerging economies can build comprehensive market momentum.

Complementing this network buildout is the crucial effort toward global standardization around the MCS, a new high-power standard for heavy-duty vehicle charging, endorsed through a joint EU-U.S. commitment.[54] This standardization is essential for ensuring interoperability, allowing any truck to use any high-power charger. These partnerships—from strategic corridors to industry joint ventures and global standards—demonstrate that creating a viable charging ecosystem for heavy-duty freight requires a collaboration between the public and private sectors.

A critical component in electrifying heavy-duty freight is the formation of robust public-private partnerships. A prime example is the Mediterranean Green Corridor, a vital freight route in which governments like Spain, Croatia, and Slovenia are partnering with leading truck manufacturers including Scania, Volvo Group, and Iveco Group, and the energy utility Iberdrola. This collaboration, which is part of the broader Global Green Road Corridor Initiative, aims to align policies and strategically deploy the next generation of high-powered chargers. The first phase of the project, a 1,000 km stretch from Algeciras, Spain to Avignon, France, will be home to the first public MCS chargers for HDVs in southern Europe.

Industry-driven initiatives also have strengthened the charging ecosystem. A prime example is Milence, a joint venture founded by competing truck manufacturers Daimler Truck, the TRATON Group, and Volvo Group.[55] With initial funding of €500 million, Milence aims to build and operate a dedicated charging network across Europe, with a goal of establishing at least 1,700 high-performance charge points (including MCS chargers) by 2027. The company is actively building hubs along key Trans-European Transport Network (TEN-T) corridors, which are open to all brands of electric trucks.

Other major players are also investing directly in their own infrastructure to support a resilient and scalable transition. Prologis, a global leader in logistics real estate, has developed a self-sufficient microgrid for a major HDV charging hub near the ports of Los Angeles and Long Beach.[56] This innovative microgrid, powered by a combination of battery storage and generators, was built to bypass lengthy utility delays and can charge over 300 trucks a day, providing a valuable prototype for future high-demand charging sites.[57]

Leading the Way: Highlights from Initiatives

EV100

Commitment:

In 2025, EV100 merged its EV100+ initiative into the main program to cover all vehicle types, from cars to MHDVs. The commitment structure was strengthened with new tiered deadlines for different markets and vehicle types, a shift to a flow model for new acquisitions, and the removal of plug-in hybrids (PHEVs) from counting toward a member's commitment.

New deadlines for newly acquired ZEVs are as follows:

TIER 1 (ADVANCED EV MARKETS):

- LDVs (< 7.5t) by 2030
- MDVs (7.5–20t) by 2035
- HDVs (> 20t) by 2040

TIER 2 (EMERGING EV MARKETS):

- LDV (< 7.5t) by 2035
- MDV (7.5–20t) by 2040
- HDV (> 20t) by 2040

Highlights:

- Members added 127,000 EVs in the last year, bringing the total to over 700,000 EVs deployed across 76 markets.
- 20 members have achieved at least 50% conversion of their committed fleets, demonstrating a strong shift towards BEVs, which saw a 61% increase in corporate fleets and a 16% increase in leased fleets, significantly outpacing the growth of PHEVs.
- Members have installed 29,882 charging points across 4,277 locations and deployed nearly 400 electric trucks in the medium and heavy-duty vehicle segment.

First Movers Coalition

Commitment:

Trucking owners and operators commit to making at least 30% of their purchases of new heavy-duty trucks, along with 100% of their purchases of new medium-duty trucks, zero-emission by 2030.

Retailers and manufacturers commit to requiring that all their trucking service providers also make at least 30% of their heavy-duty and 100% of their medium-duty new truck purchases zero-emission by 2030.

Highlights:

- Increased membership to 102 in 2025, with Spain joining as the 14th government partner. Sixteen global corporations have signed a commitment to procure or contract zero-emission trucks.
- Members are pioneering the adoption of ZE trucks through direct purchases and contracted services. In Europe, PepsiCo and SSAB commenced deliveries with two battery electric trucks in Finland and six in the UK. Cemex is expanding its fleet with seven electric ready-mix concrete truck mixers across EMEA.
- Fortescue Metals Group is advancing a large-scale fleet electrification initiative with Liebherr, ordering 360 battery electric trucks as a part of a US$2.8 billion program, while Toll Group began deploying battery electric trucks under a US$43 million investment in HDVs and charging infrastructure, aiming to roll out 28 trucks in Australia by 2027.

Fleet Electrification Coalition

Commitment:

At least 30% of sales of new medium- and heavy-duty vehicles are electric by 2030 in Europe, China, India, and the United States.

Highlights:

- 30+ member companies spanning shippers, carriers, and logistics providers advancing the business case for ZE trucks by aggregating demand, shaping finance models, and signaling the need for policies and charging infrastructure.
- Through ZET SCALE in the United States, members are working toward procurement of over 10,000 Class-8 electric trucks, breaking through acquisition cost barriers and de-risking investments.
- Members are catalyzing charging infrastructure investment by driving targeted deployment of charging energy solutions on key freight corridors, including the I-10 in the United States and the A2-A4 in Poland.

- The Electrifying Drayage Alliance has been launched with over 15 shippers to create a replicable model for electrifying drayage operations at six major global ports.
- The coalition contributes data and analysis to inform policy decisions, such as HDV CO_2 standards in Europe and India. It also provides practical tools like the Electrify Logistics Scorecard and tailored training to help fleets and shippers with their transition.

Global MOU

Commitment:

100% zero-emission new truck and bus sales by 2040, with an interim goal of 30% zero-emission vehicle sales by 2030.

Highlights:

- Montenegro, Mozambique, and Peru have joined since COP29, bringing the total to 40 national government signatories. Additionally, 275 subnational governments, fleet owners, manufacturers and suppliers, utility and infrastructure providers, and financial institutions endorsed the Global MOU.
- Signatories sold approximately 26,994 ZE MHDVs in 2024, accounting for 0.067% of new MHDVs sold globally.
- The Global Green Road Corridors initiative was launched, targeting at least ten global charging corridors for MHDVs by 2026.

ZEV Declaration

Commitment:

100% ZEV sales for cars and vans by 2035 in leading markets, and by 2040 globally.

Highlights:

- 237 signatories, including 44 government signatories in leading and emerging economies, continued to advance their ZEV adoption.
- In Latin America, EV adoption is soaring, with Colombia and Chile leading the way by achieving over 100% year-on-year growth in EV sales, fueled by supportive policies and increasing availability of affordable models.
- The Chinese manufacturer and signatory BYD solidified its position as world's largest EV seller, reaching 4.3 million EV sales in 2024.
- Vietnam-based automaker Vinfast is advancing its global expansion strategy, establishing major manufacturing hubs in the United States and India.

Accelerating the Global ZEV Transition

The global journey toward zero-emission mobility has entered a new era. The transition to ZEVs is no longer a theoretical ambition but a dynamic reality, shaped by a convergence of maturing policies, market diversification, and groundbreaking private-sector innovation. The past year has demonstrated that while challenges persist, the fundamental drivers of electrification remain resilient.

In advanced markets, a critical policy evolution is underway. As showcased by the Nordic countries and the Netherlands, the focus is shifting from broad, market-creating incentives to more targeted, fiscally sustainable frameworks. As evidenced by changes to vehicle taxation in Norway and Sweden to steer consumers toward ZEVs while preserving tax revenue, these nations are maintaining market momentum through "polluter pays" principles, demonstrating a responsible approach to managing the financial aspects of a maturing transition.

Simultaneously, a new wave of growth is emerging in the Global South, with Latin America and Southeast Asia serving as hotspots of exponential growth. Countries like Colombia, Chile, Thailand, and Vietnam are not merely following a global trend; they are becoming major hubs of ZEV adoption. This rise has been fueled by a powerful mix of fiscal incentives, fuel economy standards, and a strategic focus on public transit electrification and local production. Meanwhile, the electrification of India's 2- and 3-wheeler segments provides a unique and highly scalable model for achieving impactful change. By focusing incentives on the vehicles that dominate its roads and last-mile logistics, India is creating a self-reinforcing cycle of market acceleration. Government-led support for vehicle purchasing and charging infrastructure buildout has catalyzed corporate action, with companies committing to fully electric fleets and collaborating on innovative rental models.

Ultimately, the success of these diverse strategies hinges on the development of a robust and reliable charging infrastructure. The global expansion of public charge points is a direct result of innovative and decisive policy. For instance, the European Union's AFIR provides a predictable, legally binding framework for network expansion, while public-private partnerships on key freight corridors are bringing crucial megawatt charging solutions to heavy-duty transport.

While significant progress has been made, the collective journey is not yet complete. The ambition gap for a truly Paris-aligned transition looms large, and bridging this gap will require continued international collaboration, guided by frameworks like the ZEV Declaration and Global MOU.

At COP29, Breakthrough Agenda governments called on the leading initiatives highlighted in this report to continue working toward setting common and coordinated targets and to send a global collective market signal in support of a ZEV transition aligned with Paris Agreement goals. They nominated the Accelerating to Zero Coalition to coordinate across the initiatives and to review and communicate progress at COP30.

ABOUT THE BREAKTHROUGH AGENDA

The Breakthrough Agenda, launched at COP26, convenes initiatives and countries to strengthen international collaboration by providing a framework to prioritize, coordinate, and enhance collaborative action across seven high emitting sectors: power, road transport, steel, hydrogen, agriculture, buildings, and cement, and concrete. It is currently endorsed by 60 countries and more than 150 international initiatives working at both the governmental and non-state actor levels. The Road Transport Breakthrough coalition of countries and international initiatives have set a goal of making ZEVs the new normal: accessible, affordable, and sustainable in all regions by 2030. The Breakthrough Agenda's annual cycle is informed by independent expert reports. The 2025 report has been written by the International Energy Agency (IEA) and Climate High-Level Champions. The Breakthrough Agenda Report 2025—the fourth in the annual series—takes a different approach to previous reports, in that it does not contain the same detailed sector-by-sector assessment. This year's report focuses on enhancing the methodology behind the detailed progress assessments, provides practical examples of collaboration through deep dives, and introduces a new focus chapter on fertilizers.

Learn more: www.breakthroughagenda.org

Endnotes

[1] Zero-emission vehicles are vehicles—specifically battery-electric and fuel-cell electric models—that produce zero tailpipe exhaust emissions. They do not emit harmful pollutants, such as carbon dioxide (CO_2), nitrogen oxides (NO_x), or particulate matter.

[2] This is based on the ICCT's modeling update on the global zero-emission vehicle transition in 2025. The update incorporates adopted and proposed policies and international commitments through August 2025, while also updating expectations of ZEV uptake based on recent market developments and projected dates of total cost of ownership and purchase price parity. Arijit Sen and Josh Miller, Vision 2050: *Update on the Global Zero-Emission Vehicle Transition in 2025* (International Council on Clean Transportation, In press).

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