

ALLIANCE FOR AUTOMOTIVE INNOVATION

GET CONNECTED ELECTRIC VEHICLE QUARTERLY REPORT

FIRST QUARTER, 2025

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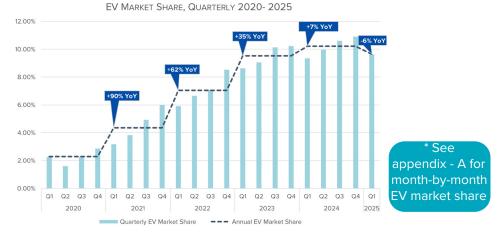


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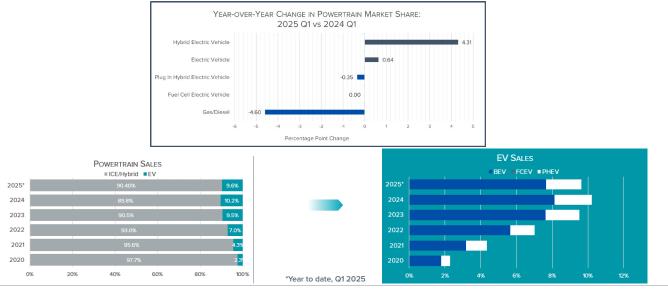
ELECTRIC VEHICLE SALES OVERVIEW (Q1 2025)

Since 2024, federal policies on EVs have shifted dramatically. Nevertheless, EVs remain an important part of the U.S. market both in response to consumer demand and in the larger picture of U.S. global competitiveness. This report continues our commitment to reporting the facts and figures on EV sales and charging infrastructure and closes with our spotlight on the importance of a healthy auto industry to remain competitive globally.



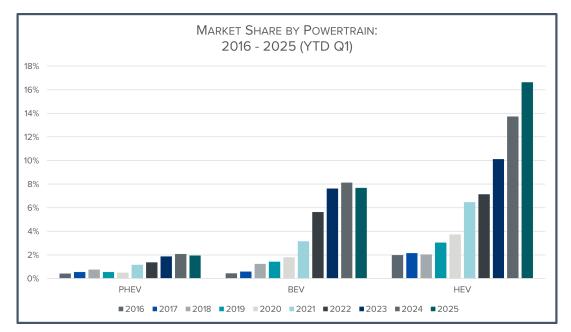
In the first quarter of 2025, automakers sold 374,841 electric vehicles (EVs, including battery, plug-in hybrid, and fuel cell electric vehicles) in the United States, representing 9.6 percent of overall light-duty vehicle sales. This represents a 1.3 percentage point (pp) market share decrease over the fourth quarter of 2024 amounting to a decrease of about 59,000 vehicle sales. While three of the last five years saw Q1 EV market shares decline after the preceding quarter peaked for the year – the 1.3 pp drop is the steepest.

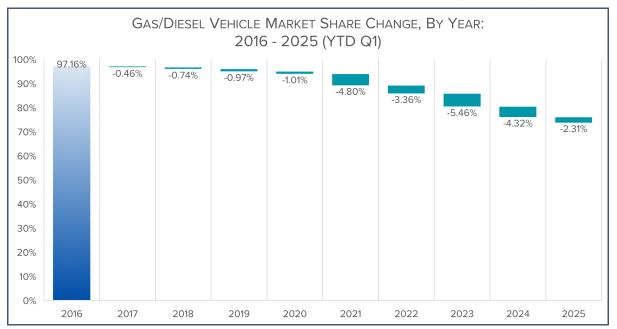
Year-over-year (YoY), EV market share increased 0.3 pp from the first quarter of 2024. The total volume of all light-duty sales in Q1 2025 was 5.6 percent higher than Q1 2024, while the volume for EVs increased 9 percent (an increase of about 30,500 vehicles). For comparison, internal combustion engine (ICE) vehicle market share decreased by 4.6 pp during Q1 2025 compared to the same period last year. Nearly all of the ICE market share loss was from gains of traditional (mild and strong) hybrids with smaller increases in electric vehicles, offset slightly by market share losses from PHEVs and FCEVs.



EVOLVING MARKET SHARE OF POWERTRAINS: 2016 - 2025

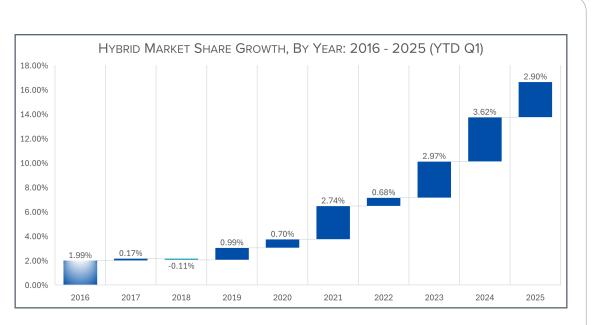
From 2016 through 2025 (Q1), traditional internal combustion engine (ICE) market share steadily declined. In 2016, ICE vehicles comprised more than 97 percent of all vehicle sales. Through the first quarter of 2025, the year-to-date ICE share dropped to 73.7 percent for an overall loss of 23.4 pp. The ICE market share was replaced by increases in share of traditional (mild and strong) hybrids, BEVs, and PHEVs. Traditional hybrids made up most of the alternative vehicle gains (+14.6 pp) followed by BEVs (+7.2 pp) and PHEVs (+1.5 pp) over the last nine plus years.



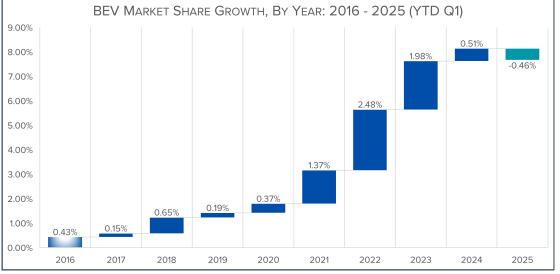


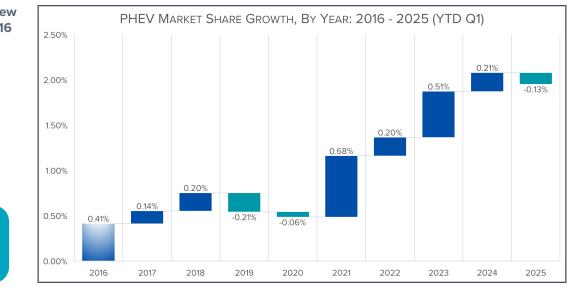
ICE market share decreased from 97 percent in 2016 to 73.7 percent through 2025 Q1 (-23.4 pp):

Hybrid market share grew from 2 percent in 2016 to 16.6 percent through Q1 2025 (+14.6 pp):



BEV market share grew from .43 percent in 2016 to 7.7 percent through Q1 2025 (+7.2 pp):





PHEV market share grew from .41 percent in 2016 to 1.9 percent through Q1 2025 (+1.5 pp):

> See Additional Historic Data on <u>EV Sales</u>

ELECTRIC VEHICLE SALES BY SEGMENT

EV Model Availability

149 Vehicle Models Sold in Q1 2025:89 Battery Electric Vehicles

- _____ 22 Cars
- » 51 Utility Vehicles
- » 6 Pickups
- » 10 Vans

57 Plug-in Hybrid Vehicles

- » 23 Cars
- 33 Utility Vehicles
- > 1Van

3 Fuel Cell Electric Vehicles*

- » 1Car
- » 2 Utility Vehicle

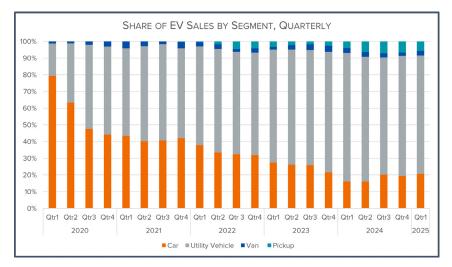
*Includes Plug-In Hybrid Fuel Cell

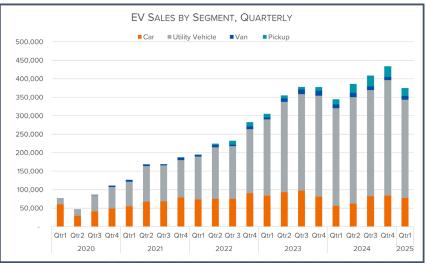
See more information about **EV CHOICE HERE**



While passenger cars once dominated the EV market, manufacturers continue to introduce new models to satisfy a variety of consumer needs. Utility vehicle (UV) offerings continue to grow, and while electric pickup trucks are a relatively new entry to the market (making their commercial debut in September 2021), there are 6 models available now, with more expected soon. As a result, non-car segments are continuing to make gains, and in the first quarter of 2025, light truck (UVs, minivans, and pickups) sales comprised 79 percent of the EV market – a 5 pp decrease from a high of 84 percent in the first quarter of 2024.

Quarterly sales of BEV and PHEV UVs have grown from about 19 percent of EVs at the start of 2020 to 71 percent in the first quarter of 2025. Despite a 6 pp market share decrease year-over-year, sales were still up by about 500 units.

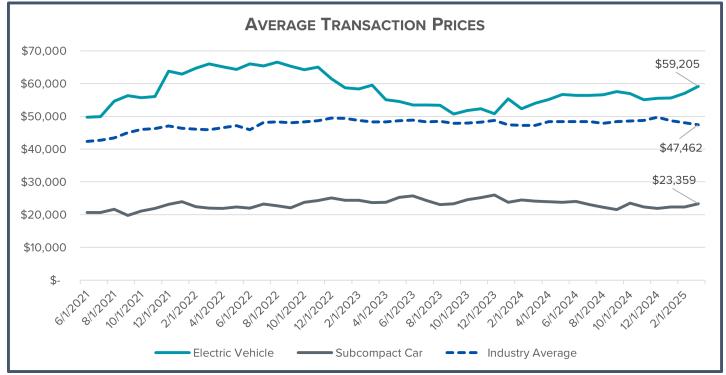




Source: Figures compiled by Alliance for Automotive Innovation with new registrations for retail and fleet data provided by S&P Global Mobility covering January 1, 2020 – March 31, 2025

ELECTRIC VEHICLE TRANSACTION PRICES

"In March, the average transaction price (ATP) for new electric vehicles was \$59,205, showing a 3.8% increase from the previous month and a 4.4% increase from the previous year. The EV price premium over ICE+ vehicles increased to \$12,229, the highest it's been in a couple of years. Incentives continue to be above the industry average at 13.3%, slightly down one percentage point from the prior month."¹



(Compiled from Kelley Blue Book Press Releases, 6/2021 – 3/2025)

ELECTRIC VEHICLE SALES BY STATE

For the First Quarter of 2025:

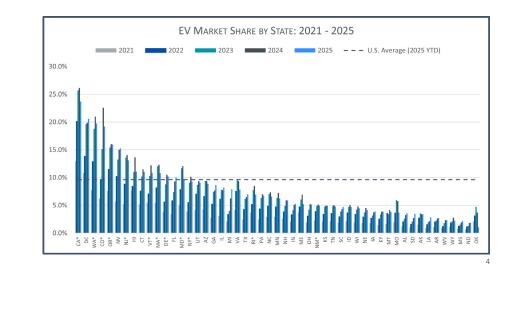
After briefly ceding first place to Colorado, California again leads the nation in EV sales, with BEVs, PHEVs and FCEVs making up 23.7 percent of new light-duty vehicle registrations in the first quarter of 2025. Michigan made the biggest gains in EV market share after increasing 3.6 pp year-over-year.

California and the District of Columbia were the only two states above 20 percent market share in Q1. There are currently eleven additional states with new EV registrations above 10 percent (but below 20 percent).

| | | | | | 2025 EV MA | RKET | SHARE | BY STATE (| YTD | Q1) | | | | |
|----|-----|--------|----|-----|------------|------|-------|------------|-----|-----|-------|----|----|-------|
| 1 | CA* | 23.68% | 11 | MA* | 10.82% | 21 | VA | 7.86% | 31 | NM* | 4.98% | 41 | MO | 3.70% |
| 2 | DC | 20.59% | 12 | DE* | 10.19% | 22 | ТΧ | 6.99% | 32 | KS | 4.93% | 42 | AL | 3.58% |
| 3 | WA* | 19.73% | 13 | FL | 10.07% | 23 | RI* | 6.93% | 33 | ΤN | 4.81% | 43 | SD | 3.47% |
| 4 | CO* | 19.20% | 14 | MD* | 9.78% | 24 | PA | 6.75% | 34 | SC | 4.69% | 44 | AK | 3.40% |
| 5 | OR* | 15.97% | 15 | NY* | 9.32% | 25 | NC | 6.60% | 35 | ID | 4.67% | 45 | LA | 2.83% |
| 6 | NV | 15.24% | 16 | UT | 9.09% | 26 | MN | 6.24% | 36 | WI | 4.47% | 46 | AR | 2.72% |
| 7 | NJ* | 13.10% | 17 | AZ | 8.84% | 27 | NH | 5.89% | 37 | NE | 4.14% | 47 | WV | 2.38% |
| 8 | HI | 11.11% | 18 | GA | 8.66% | 28 | IN | 5.24% | 38 | IA | 3.88% | 48 | WY | 2.27% |
| 9 | CT | 11.05% | 19 | IL | 8.22% | 29 | ME | 5.21% | 39 | KY | 3.86% | 49 | MS | 2.16% |
| 10 | VT* | 10.85% | 20 | MI | 7.93% | 30 | ОН | 5.13% | 40 | MT | 3.83% | 50 | ND | 1.89% |
| | | | | | | | | | | | | 51 | OK | 1.03% |

Year-over-year, for the first quarter of 2025, the market share of new EVs registered increased in nearly three-quarters of the states. Four states witnessed an increased market share of EVs by 2 pp or more. Making the largest increases were Michigan (3.6 pp), Florida (2.5 pp), Nevada (2.4 pp), and Georgia (2.2 pp).

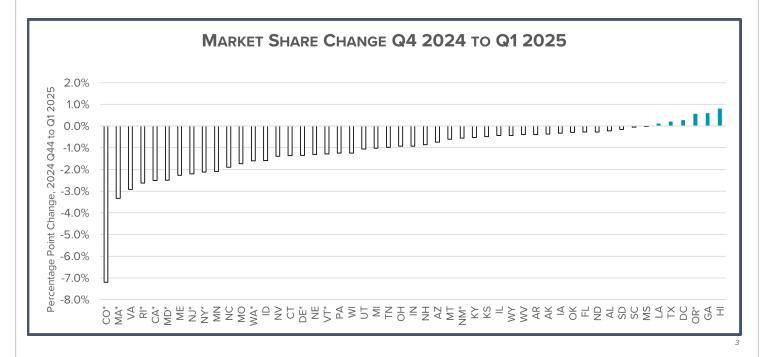
Twelve states and the District of Columbia had an EV market share above 10 percent while two states had an EV market share under 2 percent; California and the District of Columbia were the only states above 20 percent.²



² Figures compiled by Alliance for Automotive Innovation with new registrations for retail and fleet data provided by S&P Global Mobility covering January 1, 2021 – March 31, 2025

All but six states lost market share in Q1 2025 vs. Q4 2024 – 23 states saw a market share decrease of one percentage point or more. Colorado lost the largest market share with a decrease of 7.2 pp, guarter over guarter. Hawaii led all states, guarter over guarter, with an increase of 0.8 pp.

Oregon is the only state which previously adopted the California ACC II ZEV Mandate to increase market share.



EV Policy Fundamentals

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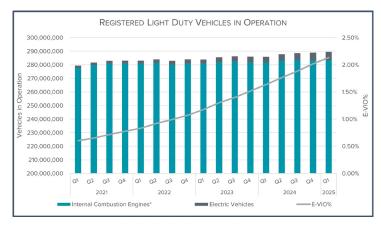
Everything You Need to Know About the EV Ecosystem REGISTER

| Fi | rst Quarter 20 Registra | 025, New Lig ations By Po | | hicle | | | 025 Q1 vs 2024 istrations Powe | | | | |
|-------|----------------------------|------------------------------|---------------|----------------------|--------------|--|-----------------------------------|----------|--|--|--|
| State | Advar | nced Powertra | in Market Sha | re | Advanced Pov | Advanced Powertrain Market Share (Percentage Point Change) | | | | | |
| | PHEV | BEV | FCEV | EV Total | PHEV | BEV | FCEV | EV Total | | | |
| ٩K | 0.60% | 2.80% | 0.00% | 3.40% | 0.02 | 0.29 | 0.00 | 0.3 | | | |
| AL | 0.76% | 2.82% | 0.00% | 3.58% | 0.15 | 0.67 | 0.00 | 0.8 | | | |
| AR | 0.59% | 2.13% | 0.00% | 2.72% | 0.14 | 0.38 | 0.00 | 0.5 | | | |
| AZ | 1.38% | 7.46% | 0.00% | 8.84% | -0.40 | -0.09 | 0.00 | -0.4 | | | |
| CA* | 3.76% | 19.90% | 0.02% | 23.68% | -0.02 | -1.05 | -0.03 | -1.1 | | | |
| CO* | 4.69% | 14.51% | 0.00% | 19.20 % | -2.25 | 3.20 | 0.00 | 0.9 | | | |
| СТ | 3.49% | 7.56% | 0.00% | 11.05% | -0.63 | 0.83 | 0.00 | 0.2 | | | |
| DC | 4.60% | 16.00% | 0.00% | 20.59% | 0.22 | 0.83 | 0.00 | 1.0 | | | |
| DE* | 2.48% | 7.71% | 0.00% | 10.19% | 0.11 | -0.19 | 0.00 | -0.0 | | | |
| FL | 1.56% | 8.50% | 0.00% | 10.07% | 0.57 | 1.93 | 0.00 | 2.4 | | | |
| GA | 1.15% | 7.52% | 0.00% | 8.66% | 0.16 | 2.06 | 0.00 | 2.2 | | | |
| HI | 1.35% | 9.76% | 0.00% | 11.11% | -5.19 | 0.32 | 0.00 | -4.8 | | | |
| A | 1.18% | 2.70% | 0.00% | 3.88% | 0.17 | 0.47 | 0.00 | 0.6 | | | |
| ID | 1.48% | 3.19% | 0.00% | 4.67% | -0.07 | 0.32 | 0.00 | 0.2 | | | |
| IL | 1.62% | 6.61% | 0.00% | 8.22% | 0.21 | 1.56 | 0.00 | 1.7 | | | |
| IN | 1.17% | 4.07% | 0.00% | 5.24% | 0.04 | 1.00 | 0.00 | 1.0 | | | |
| KS | 1.21% | 3.73% | 0.00% | 4.93% | -0.03 | 0.57 | 0.00 | 0.5 | | | |
| KY | 1.07% | 2.79% | 0.00% | 3.86% | 0.42 | 0.53 | 0.00 | 0.9 | | | |
| LA | 0.49% | 2.34% | 0.00% | 2.83% | -0.17 | 1.23 | 0.00 | 1.0 | | | |
| MA* | 3.46% | 7.36% | 0.00% | 10.82% | -0.78 | 0.44 | 0.00 | -0.3 | | | |
| MD* | 2.48% | 7.30% | 0.00% | 9.78% | -0.55 | -1.06 | 0.00 | -1.6 | | | |
| ME | 1.87% | 3.34% | 0.00% | 5.21% | -1.64 | 0.25 | 0.00 | -1.3 | | | |
| MI | 2.04% | 5.89% | 0.00% | 7.93% | 1.00 | 2.61 | 0.00 | 3.6 | | | |
| MN | 1.69% | 4.55% | 0.00% | 6.24% | 0.03 | -0.33 | 0.00 | -0.3 | | | |
| МО | 0.78% | 2.92% | 0.00% | 3.70% | -0.09 | -0.53 | 0.00 | -0.6 | | | |
| MS | 0.41% | 1.75% | 0.00% | 2.16% | -0.02 | 0.62 | 0.00 | 0.6 | | | |
| MT | 1.50% | 2.33% | 0.00% | 3.83% | 0.13 | -0.51 | 0.00 | -0.3 | | | |
| NC | 1.59% | 5.00% | 0.00% | 6.60% | 0.53 | -0.24 | 0.00 | 0.3 | | | |
| ND | 0.50% | 1.39% | 0.00% | 1.89% | -0.09 | 0.41 | 0.00 | 0.3 | | | |
| NE | 1.09% | 3.06% | 0.00% | 4.14% | -0.25 | 0.54 | 0.00 | 0.2 | | | |
| NH | 2.17% | 3.72% | 0.00% | 5.89% | -0.30 | 0.80 | 0.00 | 0.5 | | | |
| NJ* | 2.88% | 10.22% | 0.00% | 13.10% | -0.12 | 1.29 | 0.00 | 1.1 | | | |
| NM* | 1.01% | 3.97% | 0.00% | 4.98% | -0.03 | 0.42 | 0.00 | 0.3 | | | |
| NV | 1.81% | 13.43% | 0.00% | 15 <mark>.24%</mark> | 0.10 | 2.25 | 0.00 | 2.3 | | | |
| NY* | 3.29% | 6.03% | 0.00% | 9.32% | -1.96 | 1.37 | 0.00 | -0.6 | | | |
| он | 1.34% | 3.79% | 0.00% | 5.13% | 0.08 | 0.72 | 0.00 | 0.8 | | | |
| ок | 0.18% | 0.85% | 0.00% | 1.03% | -5.38 | -0.09 | 0.00 | -5.4 | | | |
| OR* | 3.85% | 12.12% | 0.00% | 15.97% | -1.12 | 1.26 | 0.00 | 0.1 | | | |
| PA | 2.17% | 4.59% | 0.00% | 6.75% | -0.65 | 0.93 | 0.00 | 0.2 | | | |
| RI* | 2.30% | 4.64% | 0.00% | 6.93% | -1.61 | 0.54 | 0.00 | -1.0 | | | |
| SC | 1.21% | 3.49% | 0.00% | 4.69% | 0.25 | 0.42 | 0.00 | 0.6 | | | |
| SD | 1.66% | 1.81% | 0.00% | 3.47% | 0.90 | 0.28 | 0.00 | 1.1 | | | |
| TN | 1.01% | 3.80% | 0.00% | 4.81% | 0.43 | 0.36 | 0.00 | 0.7 | | | |
| ТХ | 0.99% | 6.00% | 0.00% | 6.99 % | 0.02 | 0.75 | 0.00 | 0.7 | | | |
| JT | 1.85% | 7.24% | 0.00% | 9.09% | 0.24 | 0.44 | 0.00 | 0.6 | | | |
| /A | 1.95% | 5.91% | 0.00% | 7.86% | 0.56 | -0.26 | 0.00 | 0.3 | | | |
| /T* | 3.28% | 7.57% | 0.00% | 10.85% | -0.93 | 1.12 | 0.00 | 0.1 | | | |
| WA* | 3.50% | 16.23% | 0.00% | 19.73 % | -0.21 | -0.29 | 0.00 | -0.5 | | | |
| M | 1.18% | 3.29% | 0.00% | 4.47% | 0.35 | -0.08 | 0.00 | 0.2 | | | |
| NV | 0.79% | 1.58% | 0.00% | 2.38% | 0.17 | 0.25 | 0.00 | 0.4 | | | |
| NY | 0.71% | 1.56% | 0.00% | 2.27 % | -0.25 | -0.17 | 0.00 | -0.4 | | | |
| J.S. | 1.95% | 7.67% | 0.00% | 9.63% | -0.35 | 0.64 | 0.00 | 0.2 | | | |

*Denotes states that have adopted California's ACC II ZEV mandate Source: Figures compiled by Alliance for Automotive Innovation with new registrations for retail and fleet data provided by S&P Global Mobility covering January 1 – March 31, 2024, and January 1 – March 31, 2025

REGISTRATIONS AND CHARGING / REFUELING

Share of Registered EVs In U.S. Light-Duty Fleet Continues to Increase Incrementally. As sales of EVs increase, so does the total number of EVs operating on U.S. roads. There are now nearly than 6.2 million EVs in operation in the United States (2.13 percent of all light vehicles in operation). EVs represented more than 1 percent of total vehicles in operation (VIO) for the first time at the end of 2022 and topped 2 percent for the first time at the end of 2024. The electric vehicles in operation (E-VIO) of 2.13 percent is an increase of 0.5 pp since the first quarter of 2024 and more than three and a half times the E-VIO from the first quarter in 2021 (0.60 percent).⁴ The continued growth in E-VIO has implications for the number of chargers needed to support their operation.



U.S. Public Charging Infrastructure: Overview

While the U.S. Department of Energy notes that roughly 80 percent of all EV charging occurs at home⁵, reliable and convenient access to workplace and public charging and refueling stations help to support customers who purchase EVs or are considering purchasing an EV. Workplace and public charging infrastructure not only eases perceived "range anxiety" concerns but also increases consumer awareness of the technology. In addition, achieving increased EV market share will require moving beyond customers who have access to charging via privately-owned single-family dwellings.

Here is a snapshot of publicly available EV charging and refueling infrastructure ⁶ available across the United States at the end of the first quarter of 2025⁷:

Level 2: 60,660 Locations, 151,161 EVSE Ports
 DC Fast: 12,409 Locations, 52,469 EVSE Ports
 Hydrogen Refueling: 58 Stations (56 are in California)
 U.S. Total: 71,700⁸ Locations, 203,617 EVSE Ports
 See Recommended Attributes for EV Charging Stations

⁵ Department of Energy, National EV Charging Network, Accessed 3/15/2025

⁸ Some station locations have both Level 2 and DC Fast installed.

⁴ Registered vehicles in operation compiled by Alliance for Automotive Innovation with data provided by S&P Global Mobility as of March 31, 2025

⁶ "Stations" denotes stations as counted and identified by U.S. Department of Energy Alternative Fuels Data Center. Stations differs from number of locations as many stations can be at a singular location. Locations denotes unique addresses.

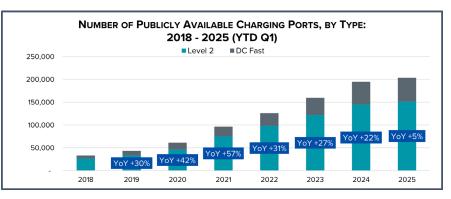
⁷ Charging information from U.S. Department of Energy Alternative Fuels Data Center, stations in operation as of March 31, 2025

Note: prior editions of this report excluded proprietary chargers, however Tesla opened their previously proprietary chargers in November 2022 and their "North American Charging Standard" will be widely adopted by automakers.

| State | Locations | L2 Ports | DC Fast Ports | State | Locations | L2 Ports | DC Fast Ports | |
|-------|-----------|----------|---------------|-----------|-----------|----------|---------------|------------------------|
| AK | 61 | 106 | 48 | MT | 126 | 196 | 235 | |
| AL | 364 | 704 | 731 | NC | 1,386 | 3,571 | 1,419 | |
| AR | 299 | 772 | 183 | ND | 80 | 113 | 116 | |
| AZ | 979 | 3,011 | 1,150 | NE | 237 | 435 | 216 | |
| CA* | 9,234 | 37,259 | 13,560 | NH | 221 | 465 | 272 | |
| CO* | 1,722 | 4,916 | 1,151 | NJ* | 1,151 | 3,240 | 1,508 | |
| СТ | 1,005 | 3,061 | 583 | NM* | 274 | 496 | 372 | |
| DC | 258 | 1,069 | 56 | NV | 429 | 1,514 | 866 | |
| DE* | 181 | 468 | 282 | NY* | 3,463 | 14,215 | 2,139 | |
| FL | 2,925 | 8,608 | 3,092 | ОН | 1,387 | 3,345 | 1,183 | |
| GA | 1,406 | 4,299 | 1,467 | OK | 341 | 609 | 951 | |
| HI | 275 | 699 | 134 | OR* | 1,137 | 2,673 | 1,061 | |
| IA | 377 | 646 | 447 | PA | 1,428 | 3,728 | 1,363 | |
| ID | 188 | 378 | 197 | RI* | 211 | 678 | 118 | |
| IL . | 1,156 | 2,921 | 1,426 | SC | 524 | 1,135 | 599 | |
| IN | 513 | 1,078 | 786 | SD | 105 | 180 | 147 | |
| KS | 323 | 916 | 264 | TN | 694 | 1,719 | 783 | |
| KY | 301 | 658 | 331 | TX | 2,767 | 7,564 | 3,343 | |
| LA | 228 | 447 | 305 | UT | 621 | 2,125 | 527 | |
| MA* | 1,988 | 7,583 | 1,110 | VA | 1,226 | 3,745 | 1,355 | |
| MD* | 1,222 | 3,420 | 1,012 | VT* | 365 | 933 | 232 | |
| ME | 433 | 993 | 287 | WA* | 1,603 | 5,329 | 1,535 | *Denotes states |
| MI | 1,194 | 2,869 | 1,040 | WI | 592 | 1,160 | 662 | |
| MN | 815 | 1,960 | 726 | WV | 146 | 323 | 165 | that have adopted |
| MO | 736 | 2,348 | 637 | WY | 95 | 150 | 130 | California's ACC II ZE |
| MS | 160 | 318 | 167 | US. Total | 48,952 | 151,161 | 52,469 | mandate |

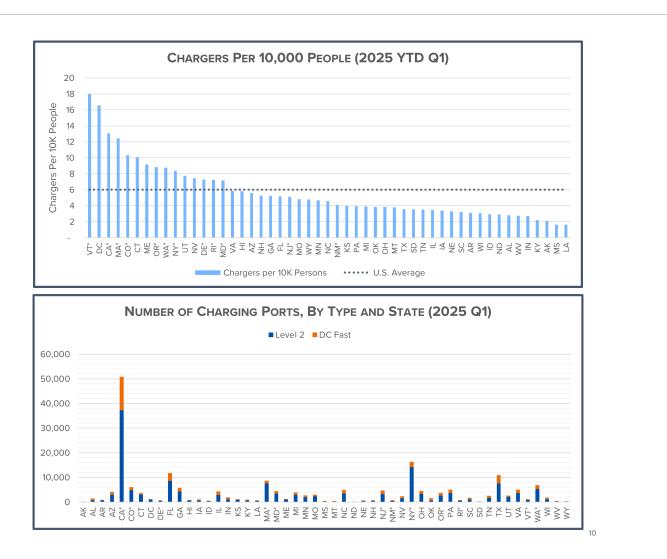
Level 2 Chargers and DC Fast Chargers. Both Level 2 and DC Fast charging play important roles in electrifying the light-duty vehicle fleet. However, the key difference between Level 2 and DC Fast chargers is how quickly each will charge an EV's battery. Level 2 equipment is common for home, workplace, and public charging with longer dwell times. Level 2 chargers can fully charge a BEV from empty in 4-10 hours and a PHEV from empty in 1-2 hours. DC Fast charging equipment enables rapid charging of BEVs in 20 minutes to 1 hour along heavy-traffic corridors, in city centers, at transportation hubs, and fleet depots. Wider installation of Level 2 chargers, DC Fast chargers, and hydrogen fueling will be necessary to support current and future EV sales.

So far in 2025, the number of public Level 2 chargers increased by 4 percent over 2024. DC Fast chargers increased 5 percent. Total charging ports increased 5 percent from the end of 2024.⁹ (For context, E-VIO increased 6 percent from the end of 2024 to the end of Q1 2025.) Effectively, this ratio is going in the wrong direction since sales of EVs are increasing faster than the growth of public charging – which can be a hinderance to public acceptance and convenience for vehicle owners.



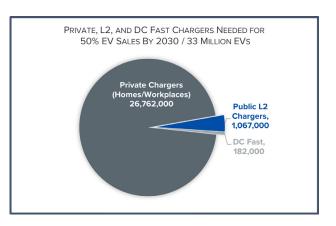
While it's useful to understand how many charging ports are installed, it's also useful to understand the number of chargers in comparison to each state's population. While some states may seem better positioned due to a higher number of chargers, those states shift when compared at a per capita basis. California has by far the most installed public charging equipment, but due to the state's size, their per capita rate is 13 chargers per 10,000 people.

⁹ Charging information from U.S. Department of Energy Alternative Fuels Data Center, stations in operation as of 3/31/2025



Infrastructure Investment Necessary

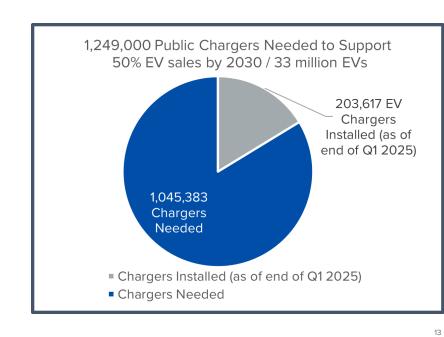
An assessment by the U.S. National Renewable Energy Laboratory (NREL) released in June 2023 estimated that a network of 28 million charging ports would be necessary to support 50 percent EV sales by 2030 (and 33 million EVs on the road).¹¹ NREL estimates that 96 percent of those charging ports would be privately accessible L1 and L2 chargers located at single-family homes, multifamily properties, and workplaces. The remaining 4 percent (1,249,000 ports) would be split between public L2 and high-speed DC Fast charging ports, with L2 making up 85 percent of those public chargers.



At the end of Q1 2025, there were about 204,000 public charging ports across the country and 6.2 million EVs on the road. Total installed public charging ports are about 16 percent of the estimated chargers needed to support 50% EV sales and 33 million EVs in operation by 2030.

More than 1 million additional public chargers (915,852 L2 and 129,531 DC Fast) will need to be installed in the U.S. to support 33 million EVs in operation by 2030. This means that between the end of Q1 2025 and December 31, 2030, 498 chargers would need to be installed every day, for the next 5.75 years. Or 3.5 chargers every 10 minutes through the end of 2030.

¹⁰ Charging information from U.S. Department of Energy Alternative Fuels Data Center, stations in operation as of 3/31/2025; *Denotes states that have adopted California's ACC II ZEV mandate ¹¹ National Renewable Energy Laboratory, "<u>The 2030 National Charging Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure</u>," June 2023 ¹² National Renewable Energy Laboratory, "<u>The 2030 National Charging Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure</u>," June 2023



Between the end of Q1 2025 and December 31, 2030, 498 chargers need to be installed every day, for the next 5.75 years. Or 3.5 chargers every 10 minutes through the end of 2030.

The Cost of This Substantial Infrastructure Necessity Will Largely Fall on Consumers and Commercial Real Estate Owners as They Install Home and Workplace Charging. According to NREL, a national capital investment of \$53– \$127 billion in charging infrastructure is needed by 2030 (including as much as \$72 billion for private residential

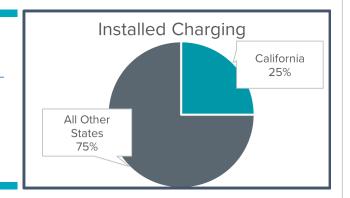
charging) to support 33 million EVs. The large range of potential costs is a result of variable and evolving equipment and installation costs across charging networks, locations, and site designs¹⁴. Notably, the estimates exclude the cost of grid upgrades and distributed energy resources. The estimated cumulative capital investment includes¹⁵:

- » \$22-\$72 billion for privately accessible Level 1 and Level 2 charging ports
- » \$27-\$44 billion for publicly accessible fast charging ports
- » \$5-\$11 billion for publicly accessible Level 2 charging ports

Infrastructure Disparities by Geography

Geographic disparities in charging infrastructure are pervasive. At the end of Q1 2025, a quarter of all public charging infrastructure was in California, which had 32 percent of all registered EVs.

Alliance for Automotive Innovation is proactively engaging to address EV policy needs through participation in the Joint Office of Energy and Transportation's <u>Electric Vehicle Working</u> <u>Group</u>, development of a <u>lithium-ion battery recycling policy</u> <u>framework</u>, <u>recommendations for attributes of EV charging</u> <u>stations</u>, and recommendations for the continuation of EV tax credits¹⁶ which support U.S. jobs and a globally competitive U.S. auto industry.



¹³ National Renewable Energy Laboratory, "The 2030 National Charging Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure," June 2023

- ¹⁴ Various state and federal incentives are available to consumers or businesses that install EV charging infrastructure, including from power utilities. ¹⁵ National Renewable Energy Laboratory, "The 2030 National Charging Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure," June 2023
- ⁵ Alliance for Automotive Innovation, Blog, What We Know (and Don't Know) About the New EV Tax Credit Rules, 12/20/2022; Alliance for Automotive Innovation, blog Foreign Entity of Concern: Finally... Some Clarity, 12/1/2023

Vehicles in Operation and Charging by State

| Public Charging Outlets And Registerd EVs (as of 3/31/2025) | | | | | | | | | | |
|---|-----------------|----------------|-----------------|-----------------|--------------------------------|-----------------------------------|--------------------|--------------------------|--|--|
| | EV Level 2 | EV DC Fast | H2** Fueling | Total | Percent EVs of Total VIO*** | Share of Registered EVs**** | EVs Per Charger | EVs Per 10K Residents | | |
| AK | 106 | 48 | | 154 | 0.78% | 0.07% | 30 | 62.84 | | |
| AL | 704 | 731 | | 1,435 | 0.48% | 0.40% | 17 | 48.42 | | |
| AR | 772 | 183 | | 955 | 0.46% | 0.21% | 14 | 43.03 | | |
| AZ | 3,011 | 1,150 | | 4,161 | 2.17% | 2.45% | 36 | 203.86 | | |
| CA* | 37,259 | 13,560 | 56 | 50,875 | 6.37% | 32.32% | 39 | 512.22 | | |
| CO* | 4,916 | 1,151 | | 6,067 | 3.30% | 2.96% | 30 | 311.44 | | |
| СТ | 3,061 | 583 | | 3,644 | 2.09% | 1.05% | 18 | 178.58 | | |
| DC | 1,069 | 56 | | 1,125 | <mark>4</mark> .43% | 0.24% | 13 | 218.77 | | |
| DE* | 468 | 282 | | 750 | 1.86% | 0.28% | 23 | 164.75 | | |
| FL | 8,608 | 3,092 | | 11,700 | 2.17% | 6.88% | 36 | 187.88 | | |
| GA | 4,299 | 1,467 | | 5,766 | 1.54% | 2.41% | 26 | 134.77 | | |
| HI | 699 | 134 | 1 | 834 | 3.52% | 0.65% | 48 | 279.26 | | |
| IA | 646 | 447 | | 1,093 | 0.60% | 0.32% | 18 | 60.78 | | |
| ID | 378 | 197 | | 575 | 0.89% | 0.29% | 32 | 92.68 | | |
| IL | 2,921 | 1,426 | | 4,347 | 1.70% | 2.82% | 40 | 138.82 | | |
| IN | 1,078 | 786 | | 1,864 | 0.82% | 0.83% | 28 | 75.06 | | |
| KS | 916 | 264 | | 1,180 | 0.76% | 0.36% | 19 | 76.57 | | |
| KY | 658 | 331 | | 989 | 0.56% | 0.37% | 23 | 49.98 | | |
| LA | 447 | 305 | | 752 | 0.45% | 0.27% | 23 | 37.01 | | |
| MA* | 7,583 | 1,110 | | 8,693 | 2.70% | 2.44% | 17 | 215.24 | | |
| MD* | 3,420 | 1,012 | | 4,432 | 2.62% | 2.17% | 30 | 216.76 | | |
| ME | 993 | 287 | | 1,280 | 1.47% | 0.32% | 15 | 142.03 | | |
| MI | 2,869 | 1,040 | | 3,909 | 1.22% | 1.70% | 27 | 104.30 | | |
| MN | 1,960 | 726 | | 2,686 | 1.32% | 1.12% | 26 | 120.89 | | |
| мо | 2,348 | 637 | | 2,985 | 0.86% | 0.81% | 17 | 80.70 | | |
| MS | 318 | 167 | | 485 | 0.25% | 0.13% | 16 | 26.49 | | |
| MT | 196 | 235 | | 431 | 0.53% | 0.15% | 22 | 82.25 | | |
| NC | 3,571 | 1,419 | | 4,990 | 1.31% | 2.06% | 25 | 117.38 | | |
| ND | 113 | 116 | | 229 | 0.28% | 0.04% | 10 | 29.37 | | |
| NE | 435 | 216 | | 651 | 0.67% | 0.23% | 22 | 72.19 | | |
| NH | 435 | 272 | | 737 | 1.53% | 0.23% | 28 | 146.70 | | |
| NJ* | 3,240 | 1,508 | | 4,748 | 3.01% | 3.68% | 48 | 244.51 | | |
| NM* | 496 | 372 | | 868 | 0.97% | 0.32% | 23 | 93.63 | | |
| NV | 1,514 | 866 | | 2,380 | 3.23% | 1.33% | 35 | 257.97 | | |
| NY* | | | | | | | | | | |
| OH | 14,215 3,345 | 2,139 1,183 | | 16,354 4,528 | 2.46% 0.97% | 4.53% | 17 23 | 142.97 88.00 | | |
| он Ок | 3,345 609 | 951 | | | | 0.94% | 37 | 143.46 | | |
| | | | | 1,560 | 1.26% | | | | | |
| OR* | 2,673 | 1,061 1,363 | | 3,734 | 3.00% | 1.89% | 31 | 275.71 113.77 | | |
| PA RI* | 3,728 | | | 5,091 | 1.33% | | 29 | | | |
| | 678 1425 | 118 | | 796 | 1.63% | 0.20% | 16 | 115.20 | | |
| SC | 1,135 | 599 | | 1,734 | 0.71% | 0.63% | 22 | 72.34 | | |
| SD | 180 | 147 | | 327 | 0.41% | 0.07% | 13 | 45.09 | | |
| TN | 1,719 | 783 | | 2,502 | 0.86% | 0.97% | 24 | 84.35 | | |
| TX | 7,564 | 3,343 | 1 | 10,908 | 1.49% | 6.03% | 34 | 122.02 | | |
| UT | 2,125 | 527 | | 2,652 | 2.25% | 1.14% | 27 | 205.91 | | |
| VA | 3,745 | 1,355 | | 5,100 | 1.78% | 2.24% | 27 | 158.43 | | |
| VT* | 933 | 232 | | 1,165 | 3.18% | 0.28% | 15 | 271.07 | | |
| WA* | 5,329 | 1,535 | | 6,864 | 3.57% | 4.05% | 36 | 319.89 | | |
| WI | 1,160 | 662 | | 1,822 | 0.89% | 0.78% | 27 | 81.73 | | |
| WV | 323 | 165 | | 488 | 0.39% | 0.10% | 13 | 34.77 | | |
| WY | 150 | 130 | | 280 | 0.39% | 0.04% | 9 | 45.25 | | |
| U.S. | 151,148 | 52,469 | 58 | 203,675 | 2.13% | 100.00% | 30 | 184.36 | | |

REGISTRATIONS

EV registrations as a share of all registered light-duty vehicles are 2.1 percent (as of March 31, 2025). There are more than 289 million registered light-duty vehicles in the U.S.

At the end of Q1 2025, California accounted for 32 percent of all registered light-duty EVs in the U.S.

States with highest portion of total EVs registered:

1) CA* (1,995,867, 6.37%)

2) FL (424,810, 2.17%)

3) TX (372,195, 1.49%)

4) NY* (279,800, 2.46%)

5) WA* (249,924, 3.57%)

7) CO* (183,050, 3.3%)

8) IL (174,215, 1.7%)

9) AZ (151,492, 2.17%)

10) MA* (150,701, 2.7%)

States with worst ratio of registered EVs per public charger:

2) NJ*

3) IL

4) CA*

5) OK 6) WA*

7) AZ

8) FL

9) NV

10) TX

Read more about automaker plans for an ELECTRIC FUTURE HERE

*Denotes states that have adopted California's ACC II ZEV mandate; **Hydrogen count denotes stations *** VIO is vehicles in operation; **** State share of U.S. Total

Source: Figures compiled by Alliance for Automotive Innovation with registered vehicle data provided by S&P Global Mobility as of March 31, 2025; Charging information from U.S. Department of Energy Alternative Fuels Data Center, as of 3/31/2025

SPOTLIGHT ON: NAVIGATING GLOBAL COMPETITION -STRENGTHENING U.S. EV MANUFACTURING

The U.S. must bolster its EV manufacturing to maintain relevance in a global market where EVs are projected to dominate in the future. While estimates have varied widely, with forecasts of 50 percent¹⁷ to more than 60 percent EV market share by 2030¹⁸, it's clear that EVs will play a major role in the future of the global vehicle market. If the U.S. fails to lead in EV production, it risks ceding economic and technological leadership to competitors like China, which produced 70 percent of global EVs in 2024¹⁹, or Europe, which recently reaffirmed its aggressive 2035 zero-emission target.²⁰

The United States faces a critical juncture in the global EV market, where China's dominance threatens its economic vitality, job security, and national security. As global EV mandates intensify and competition escalates, bolstering domestic EV manufacturing is essential for the U.S. to maintain its competitive edge and safeguard its interests.

State of the Global Market

More than 17 million EVs were sold globally in 2024, exceeding a 20 percent market share. Only four years ago, global sales of EVs were just about 3 million units – a 4.6 percent market share ²¹. That's over 400 percent growth from 2020 to 2024. At the time, Europe was the largest EV market in the world (1.4 million sales). Now, China (65 percent of all global EV sales) is the leading market with sales exceeding 11 million in 2024 alone. For comparison, 1.6 million EV were sold in the U.S. in 2024 (10 percent share), and 3.2 million EV were sold in Europe (24 percent share).

China Dominating the EV Lanscape

China has emerged as the unrivaled leader in EV production, manufacturing nearly 70 percent of the world's EVs in 2024, with exports surging to 1.25 million units last year alone ²². This dominance is fueled by a strategic blend of government subsidies – totaling \$230.9 billion between 2009 and 2023 ²³, robust domestic supply chains, and economies of scale. China's dominance is further bolstered by control of battery materials processing: 90 percent of the world's graphite and two-thirds of the world's cobalt and lithium. ²⁴ Additionally, China has almost 85% of global battery cell production capacity ²⁵ – a monopoly that gives it leverage over critical supply chains.

If the U.S. fails to compete, it risks remaining vulnerable as it continues to rely on imported components. A robust domestic manufacturing base could localize production, reducing dependence on foreign supply chains and preserving jobs amid global trade tensions.

EV Mandates Across Largest Markets

Globally, EV mandates are accelerating. The EU's has a 2035 zero-emission target, the UK is pursuing a similar goal, and Canada – the U.S.'s largest vehicle export market – intends to ban non-EVs by 2035. According to the U.S. International Trade Administration, the U.S. exported 1.46 million vehicles in 2024²⁶. Over one million of those vehicles (69 percent) were shipped to countries with an EV mandate. More than 900,000 (62 percent) of those vehicles were destined to markets that intend to ban non-EVs.

¹⁷ Dan Carney, "Bloomberg Predicts 50 Percent Global EV Sales by 2030," Design News, 7/17/224

¹⁸ RMI, "EVs To Surpass Two-Thirds Of Global Car Sales By 2030, Putting At Risk Nearly Half Of Oil Demand, New Research Finds," 9/14/2023

¹⁹ International Energy Agency, "Global EV Outlook 2025," Accessed 6/6/2025

 ²⁰ Philip Blenkinsop, "EU Says It Sticks To Zero-Emission Car Path To 2035," Reuters, 3/5/2025
 ²¹ International Energy Agency, Global EV Outlook 2021, Accessed 6/6/2025

 ²² International Energy Agency, Global EV Outlook 2021, Accessed 6/6/2025
 ²³ International Energy Agency, "Global EV Outlook 2025," Accessed 6/6/2025

²³ Center for Strategic and International Studies, "The Chinese EV Dilemma: Subsidized Yet Striking," 6/28/224

²⁴ U.S. EIA, "China Dominates Global Trade Of Battery Minerals," 5/21/2025

²⁵ International Energy Agency, "Batteries and Secure Energy Transitions," 2024

²⁶ U.S. Department of Commerce, International Trade Administration, New Vehicle Trade Data Visualizer, Accessed 6/6/2025

| Country | Passenger Vehicles | Percent U.S. Exports | EV Mandate | ICE Ban | Policy Details |
|----------------|-----------------------|----------------------------|---------------|------------|--|
| Canada | 628,742 | 43% | Yes | Yes | Mandates 100% zero-emission vehicle (ZEV) sales for light-duty vehicles by 2035, with interim targets of 20% by 2026 and 60% by 2030. Enacted via amendments to the Canadian Environmental Protection Act (CEPA). |
| Germany | 144,089 | 10% | Yes | Yes | Part of EU's 2035 ban on new petrol and diesel light vehicle sales, with e-fuel exemptions. |
| China | 99,475 | 7% | Yes | No | New Energy Vehicle (NEV) credit mandate requires 18% of light vehicle sales to be EVs or hybrids by 2023, extended to 2025. No binding national ICE ban for light vehicles, but regional targets (e.g., Hainan by 2030). |
| Korea | 47,190 | 3% | Yes | Yes | Proposed ban on new ICE light vehicle registrations by 2035, with incentives for EV adoption. Limited details on binding legislation. |
| Belgium | 33,369 | 2% | Yes | Yes | Part of EU's 2035 ICE ban for light vehicles. |
| United Kingdom | 16,393 | 1% | Yes | Yes | Bans new petrol and diesel light vehicle sales by 2030, with hybrids allowed until 2035. Mandates increasing ZEV sales, but specific percentages vary. |
| Lithuania | 11,322 | 1% | Yes | Yes | Part of EU's 2035 ICE ban for light vehicles. |
| Poland | 8,740 | 1% | Yes | Yes | Part of EU's 2035 ICE ban for light vehicles. |
| Chile | 8,131 | 1% | Yes | No | Targets 100% EV sales for light vehicles by 2035, but no binding ICE ban. |
| Sweden | 5,211 | 0% | Yes | Yes | Bans new petrol and diesel light vehicle sales by 2030, ahead of EU's 2035 target. |
| Ukraine | 5,104 | 0% | Yes | Yes | Part of EU-aligned 2035 ICE ban for light vehicles. |
| Total | 1,007,766 | 69% | | | |

China's export boom - 5.86 million vehicles in 2024, including 1.25 million EVs - targets these markets, with 60 percent of the EUs EV imports (420,000 units) coming from China²⁷. And China's capacity continues to grow. Goldman Sachs estimates China will have the capacity to produce nearly 25 million EVs by late 2025, as production is currently increasing by close to 4 million cars a year and Chinese firms continue to invest heavily.²⁸

Growth Opportunities

Domestic manufacturing ensures energy security, reduces reliance on foreign supply chains, and creates jobs. Auto manufacturers, battery producers, and suppliers have committed at least \$130 billion in the U.S. to vehicle electrification, creating 110,00 jobs. Explore the EV Investment Dashboard to learn more.

The importance of U.S. exports to domestic jobs amplifies the need for a strong EV industry. The U.S. auto sector supports 10.1 million jobs, and while exports of U.S.-produced EVs to Europe remain limited, expanding this market could create significant employment opportunities.

"In 2024, the US produced just over 1.1 million EVs, while the majority of these went to the domestic market, just under 186,000 EVs, 17%, were exported and sold outside of the country. Most of these vehicles, 57%, remained within North America going to the US' neighbors Canada and Mexico. Outside of the region, US-made EVs had a limited market share. The next biggest destination was Europe which sold just over 60,000 US made EVs in 2024." 29

Auto jobs are not just in assembly facilities, battery factories, tech centers, or parts manufacturing - over \$400 billion worth of vehicles and parts pass through U.S. ports annually, supporting port workers and non-traditional auto hubs from coast-to-coast. Explore more on the Auto Ports Dashboard.

²⁷ International Energy Agency, "Global EV Outlook 2025," Accessed 6/6/2025

²⁸ Brad Setser, "Will China Take Over the Global Auto Industry?," Council on Foreign Relations, 12/8/2024
²⁹ Benchmark Source, "Trump Automotive Tariffs, What's At Risk For The EV Industry?," 5/1/2025

National Security

National security further underscores the need to bolster domestic EV production and supply chains. The U.S. imports over 80 percent of its rare earth elements ³⁰, with China dominating processing (over 90 percent of global processing capacity³¹), posing a risk if geopolitical tensions disrupt supplies. China's control could disrupt EV manufacturing with near immediate effects in such scenarios. China's recent restrictions on exports of rare earths and magnets – which threatened to shut down EV production around the world – illustrates its dominance in the supply chain³².

Strengthening domestic production, as seen with the addition of nearly 1,000 GWh of battery manufacturing capacity by 2030³³, is a step toward energy independence and resilience, countering China's strategic edge.

To remain competitive, the U.S. must invest in R&D, targeting battery and powertrain advancements, and expand workforce training. Stable policies coupled with incentives for domestic supply chains, are critical. Bolstering U.S. EV manufacturing is not just an economic choice, it is a strategic imperative to secure jobs, national security, and a leadership role in the global EV revolution.

³⁰ Statista, "The U.S. Relies Heavily on Rare Earth Imports From China," 4/14/2025

David Shepardson, "US auto suppliers say immediate action needed on China rare earths restrictions," 6/5/2025
 John Irwin, "Why China's rare-earth export restrictions threaten new-car production," Automotive News, 6/11/2025

³³ Alliance for Automotive Innovation, EV Investment Dashboard, Accessed 6/6/2025

APPENDIX - A

