INFRASTRUCTURE NEWS

The EV Infrastructure Report 2025

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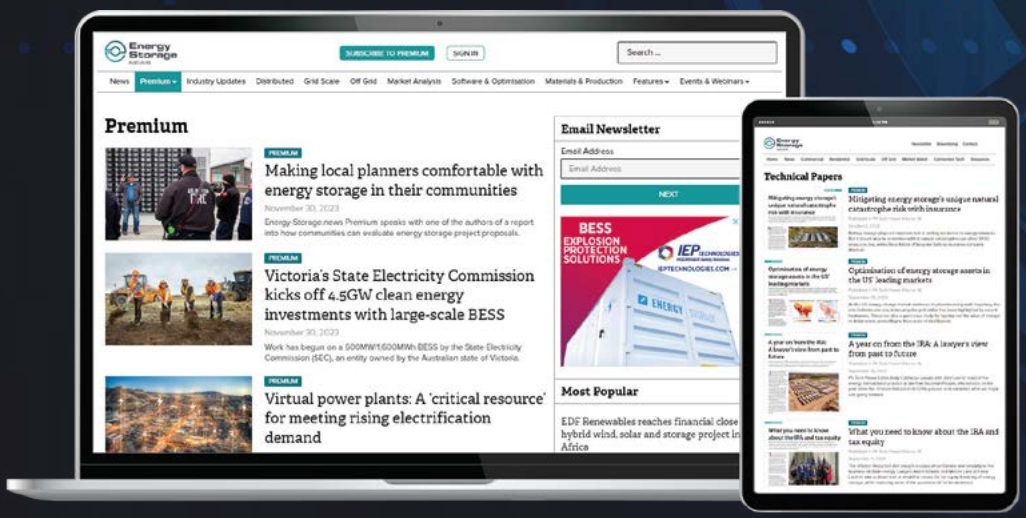

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SCAN ME

Foreword

By Molly Green

This year's edition of the EV Report comes to you from *EV Infrastructure News.*

The third edition of the report is the first in the series to unpack the worldwide state of EV infrastructure, reflecting the changes in our editorial focus and the inherently global nature of the drive towards decarbonising transport.

Readers will remember that at this time last year, the UK's EV sector was keenly awaiting word from the new government on what policy support would be delivered. In a boon for the EV infrastructure sector, the ZEV mandate has been (mostly) reinstated, although the inclusion of plug-in hybrid electric vehicles has proven controversial, and the Labour government has pledged billions in financial support for the rollout of charging infrastructure. That, and other major news from recent months, appears on pages 6–11.

The UK's Electric Car Grant, which allows EV buyers to claim money back on their purchase, comes into effect almost in tandem with the end of the US tax credit scheme that incentivised buyers. We give a comprehensive overview of the changes included in president Trump's One Big, Beautiful Bill Act, with expert analysis assessing the extent to which the withdrawal of federal support will hurt the sector in the US on page 22.

Page 18 starts a returning feature on vehicle-to-grid (V2G) technology. In the past few years, the tone of discussion about the technology has changed, from breathless anticipation of potential to a matter of crossing the 't's in the final steps before mass deployment. We hear from the companies pioneering market-ready V2G offers on what barriers remain to mass uptake of this common-sense solution.

On page 20, we also round up some of the biggest advances coming out of Asia in the EV space, with an in-depth look at the Australian market on page 13, exploring some of the trends and challenges facing the rollout of EVs and the necessary charging infrastructure required to facilitate the adoption of clean mobility in the land down under.

Thank you to everyone who contributed to this edition of the EV Infrastructure Report. We hope you enjoy reading it.

Molly Green, Editor, **EV Infrastructure News**

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NEWS

LG Energy Solution targets 10-minute EV charge times amid battery production slowdown

LG Energy Solution (LG ES) hopes to develop EV batteries that can be charged in under ten minutes, as stated in an earnings call presentation to explain recent financial results.

LG ES said it would adjust, scale down and postpone existing investment plans this year, curtail investment in new production lines, and continue reallocating resources to increase cost efficiency. It had announced the scaling back of expansion plans in its Q3 2024 results as it wrestled with declining battery prices and dampened EV demand.

For the rest of 2025, its investment activities in the EV space are more R&D-focused. The company hopes to develop EV batteries that can be charged in under ten minutes and lithium manganese-rich (LMR) batteries with 30% higher energy density than LFP to be used in next-generation EV models by a “strategic customer” by 2028.

Although EVs look set to remain the much bigger overall market, in the short term, LG ES identified recent policy changes that presented uncertainties, including the phaseout of the consumer EV subsidy in the US by the end of September and import tariffs creating cost pressures for OEMs.

LG ES, which has agreements with Hyundai and Honda for US-based EV battery manufacturing, does not break out its financials between EV and ESS division numbers.

The South Korean company has been rebalancing production capacity utilisation between those two segments of its business.

While a slowdown in growth in the electric vehicle (EV) market continues—although LG Energy Solution (LG ES) said sales were “stable” in the second quarter—the company said it expects demand for energy storage to continue to increase, with rising renewable energy adoption and AI data centres as the main drivers.

UK government to spend £650 million on electric car subsidy

The UK government has confirmed it will launch a £650 million grant scheme to discount new EVs for consumers by up to £3,750 per car.

The Electric Car Grant (ECG) will make the discount available at the point of sale for new eligible electric cars priced at or under £37,000.

In a move that transport secretary Heidi Alexander said will "allow people to keep more of their hard-earned money", drivers will be able to access the discounts from manufacturers that apply to be part of the grant scheme from 16 July.

Funding is available until the 2028/29 financial year and awarded on a first-come, first-served basis. Alexander added that it will "help our automotive sector seize one of the biggest opportunities of the 21st century".

Eligibility for the scheme will depend on manufacturers' sustainability standards. The 'greenest' vehicles in band one will receive up to the full £3,750, with band two vehicles eligible for up to £1,500.

The grant administration is carried out between government, dealerships and manufacturers, meaning buyers simply purchase the car at a lower price. The ECG requires manufacturers to have committed to a verified science-based target (SBI).

The UK government website has a list of vehicles approved for the ECG.

The £650 million investment in EV affordability comes just after the transport secretary, Heidi Alexander, announced a £63 million investment in EV charging infrastructure in the UK.

CEO of chargepoint operator trade body ChargeUK, Vicky Read, pointed out that charging infrastructure is already largely in place to support increased EV uptake as a result of the subsidy.

NEWS

Canadian government reveals CA$25 million investment for EV charging infrastructure

The Canadian government has announced an investment of CA$25 million (US$18 million) to support 33 projects, which include support for EV charging infrastructure.

The funding, unveiled by Claude Guay, Parliamentary Secretary to the Minister of Energy and Natural Resources, will focus on improving EV charging infrastructure, decarbonising freight transportation and developing technologies for medium and heavy-duty vehicles.

Natural Resources Canada (NRCan) has allocated CA$9.7 million to 23 projects that will install more than 850 EV chargers across the country through the Zero Emission Vehicle Infrastructure Program (ZEVIP).

A substantial portion of these new EV charging stations will be located in Quebec, addressing the growing demand for charging infrastructure in one of Canada's most EV-friendly provinces.

Indeed, government agency Statistics Canada detailed in its recent quarterly report that Quebec has led in new ZEV registrations, accounting for over half (54.4%) of Canada's new ZEV registrations in 2024.

This latest round of funding represents another step toward the federal government's ambitious target of deploying 84,500 chargers and 45 hydrogen stations across Canada by 2029. The current initiative is part of a broader CA$1 billion investment strategy to build out the country's ZEV infrastructure.

The 23 charging infrastructure projects represent diverse applications across multiple settings, with Quebec receiving a significant portion of the investment.

Public EV charging network expansions

For instance, Funding Quebec received CA$3 million to install 320 Level 2 chargers in public places throughout the province. This represents one of the largest single deployments in the current funding round and will substantially increase charging availability in community centres, shopping areas and recreational facilities.

Kruger Energie and Zone Signature are implementing mixed charging solutions at strategic locations, including Level 2 and DC fast chargers. These installations will help address the critical need for rapid charging options along key travel corridors while also providing slower charging options for longer-duration parking.

Quebec Airport has also secured funding to install charging infrastructure to serve both travellers and airport employees, making air travel connections more seamless for EV drivers. This project addresses a significant gap in the charging ecosystem, as transportation hubs have historically lacked adequate EV infrastructure.

Workplace charging expansion

IKEA Canada is among the recipients focused on workplace charging, with plans to install chargers at distribution centres and retail locations. This dual-purpose approach will serve employees during work hours and customers during shopping trips, maximising utilisation rates.

Financial support for EV emergency mobility

The Centre hospitalier de l'Université de Montréal (CHUM) secured CA$100,000 to install two Level 2 EV chargers and two EV fast chargers specifically for a Montreal ambulance fleet. This project represents an important step in electrifying emergency service vehicles.

Distribution Services in Quebec received CA$300,000 to Zinstall Level 3 chargers for its heavy-duty drayage distribution trucks, supporting the electrification of commercial logistics operations.

Brazil leads the charge with world-first electric bi-articulated buses

Goiânia city in Brazil is set to make history as the first globally to operate a regular service of fully electric bi-articulated buses. The initiative comes from a partnership between Volvo Buses and GreenMob Capital, an investment arm of the HP Group specialising in urban mobility projects. The order includes 21 Volvo BZRT buses—16 articulated and five bi-articulated models—each destined for the East-West BRT line of the Metropolitan Collective Transport Network.

The East-West BRT corridor currently serves 12 million passengers monthly and is expected to expand its reach to 17 million passengers. With over 50 stations and connections to surrounding cities, the network's heavy traffic will benefit from the addition of electric buses to manage emissions.

With zero CO_2 emissions and ultra-low noise levels, the Volvo BZRT buses promise to transform the commuting experience for millions of passengers. The bi-articulated vehicles, capable of carrying up to 250 passengers, and the articulated models, accommodating 180, offer dual-side doors, essential features in warmer climates such as air conditioning, and are home to a unified fare system to ensure accessibility and comfort.

"The city of Goiânia takes a major step toward decarbonising public transport by adopting high-tech electric buses with exceptional safety features," said André Marques, President of Volvo Buses Latin America.

Innovative safety technology

The Volvo BZRT buses combine safety with their renewable energy credentials. Features such as Volvo Dynamic Steering (VDS) improve manoeuvrability and stability, while active safety systems—including cameras and sensors—help protect passengers, pedestrians, and cyclists. Additionally, the buses are equipped with traffic sign recognition and GPS-enabled "Safety Zones," which automatically reduce speed in high-risk areas, such as schools and hospitals.

Gustavo Bacellar de Faria, CEO of GreenMob Capital, highlighted the significance of this development: "We are bringing the most advanced vehicle technology available globally to Goiânia—combining efficiency, comfort, and safety. The arrival of the electric Volvo BZRTs strengthens our commitment to driving the development of innovative and sustainable urban mobility solutions."

The fleet's delivery is scheduled for 2025.

Ford joint venture BlueOval SK begins US EV battery production

BlueOval SK has produced its first EV battery at its Kentucky 1 site in the US, built to power the all-electric Ford F-150 Lightning.

BlueOval SK is the joint venture between Ford Motor Company and SK On, a subsidiary of SK Innovation focused on EV battery production. BlueOval SK CEO Michael Adams said the start of production strengthens the joint venture's position in the EV battery market.

Adams added: "We are strengthening the domestic supply chain and driving the transition to zero-emissions transportation."

The BlueOval SK Battery Park features two battery production lines in Gendale, Kentucky and was announced in 2021 alongside a plant to be built in Stanton, Tennessee.

Kentucky governor Andy Beshear called the BlueOval SK project "the largest economic investment and jobs announcement in Kentucky history".

Beshear said: "Today's milestone is four years in the making as our commonwealth takes centre stage in this automotive industry transformation."

At the time, both locations were due to begin operations in 2025, but the second plant on the site (Kentucky 2) and the Tennessee BlueOval City have been paused due to lower-than-anticipated EV demand.

The US$5.8 billion battery manufacturing site is intended to supply Ford's North American assembly plants with locally assembled batteries for electric Ford and Lincoln vehicles. At the time of launch, Ford said the plant would create 5,000 jobs. So far, 1,450 have been filled and BlueOval SK is advertising job openings in Kentucky, but the pause of the Kentucky 2 project also means hiring for that part of the project is on hold.

The automaker recently announced it would establish a Universal EV Platform and Ford Universal EV Production System, with the first vehicle coming off the new electric production line available to buy in 2027, backed by a US$5 billion investment.

Part of this (US$3 billion) is for the BlueOval Battery Park Michigan, where it will produce lithium iron phosphate (LFP) batteries for use in Ford EVs, manufactured at the assembly plant in Louisville, Kentucky.

NEWS

Wood Mackenzie: global EV chargers set to soar to 206.6 million, spend to hit $300B by 2040

Wood Mackenzie's *Electric Vehicle Charging Infrastructure Forecast* projects rapid expansion for global EV charging. The report predicts that global EV charging infrastructure will grow at a compound annual growth rate (CAGR) of 12.3% from 2026 to 2040 to reach 206.6 million worldwide. In line with that growth, global spending is also set to increase exponentially to $300 billion by 2040, a rate of 8% CAGR. Residential charging remains the dominant segment, with 133 million charge ports forecasted globally by 2040.

Emil Koenig, senior research analyst for EV charging and power renewables at Wood Mackenzie, explained residential charging's appeal: "Residential Level 2 charging dominates the global market, and will comprise approximately two out of every three charging ports worldwide through 2050. This segment's sustained appeal stems from its ability to deliver the optimal balance of convenience, charging performance, and value that resonates most strongly with EV owners."

Alongside growth in home charging, public charging infrastructure is set to more than double.

Oliver McHugh, senior EV charging research analyst for Wood Mackenzie, noted: "As utilisation in public charging increases and infrastructure efficiency improves, we expect the ratio of EVs to public chargers to increase from 7.5 battery electric vehicles per charger in 2025 to 14.2 in 2040".

Regional trends set to shape the future of EV charging

Naturally, this growth isn't geographically uniform. Asia-Pacific leads the way as China continues to dominate public charging infrastructure. DC charging is forecasted to grow at ~10% CAGR from 2025 to 2040.

While Australia isn't seen as a 'big' EV market just yet (and doesn't warrant its own mention in Wood Mackenzie's analysis), it, too, is showing signs of impressive growth, surging 63% for a record-breaking Q2 in 2025.

India is emerging as a key player, too, with DC fast chargers expected to surge from their current total of 14,000 to 1.1 million by 2040. This growth will be driven by strong policy support and rapid EV adoption across the region.

In the Americas, the US public DC fast charging (DCFC) segment is expected to grow at 14% CAGR, with 475,000 charging ports available by 2040. Those numbers are predicted to generate $3.3 billion in annual market value.

Tesla's stranglehold on the US charging infrastructure market shows some signs of loosening, albeit tempered by the recent news that it has just opened the largest EV charging station in the southern hemisphere.

While not yet at the level of North America's chargepoint penetration, South America is catching up. Residential charging is set to expand at 22% CAGR, a figure supported by growing EV adoption and increasing infrastructure investments.

Finally, Europe and the Middle East are also predicted to show strong momentum. European public chargers are expected to grow at 11.3% CAGR during 2040, led by DC charger expansion at 13.7% CAGR. Saudi Arabia, in particular, is set to show huge growth, hitting 29% CAGR in public DC charging, which will be driven by ambitious government targets. By 2040, the EMEA region will see annual spending of $14 billion in public charging and $30 billion in residential infrastructure.

Global EV charging infrastructure market shows steady growth in H1 2025

Public EV charging markets grew by 14% across the three main global regions during the first half of 2025, maintaining stable infrastructure deployment compared to the same period last year.

Despite policy uncertainty, which will likely begin to take effect late 2025-early 2026, the United States continues to show approximately 12% growth, supported last year's investments in network expansion.

Europe surpasses one million chargepoints installed

In March 2025, Europe hit the one million installed public chargepoints milestone. Western Europe maintains its dominant market share, though Central, Eastern, and Southern European regions are beginning to narrow the gap with double-digit growth rates.

Nearly 20% of Europe's charging infrastructure now features fast charging capabilities (chargepoints with a capacity above 22kW). The ultra-fast charging segment, with capacities exceeding 150kW, has demonstrated particularly strong growth, driven by declining technology costs and increasing consumer demand.

The Netherlands, despite having the highest density of charging points in Europe, continues to face challenges with public fast-charging implementation. Less than 5% of its public infrastructure offers fast charging capabilities, a situation attributed to both historical approach and increasing grid capacity issues.

Retail charging partnerships have emerged as a particularly successful business model across European markets. Chargepoint operators (CPOs) are actively securing agreements with major retail brands, creating mutually beneficial arrangements that offer potentially higher return on investment for charging operators while increasing store traffic for retailers.

China experiences expected moderation in infrastructure growth

China's public charging infrastructure expansion has moderated since the beginning of 2025, particularly in the slow charging segment that saw massive growth in previous years. This slowdown aligns with expected patterns in mature markets where public infrastructure is already well-developed.

The deceleration reflects China's unique EV adoption pattern, where typical buyers reside in urban apartments without access to home charging, necessitating early rapid development of public infrastructure. Analysts now expect public charging development to more closely track EV sales, with slower expansion until utilisation rates increase.

Several significant technological announcements have emerged from China recently. Both BYD and CATL have unveiled new super-fast charging battery technologies, with BYD additionally announcing plans to construct a megawatt charger network targeting 400 units installed by year-end. While these technologies are not expected to disrupt traditional charging infrastructure in the near term—as they primarily target premium vehicle segments—they represent important developments to monitor.

China has also seen marked growth in battery swapping technologies. In July, Nio commissioned its 1,000th battery swapping station in the country, with the technology gaining increasing acceptance among EV drivers, though primarily serving fleet operators currently.

US market faces regulatory uncertainty

The US charging market is experiencing the effects of legislative and regulatory uncertainty, which has begun to slow infrastructure investments. While installations remained stable during H1 2025—supported by earlier investments and National Electric Vehicle Infrastructure (NEVI) funding—analysts project a slowdown in public infrastructure deployment over the next few years.

The elimination of EV tax credits, combined with broader market conditions affecting electric vehicle sales, is expected to delay public charger deployment due to uncertain utilisation rate forecasts. This could create future challenges when EV sales eventually accelerate again, particularly for drivers without access to home charging who will rely heavily on public networks.

There are concerns that this uncertainty might also impact the development of advanced technologies including energy management systems, vehicle-to-grid capabilities, battery energy storage systems, and renewable energy integration—potentially creating long-term challenges for electricity grid management and EV adoption.

In a positive development on 11 August, the administration released billions in previously frozen funding from the NEVI program. This will continue to support public fast-charging network expansion and provide relief to industry players who had made significant investments in anticipation of program funding.

Turn to page 22 for an update on the state of US EV policy.

Data and research taken from Rho Motion's EV chargepoint database.

Molly Green and Jeanne Buee, senior research analyst, Rho Motion

How Australia could become the next hotspot for EV and charging infrastructure

The Australian market has reached a critical inflection point, with charging infrastructure deployment now recognised as the essential foundation for the nation's broader electric mobility transition.

Recent data from market research firm IMARC Group indicates the Australian EV charging market reached US$250.5 million in 2024 and is projected to grow at a compound annual growth rate of 21.50% between 2025 and 2033, potentially reaching US$1,643.1 million by 2033.

The current landscape of Australia's charging infrastructure reveals both encouraging progress and persistent challenges. Australia's public charging network has expanded substantially, though pronounced regional disparities in deployment remain.

Urban centres along the eastern seaboard demonstrate relatively robust charging networks, while regional and rural areas continue to face significant infrastructure gaps despite evidence that rural EV owners drive greater distances annually than their urban counterparts.

This urban-rural divide threatens to create a two-tier EV ecosystem where rural adoption lags due to inadequate charging options, despite the potential benefits EVs offer to rural drivers facing higher fuel costs and longer travel distances.

The market dynamics driving infrastructure deployment have evolved substantially over the past 18 months. Early deployment models relied heavily on government grants and subsidies to offset high capital costs and uncertain utilisation rates. However, as EV adoption accelerates—with EVs comprising nearly 16% of new vehicle sales in June 2025 alone—commercial operators are developing more sustainable business models based on higher utilisation, diversified revenue streams and strategic site selection.

Another trend in Australia is that traditional fuel retailers are increasingly entering the charging market, leveraging their prime locations and existing customer relationships.

Barriers to the adoption of EVs and charging infrastructure

Grid capacity limitations represent perhaps the most significant barrier to infrastructure expansion, particularly for high-power charging installations that place substantial demands on local distribution networks.

The Australian Energy Market Commission (AEMC) has recognised these challenges and implemented new grid access standards starting 21 August 2025. These reforms aim to streamline renewable energy connections while maintaining system security - a critical consideration as charging networks expand and place additional demands on the grid.

AEMC Chair Anna Collyer emphasised that these reforms will help accelerate Australia's energy transition while ensuring system stability, a balance that charging infrastructure developers must navigate carefully.

Site modifications present another hurdle for charging network operators. Many potential charging locations require extensive electrical upgrades, civil works, and compliance measures that significantly increase deployment costs and timelines. These factors are especially pronounced in regional areas where electrical infrastructure may be less robust and installation costs higher due to distance factors.

The commercial viability of charging infrastructure in these areas often depends on strategic site selection that balances visibility, accessibility and proximity to existing electrical infrastructure.

Operators must carefully evaluate potential locations based on current demand patterns and projected future needs. They must also recognise that charging infrastructure deployment often precedes rather than follows EV adoption in many markets.

Australia's approach to charging technology standards has created additional market complexities. Unlike New Zealand, which typically defaults to trusted international standards, Australia often duplicates the work of international bodies such as the International Electrotechnical Commission.

This regulatory approach adds costs without corresponding value and frequently delays access to new charging technologies. Fragmentation presents another systemic challenge, as states, territories, and regulators adopt or interpret standards differently. This regulatory inconsistency forces charging network operators to comply with multiple regimes, raising deployment costs and potentially discouraging investment in multi-state charging networks.

The charging market itself reflects this fragmentation, with multiple operators competing for market share.

While competition usually drives innovation, the lack of standardisation across networks creates potential interoperability issues for EV drivers navigating between different charging systems. Industry stakeholders increasingly call for greater standardisation and interoperability, recognising that a fragmented charging ecosystem may impede broader EV adoption by creating unnecessary consumer complexity.

The integration of V2G technologies

The integration of smart charging technologies represents both an opportunity and a challenge for Australia's EV ecosystem. Vehicle-to-grid (V2G) systems are gaining traction, with regulatory frameworks evolving to accommodate bidirectional charging capabilities.

How Australia could become the next hotspot for EV and charging infrastructure *continued*

These advanced charging technologies offer potential grid benefits, including demand management capabilities and the opportunity to use EV batteries as distributed energy resources. However, successful implementation requires coordinated approaches to grid connection frameworks and technical standards that balance innovation with system security.

To learn more about V2G in Australia, EV Infrastructure News spoke with Charlie Walker, CEO and co-founder and Marc Sheldon, chief operating officer at RedEarth. Sheldon notes that the new standards agreement is not new legislation but a code modification that an installer must abide by. The code in question is AS/NZS 4777.1:2024.

"This is our grid code standard; it is what every generation device connected to the grid needs to abide by, whether they be a solar inverter, battery inverter, or any other generation device that sits behind," Sheldon says. "It has the testing requirements that the device needs to be able to fulfil."

To receive certification for V2G technologies, companies would need to sidestep and go through the "solar and battery inverter piece", which, according to Sheldon, did not work well.

Australian standards have validated the amendment to the code, which "explicitly spells out and stipulates the testing requirements for V2G technologies", Sheldon says. This means any charger will need to abide by these rules.

"It's very straightforward," Sheldon explains. "It's not complicated, especially when compared to Europe and the US. From our perspective, that's what Bowen was talking about. It is now possible to deploy a system like that, should you have it, and connect it to the grid without any problems.

"It's opened up that part of the market without having the difficulties and certification or obligation."

Sheldon also raises concerns about optimising an EV. From a mobility perspective, a car usually spends around 5% of its lifetime on the roads being driven, with 95% of its life usually at a standstill, not being used. Because of this, the value proposition of V2X in supplying energy to the grid or home could attract an influx of new buyers.

"That's the critical piece here. You'd basically have over 40kWh available to you, and you'd be able to time shift, even if you don't have a solar PV system on your roof, you'd charge the car up during daylight hours," Sheldon says. "You can also participate in the wholesale arbitrage market."

However, there is an elephant in the room when it comes to both EVs and V2X technologies. Despite the long-term savings they could bring, and the carbon reduction achieved in the case of EVs, these are still expensive technologies.

According to WhichCar, an online site that provides information on buying new vehicles, the cheapest new EVs are around AU$40,000 (US$25,300) to drive away, with most model centres seeing prices between AU$60,000 and AU$80,000.

"It [a bidirectional charger] is a big investment. I get that. But every car is a big investment, so you're just adding the charger on top of that," Sheldon says. "But it helps with grid security, storage, time shifting, and grid capabilities."

Battery degradation and 3-5GWh of energy storage a day

One pivotal question surrounding V2X technologies continues to be its impact on battery degradation, especially given that batteries are often expensive for drivers to replace.

"Yes, it [V2X] accelerates the degradation," Walker explains. "But all EVs have too much battery lifetime for the duration of the vehicle.

> "Government policy continues to shape Australia's charging infrastructure landscape, with federal, state, and local initiatives influencing deployment patterns and investment decisions. Recent policy developments have focused on accelerating infrastructure rollout through a combination of direct funding, regulatory reforms, and market incentives."

"The battery is forecast to last 800,000km for a Tesla base Model 3. By then, the rest of the car will start falling apart. Stationary storage is very gentle on the battery, whereas mobile storage is extremely violent on the battery, and they don't like it."

Another revelation made by RedEarth is its target for the first year of selling its new bidirectional chargers. Walker says the company hopes to secure a 30% market share of the 3,000 to 5,000 bidirectional chargers expected to be sold within the first year. However, the real interest comes from the energy storage potential this could bring to Australia.

"This is too conservative, but let's say that around 2kWh per charger is available daily to the grid. That would give us 3.2GWh for the year. If this becomes around 5kWh or 10kWh, it gets to

10GWh quickly. That's the first year the market adopts a new product. It's very easy to imagine what happens in years two to five," Walker says.

Australia's home and workplace EV charging potential

While public charging infrastructure captures significant attention, home charging installations have emerged as the dominant charging solution for Australian EV owners in 2025.

The residential charging segment has benefited from declining equipment costs, streamlined installation processes, and increasing consumer awareness of the benefits of dedicated home charging solutions.

The workplace charging segment has also gained prominence, with recent Electric Vehicle Council survey data revealing that commuters increasingly prioritise charging access at their place of employment. This trend is particularly significant for drivers in regional and rural areas, who report higher annual kilometres travelled (averaging 19,126km) compared to their urban counterparts.

Workplace charging thus complements home charging solutions, especially for commuters without access to dedicated residential charging facilities. Commercial property owners and employers are responding to this demand by installing charging infrastructure as both an employee benefit and a sustainability credential.

Government policy continues to shape Australia's charging infrastructure landscape, with federal, state, and local initiatives influencing deployment patterns and investment decisions. Recent policy developments have focused on accelerating infrastructure rollout through a combination of direct funding, regulatory reforms, and market incentives.

The implementation of new grid rules scheduled for August 2025 represents a significant regulatory development. These reforms aim to address technical connection standards and accommodate rising demand from energy-intensive facilities, potentially easing grid connection processes for charging infrastructure projects. However, policy approaches remain inconsistent across jurisdictions, creating a complex regulatory landscape for charging network operators to navigate.

Commercial viability of EV charging infrastructure

The commercial case for charging infrastructure continues to evolve as the market matures. Early deployment models focused heavily on government grants and subsidies to offset high capital costs and uncertain utilisation rates.

However, as EV adoption accelerates, commercial operators are developing more sustainable business models based on higher utilisation rates, diversified revenue streams, and strategic site selection.

These evolving business models reflect the transition from early-stage market development to more mature commercial operations. However, many charging networks still rely on some form of government support to ensure financial viability, particularly in regional areas with lower utilisation rates.

Commercial operators face ongoing challenges related to electricity costs, demand charges, and balancing charging speeds with infrastructure costs. Ultra-fast EV charging installations require substantial capital investment and often trigger significant grid connection costs. At the same time, slower Level 2 chargers offer lower installation costs but may not meet consumer expectations for charging speed.

This tension between cost and performance creates complex investment decisions for charging network operators, who must carefully evaluate the trade-offs between different charging technologies and deployment models.

The integration of renewable energy with charging infrastructure represents another significant opportunity for the Australian market. Australia has the strongest rooftop solar uptake per capita in the world, with rooftop solar now accounting for 11.2% of Australia's electricity supply.

The country's abundant solar resources and growing wind capacity create potential synergies between renewable energy generation and EV charging, particularly through smart charging systems that align charging patterns with periods of renewable energy availability.

Several innovative projects have demonstrated the feasibility of solar-integrated charging stations, though challenges remain related to intermittency, storage requirements and grid integration. The successful integration of renewable energy with charging infrastructure will be particularly important as Australia seeks to maximise the environmental benefits of electric mobility through clean charging solutions.

Australia's EV charging infrastructure sector stands at a critical juncture in 2025. The market has demonstrated encouraging growth and attracted substantial investment, yet significant challenges remain related to grid capacity, regulatory fragmentation, and regional deployment disparities.

Addressing these challenges will require coordinated efforts from government, industry and energy sector stakeholders, focusing on grid capacity enhancements, standardisation initiatives and strategic infrastructure planning. As the market evolves, those navigating these complexities while delivering innovative, reliable and accessible charging solutions will be crucial in enabling Australia's transition to electric mobility.

Positive UK policy progression

From 2030, no new petrol or diesel combustion vehicles will be sold in the UK.

The UK government announced the new parameters of the mandate, which include allowing sales of hybrid electric vehicles and ICE vans until 2035, in April 2025, with prime minister Keir Starmer calling the amended zero emission vehicle (ZEV) mandate a "bold change to the way we support our car industry".

Small and micro-volume car manufacturers, including supercar brands McLaren and Aston Martin, will also be exempt from the ZEV mandate, a move which the government states will help to preserve the history of British car manufacturing.

According to the REA's head of transport and innovation, Matthew Adams, the ZEV mandate is still "really encouraging", and the extension for vans "avoids a lot of unintended consequences".

Following a consultation launched in December 2024 to placate automakers who claimed a lack of government support meant the mandate would cause major losses and threaten factory closures and jobs, the revised legislation leads with the phaseout of internal combustion engine (ICE) vehicles but is lenient on hybrid vehicles and manufacturing loopholes.

Up until the 2030 ban, manufacturers must sell an increasing proportion of EVs each year. However, while the headline sales share for 2025, for example, is 28%, automakers can avoid fines incurred by underselling EVs if they generate additional credits by exceeding CO2 emissions targets on their ICE vehicle sales.

As such, UK NGO New Automotive puts the necessary market share to meet the 2025 target at a real level of 22.74%.

Indeed, the mandate has had a clear positive impact for EV uptake, with August figures from New Automotive showing that battery EVs took a 26.8% share of the new car market in August 2025.

Sales of plug-in hybrid EVs (PHEVs) were also up, with an 80.9% increase in the number sold in August 2025 compared to 2024. This is not necessarily the victory some would like to believe, however—see facing page for an article by Colin Walker, head of transport at the Energy and Climate Intelligence Unit, examining the real environmental impact of PHEVs.

Infrastructure funding

Having established that EV sales will necessarily increase over the coming years, the UK government has specifically targeted the sector supporting that push: EV charging.

In June 2025, Lilian Greenwod, then future of roads minister, confirmed the government and industry are expected to install over 100,000 EV chargepoints "in the coming years", focusing on 'local' chargepoints, onstreet chargers that enable EV drivers without a driveway to charge their EVs on the street near their home.

These will be delivered with existing government funding from the £381 million Local Electric Vehicle Infrastructure (LEVI) fund. The first charger funded by LEVI was installed in Hove by char.gy in September, following JOLTs installation of the first LEVI pilot project in October 2023 in the London Borough of Barnet.

In July, the government announced it had allocated £63 million spending for EV infrastructure.

Local authorities will receive a collective £25 million to fund installation of at-home charging for those without driveways, and NHS England will receive £8 million funding towards the electrification of ambulances and medical fleets across 62 NHS Trusts and around 224 sites.

The government is also launching a grant scheme for workplace and depot EV charging, particularly for electrified HGV, van and coach fleets.

It has also committed to modernising EV charging signage along major roads in the UK, which will see signposting to large EV charging hubs along A-roads for the first time.

These announcements laid the way for the Electric Car Grant, introduced on 15 July 2025, covered on page 7 in the news section of this report.

The PHEV mirage: 350% more emissions than advertised

Making the transition from an established and dominant technology like the internal combustion engine to a battery electric car is no small ask. For many, the move to electric driving appears daunting—an impression exacerbated by the deluge of misinformation about EVs to which we are subjected on an almost daily basis from news outlets and across social media.

This is where PHEVs come in. They are marketed as a stepping stone technology, allowing people to begin accessing the benefits of electric driving whilst retaining the sense of certainty that comes from an ongoing use of the petrol technologies they have grown up with. Once that first step has been taken, the theory is that people will find it easier to make the next step towards full electric driving.

The premise appears logical—a significant number of the journeys that we make by car are within the battery range of modern PHEVs. This means that, in theory, a substantial number of the journeys taken in PHEVs will be zero emission—offering a notable reduction in CO2 emissions within the UK's most emitting sector. This theoretical ability to deliver a large volume of emission-free miles means PHEVs, on paper at least, can boast impressive mpg figures of the kind ICE buyers pore over when considering a new vehicle, not to mention the impressively CO2 emission figures.

That's the theory. The reality, it seems, is quite different. In 2024, the European Commission released analysis of data from 600,000 cars, looking at the difference between a vehicle's claimed fuel consumption and its real world figures.

It should come as no surprise that the Commission found that vehicles generally struggle to achieve their claimed levels of fuel consumption in the real world. The analysis found, for example, that petrol and diesels typically consume 20% more fuel than they do when they're put through the standardised WLTP type-approval test—most people will read that, nod and think 'yep, that seems about right'. But wait until you hear what the figure is for PHEVs—350%! In the real world, PHEVs consume 350% more fuel and release 350% more CO2 than their manufacturers claim. That is a hugely significant difference, seriously undermining the environmental—and, for that matter, the financial—credentials of plug-in hybrids.

So, firstly, why does this happen? Well, it all seems to be down to how often people are actually plugging their PHEVs in, and the amount of travel they do with electrical energy they've taken from a plug, compared to the miles covered using energy released by burning hydrocarbons in an internal combustion engine. The official test assumes a relatively high 'utility factor' – the share of distance driven electrically. In reality, people aren't charging their PHEVs and driving them electrically anywhere near as much as is assumed. Instead, these vehicles are relying more on their internal combustion engines to move, burning more fuel and generating more CO2 as a result.

> "Not only are PHEVs failing to live up to expectations when it comes to delivering meaningful reductions in CO2 emissions from the UK's most emitting sector, they are failing to deliver the financial savings that many people might realistically hope to get from them."

A financial reality check

Secondly, what does this all mean? Well, from an environmental perspective, it's not great news as these vehicles are simply not delivering the reductions in CO2 emissions that have been promised of them. But there are also financial implications. At the ECIU, we crunched the numbers, looking at how much it would cost to run the UK's best-selling PHEVs, considering that they burn so much more fuel than their manufacturers claim.

We found that, in reality, PHEVs offer their owners running cost savings of just £117 a year—less than £10 a month—compared to their petrol equivalents. Conversely, were a driver to switch from those same petrol cars to an equivalent EV, rather than a PHEV, their savings could jump to over £1050 a year.

So, not only are PHEVs failing to live up to expectations when it comes to delivering meaningful reductions in CO2 emissions from the UK's most emitting sector, they are failing to deliver the financial savings that many people might realistically hope to get from them. The reality is that many people will enjoy much more significant savings if they make the switch to fully electric cars rather than PHEVs.

One final concern is that, just as we begin to learn of the true environmental and financial costs of PHEVs, the government made changes to its EV sales targets that could encourage manufacturers to switch their focus from selling EVs to selling more PHEVs.

The effect of this would be to slow the UK's EV transition, resulting in fewer British families being able to access the hundreds, even thousands, of pounds of savings every year that can come from running an electric car. The more that can be done to incentivise manufacturers to sell more EVs—rather than PHEVs—the better. And the more that can be done to tackle the relentless misinformation about EVs to which we are exposed—and which may well be pushing some people towards PHEVs as they labour under misapprehensions about EV ownership—the better.

By Colin Walker, Head of Transport at the Energy and Climate Intelligence Unit.

V2G technology moves from trials to reality as industry tackles remaining hurdles

Last year, it felt as though vehicle-to-grid (V2G) becoming the standard was 'still a way off'. Now, we are on the precipice, it seems, as major carmakers, utilities and charging providers are beginning to announce market-ready V2G initiatives.

Having been one of the first to bring a V2G tariff to market, in June 2025, Octopus Energy, in partnership with Zaptec and BYD, launched a bundle deal in the UK that, using the economic benefit of V2G, offers drivers 'free' EV charging.

Paul Pschierer-Barnfather of Zaptec, which is providing its bi-directional Zaptec Pro EV charger for the initiative, and more recently, in September, launched a new bidirectional charger, the Zaptec Go 2, says of the technology: "We know it works. We know the fact that the business case is there. All of that has been proved over years of trials."

Alex Schoch, VP of electrification at Octopus Energy, echoes him: "We have proved that vehicle-to-grid works and the potential for our energy system is massive—now the real barrier is making the infrastructure available on the market."

The remaining barriers

In the bundled offers seen so far—as well as Octopus, The Mobility House launched a free V2G charging rate in France in collaboration with Renault Group and Mobilize Power in October—the solution only works in a closed system.

Schoch concedes: "Interoperability also still needs to be overcome. To truly scale the technology, customers need to have the peace of mind that they can change their tech and still get the same benefits."

Lots of technology components need to 'communicate', with a fair degree of complexity, and that communication must be secure, accurate and reliable.

To enable this, standards need to be set across the various industries that will collaborate to enable V2G.

Schoch calls certifying V2G chargers "tricky", adding that "we need to cut red tape and communicate better between charger manufacturers and grid operators to get new, cheaper chargers available for drivers."

There are two key areas that need standardisation: vehicle-to-charger communications and the chargepoint to the grid.

For Pschierer-Barnfather: "The standards should sort themselves out over the next year or two. But when we've done that, we still need to connect to the grid, and to be honest, the protocols for connecting safely are not quite there yet."

He explains that this element is harder to standardise because grid codes "have always been" regional; the first problem for manufacturers will be having to support different countries' grid needs.

"All of those grids are running at slightly different speeds in terms of readiness."

In the UK, as an example, there is a "reasonably developed" grid code process, allowing relatively easy connection of home renewable devices. Under code G98, homeowners can export up to 3.5kW back to the grid, under a standard designed to allow mass connection of solar.

However, to go above the 3.5kW threshold, connection to the grid must meet the G99 standard, which is more complicated, involves more paperwork, and allows higher export.

Regarding V2G, a vehicle could comfortably export at 7kW if the process to do so weren't more involved. This has seen Octopus essentially take on the responsibility for that additional work and cost, which is one way forward but not necessarily the best way to open widespread access.

Ultimately, "a little bit of a rewrite is needed to free this up. It's not super difficult work, but it's work that needs to be done."

Another cost factor is the fact that until there is clarity on standards, it is hard for manufacturers to build in the behaviour needed to pass testing; either a wide range must be figured into design, or frequent redesign will be required, both driving up costs and ultimately presenting additional barriers.

Consumer readiness, market appeal

The final unknown element in the deployment of V2G is how consumers will engage.

The benefits are obvious, at least to those aware of the technology's potential.

"What is clear is that the money is quite significant," says Pschierer-Barnfather, who adds that unlike with some technologies, it isn't just the early adopters that will benefit.

"V2G really starts to make sense, not when you do it yourself, but when you become part of a much bigger energy system."

Crucially, the grid support from V2G "benefits even those who don't want to get involved: The more people that do it, the cheaper electricity gets for everyone".

Schoch calls the technology a "clear win-win", adding that "continuous savings paired with simplicity is the best way to drive adoption."

Consumers seem supportive of the technology, with over 6,000 customers having already registered their interest in the Octopus offer, only launched in June, *EV Infrastructure News* heard.

Pschierer-Barnfather says that how access will look for service users is still up for debate; will the cost benefit come via the chargebank manufacturer or the energy provider? Could the capability be tied to the car and its manufacturer?

The Octopus Energy tariff would see the energy provider handle the electricity flow and rate of charge, while recent launches from Mercedes Benz and BMW both tie charging services into the vehicle's operating system.

Where V2G is needed, the market is ready for it. As Pschierer-Barnfather explains, there are some regions where the technology is unlikely to take off: in China, the grid is strong enough that there isn't a business case for V2G; in Norway, where Zaptec is headquartered and the electricity mix is dominated by stable hydropower, price signals don't vary frequently enough to see significant benefit from the tech.

"The UK is one of the more advanced—or extreme, if you prefer—markets for V2G, because of rapid decarbonisation and because it is literally islanded, so price is all over the place."

Grid constraints and complex energy market arrangements in countries like Germany and the US, too, make V2G an attractive prospect.

Schoch says: "It's now up to the car manufacturers to deliver the cars and get new chargers onto the market—we'll handle the rest for customers."

EV Report Asia: Innovation driving world-beating growth

China's EV leadership is well-known, but Asia as a whole represents a fascinating market evolution.

As of July 2025, China had 3,976,871 chargepoints installed, and the government has now set a new target to have over 100,000 high-speed EV chargers, with a capacity over 250kW, installed in cities across the country by the year 2027.

The demand for infrastructure is clear, with two-thirds of the 22 million passenger EVs that Bloomberg NEF projects will be sold across 2025 changing hands in China. Part of the reason for this is the fact that China is one of the only countries in which EVs are, on average, cheaper to buy than comparable internal combustion engine cars.

This partly due to its domestic battery production, a model that the rest of the world is hoping to follow. That effort has seen punitive restrictions placed on Chinese-originating supply chains, to which the Chinese government responded with a restriction on components critical to battery production.

According to the Chinese Ministry of Commerce and Ministry of Science and Technology, battery positive electrode (cathode) material preparation technology is "increasingly being used in sensitive fields".

The new catalogue of technologies prohibited and restricted from export, as set by the Ministries in China, does not prevent export of batteries once ready for use in vehicles

China-based OEM, CATL, is the largest global EV battery producer, supplying majors including Tesla, BMW and Volkswagen, and has plants in Germany and Hungary.

Indeed, The Demand Report published by UK-based Advanced Propulsion Centre (APC) expects that a rise in imported vehicles may impact European production, with competitive challenges from Chinese, South Korean and Japanese OEMs growing.

Chinese carmakers are beginning to set their sights on the European and UK markets, with the cheaper battery manufacturing available to them giving them a competitive edge in cost; Chinese tech giant Xiaomi is just one firm to announce that it plans to launch EVs across Europe from 2027.

Indian EV rollout gathers pace

Further behind in the transition, the Indian EV transition has, until recently, been driven by two- and three-wheeled vehicles. Statista previously noted that two-wheeled vehicles—including scooters and motorcycles—made up approximately 75% of the vehicle fleet across India in 2020.

Electric motorcycles currently represent less than 0.1% market penetration in India, but electric motorcycle firm Ultraviolette hopes this will ramp up, having just secured a US$21 million investment from TDK Ventures.

The government-backed thinktank NITI Aayog expects India's EV market to represent a '200 billion dollar opportunity'.

The Indian government is aiming for EVs to take a 30% vehicle market share by 2030. The Indian EV market is fast-growing, with a projected compound annual growth rate (CAGR) of about 27%.

In the country, 25,000 public charging stations were installed by October 2024, and infrastructure deployment is beginning to pick up: In late July, full-stack EV charging infrastructure company ThunderPlus opened an inaugural charging site in Hyderabad, the capital of the southern Indian state of Telangana.

In some ways, having been late to the transition benefits the nation, because the technology has advanced since the market first began pushing into the mainstream. For example, the ThunderPlus site, developed in partnership with South Central Railway, features ultra-fast 120kW charging bays that are scalable up to 480kW—speeds that exceed much of the established infrastructure in several European regions.

The rollout is continuing apace, with deals such as a memorandum of understanding (MoU) signed by Servotech EV Infra with Noida Power Company Limited (NPCL) to help scale up EV charging infrastructure across the Greater Noida region of India.

Most prominently for India's transport electrification, Australian-headquartered Macquarie Asset Management raised US$405 million for Indian fleet electrification solutions platform Vertelo.

This was made up of US$205 million from institutional investors, backing US$200 million concessional capital from anchor investor, the Green Climate Fund (GCF). Other investors include Macquarie Green Energy Transition Solutions Fund ("MGETS"), Allianz Global Investors ("AllianzGI"), and Australian Ethical.

Macquarie Asset Management (MAM) Green Investment launched Vertelo in April 2024, aiming to accelerate fleet transitions and build an EV ecosystem in India. This funding's partnership model, which combines commercial and developmental funding, represents MAM's first blended finance partnership with the GCF.

The Vertelo platform provides leasing and financing, charging infrastructure and energy management, fleet management services and end-of-life asset management. Vertelo's website cites the aim of mobilising US$1.5 billion over 10 years.

Battery swapping on Thailand's agenda

The model of refuelling an EV's battery is not the only one by which transport can be electrified. In markets dominated by smaller vehicles, or where EVs have a lower penetration, swappable battery technology provides a low-carbon transport option.

This method significantly reduces downtime compared to traditional plug-in charging and promotes battery standardisation and lifecycle management, which can help lower costs through shared infrastructure and centralised energy storage.

EV battery swapping technology firm U Power has signed several major MoUs in the last year to support its efforts to grow the reach of battery swapping tech across Thailand, with the aim of expanding across the wider Southeast Asia region. These include partnerships with Pattaya AI Terminal, SUSCO, SAIC, EZZY Transporter, Sumitomo Mitsui and Auto Drive EV.

Most recently, it partnered with NV Gotion Co. to accelerate the uptake of battery swapping in Thailand, hoping to expand 'battery bank' operations in the region.

Not to be left out, CATL has also been active in the battery swapping space, partnering with Chinese EV company NIO, promoting the standardisation of EV technologies by jointly developing and adopting national standards for battery swapping in EVs, looking to accelerate the adoption and advancement of battery swapping services.

Asia: EVs gain traction

Other developments in Asia have seen Japanese automaker subsidiary Mitsubishi Fuso Truck and Bus Corporation sign an agreement with electronics manufacturer Foxconn to collaborate on development, production, supply chain management, and sales of zero-emission vehicle (ZEV) buses.

The first models to be rolled out as part of the collaboration will be Foxtron's Model T and Model U buses. Model T is already in commercial operations in Taiwanese cities after launching in 2022, and Model U was unveiled in late 2023.

In Malaysia, highway operator Plus Malaysia Berhad has installed 112 EV chargepoints across its highways, surpassing its target of installing 100 chargepoints by the end of the year.

All of the chargers in operation across the network are Direct Current Fast Chargers (DCFCs), with a power output between 47kW and 200kW, designed to support long-distance travel.

Across Southeast Asia, Indonesia aims to reach 30,000 charging stations by 2030 and Thailand 12,000.

The *Global EV Outlook* published by the International Energy Agency in May suggests that globally, if policy remains as it was at the start of 2025, around 150 million chargepoints will be added from 2025 to the end of 2030. Just 8% of those will be public, however, with almost two-thirds being home chargers and 30% other private chargers.

US EV policy: A shifting landscape

The United States EV policy framework has undergone significant transformation in recent months, with developments under the current administration marking a substantial pivot in approach—if not a complete denial of the need for a transition to EVs.

Despite policy reversals at the federal level, state initiatives and market forces continue to influence the trajectory of transportation electrification in the US.

Tax credit cuts and policy reversals

Federal support for electric vehicles was first seen in 2008 with the Energy Improvement and Extension Act, which introduced tax credits of up to $7,500 for qualifying plug-in EVs, the amount awarded being determined by vehicle weight and battery capacity.

These credits were designed with a phase-out mechanism triggered once a manufacturer sold 200,000 qualified EVs, reducing to 50% and then 25% during a year-long phase-out period.

The Biden administration significantly expanded federal EV support through two major pieces of legislation. In November 2021, the Bipartisan Infrastructure Law (BIL), also known as the Infrastructure Investment and Jobs Act (IIJA), allocated $47.5 billion for EV infrastructure.

This included $5 billion distributed to all 50 states through the National EV Infrastructure (NEVI) formula program and $2.5 billion, distributed across five years, for the Charging and Fueling Infrastructure (CFI) competitive grants.

NEVI provides funding to establish a national fast-charging network along major transportation corridors, while CFI funding supports charging infrastructure in communities and on corridors, with a broader focus on zero-emission fueling options in addition to EV charging.

A key development under the IIJA was the creation of the Joint Office of Energy and Transportation, which the Government Accountability Office (GAO) said has "played a key role in coordinating efforts to advance a nationwide electric vehicle charging network."

The Joint Office facilitated collaboration between the Departments of Energy and Transportation to provide technical assistance to state DOTs and distribute federal funding for charging networks.

The Inflation Reduction Act (IRA) of August 2022 further bolstered EV initiatives with billions of dollars for manufacturing and tax credits, including the New Clean Vehicle Tax Credit, Alternative Refueling Property Credit, Used Clean Vehicle Tax Credit, Commercial Clean Vehicle Tax Credit, and $3 billion to support the USPS zero-emission fleet.

These measures aligned with President Biden's goal, established as part of an executive order in 2021, that "half of all new cars and trucks sold in 2030 would be zero-emission."

However, January 2025 marked a significant policy shift, all across the clean energy market, when Donald Trump was inaugurated as US president and immediately issued the 'Unleashing American Energy' executive order.

President Trump signed executive orders to remove what he termed "burdensome and ideologically motivated" regulation and "unleash" American energy. This included fulfilling his campaign promise to "eliminate" what he called the previous president's "EV mandate," though such a legally binding mandate never existed.

Trump's January directive paused disbursement of all IRA and IIJA funds for 90 days and required agencies to submit reviews of projects, programmes, and policies. In February, the Federal Highway Administration (FHWA) rescinded all previously released guidance for implementing the NEVI program and suspended state NEVI plan approvals.

In May, the GAO found the administration violated the law by withholding this funding and ruled that statutory requirements of the programme must continue to be carried out.

In June 2025, a judge granted a partial injunction to states that sued the Department of Transportation when it froze NEVI program funds, and in August 2025, the FHWA released interim final guidance that largely maintained the existing NEVI program structure with some simplifications.

States are no longer required to place EV chargers every 50 miles or consider equity components in the award process, but they can restart their NEVI plans to build more public chargers.

The signing of the One Big, Beautiful Bill (OBBB) on 4 July 2023 cemented Trump's policy reversal by repealing tax credits for secondhand, new, and commercial clean vehicles, as well as the Alternative Fuel Vehicle Refueling Property Tax Credit for chargers placed in service after 30 June, 2026.

Current state of US EV charging

Despite policy uncertainty, EV charging infrastructure in the US continues to grow. As of April 2025, 384 chargers funded by federal programs were operational, per a GAO report. According to Paren's "State of the US Fast Charging Industry" report published in July 2025, this year is expected to see 16,700 new fast chargepoints installed across the US, representing a 19% year-on-year increase compared with 2024. The J.D. Power "2025 U.S. Electric Vehicle Experience (EVX)

Public Charging Study" published in August 2025 indicates improving reliability, with non-charging visits at public EV chargers reaching their lowest level in four years. A non-charging visit occurs when an owner visits a charger but is unable to charge their vehicle, making this decline a positive indicator for user experience.

A (mostly) hopeful future

According to Aaron Kressig, transportation electrification manager at Western Resource Advocates (WRA), the federal bill will have an "adverse short-term impact on the US electric vehicle market" with effects "rippling out from manufacturers to consumers".

WRA is an environmental non-profit organisation dedicated to protecting the American West's natural resources by advancing a clean energy future

However, Kressig maintains that "our electrification goals still remain in sight."

He notes: "The auto market is inherently global in nature, and all the U.S. automakers know that they need to be able to compete with China on EVs or the U.S. will cede its global dominance".

While recent policy changes "will likely slow progress and possibly delay key timelines," he believes US automakers will continue the transition to EVs "in the long term".

"Internationally, there is recognition, even among fossil fuel champions, that EVs are the future. Try as it might, this administration can't stuff the EV genie back into the bottle," Kressig states.

He emphasises that states have "a great deal of ways" to keep the EV market moving forward, including "fleet electrification policies, state and local-level incentive programs, and indirect source rules, which regulate pollution hotspots rather than tailpipe emissions directly".

Indeed, he says the federal government's "misguided decision" to end EV incentives is a key example of why work at the state level is so important. WRA works at the state level on legislation and policies, and the organisation has published a roadmap outlining how state and local government can continue to support the rapid transition to zero-emission vehicles.

"There's an appetite among leading states to charge forward on these policies, rather than back down."

Kressig suggests that "those policies that are most resistant to federal rollbacks are the most attractive right now".

For example, although Trump's order will remove the White House's federal standards, California has been setting its own vehicle emissions standards (the Advanced Clean Cars standards) that were already more stringent.

Under section 177 of the US Clean Air Act, other states can choose to follow California's standards; known as the section 177 States, 17 American states including New York, Delaware and Pennsylvania, have opted to adhere to some or all elements of the Californian standard.

The only potential for Trump's changes to the Environmental Protection Agency (EPA) rules to touch California would be to eliminate the federal waiver allowing the state to pre-empt EPA—something that, unfortunately, the US House voted in favour of earlier this year.

Still, for Kressig, the combination of state leadership, market momentum, and global competitive pressures suggests that transportation electrification efforts have been "stymied but certainly not extinguished".

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