US Electric Vehicle Future Growth

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1. Introduction

I write about many subjects related to anthropomorphic (human-caused) climate change. This includes both instances of this that evolve in the U.S. Economy and potential solutions to this environmental disaster. Regarding the "U.S." in my national limiter, I try to keep my posts close to home (I live in California, USA).

Electric vehicles definitely fall into the "solutions" category. Even the cleanest internal combustion or hybrid vehicle still emits much more greenhouse gas than an EV, and thus impacts climate change (or "global warming", if you prefer). There are two counter-arguments to this: (1) how much greenhouse gas was produced in generating the electricity, and (2) how much was produced in developing and maintaining the electric grid that allows the electricity to be widely distributed. Since I live in California, I asked Microsoft Bing (my browser) "What was the California electricity generation in 2024?" Bing responded with the following answer:

In 2024, California's total system electric generation (TSEG) was 278,338 gigawatt-hours (GWh), down 1% from 2023's 278,640 GWh per the California Energy Commission. This total includes in-state generation (216,181 GWh) and net electricity imports (62,157 GWh) from power plants with at least 1 MW capacity.

Fuel Mix and Share

Natural gas was the largest single source, providing 86,479 GWh (40% of in-state generation) and 94,655 GWh (34% of total TSEG) California Energy Commission.

Solar contributed 50,666 GWh (23.4% of in-state generation) and 59,283 GWh (21.3% of total TSEG) California Energy Commission.

Wind generated 15,761 GWh (7.3% of in-state generation) and 17,341 GWh (11.9% of total TSEG) California Energy Commission.

Nuclear produced 18,379 GWh (8.5% of in-state generation) and 27,613 GWh (9.9% of total TSEG) California Energy Commission.

Large hydro generated 25,222 GWh (11.7% of in-state generation) and 30,780 GWh (11.1% of total TSEG) California Energy Commission.

Geothermal added 10,453 GWh (4.8% of in-state generation) and 12,803 GWh (4.6% of total TSEG) California Energy Commission.

Biomass and small hydro together made up about 4% of in-state generation.

Simplifying the above:

- Natural gas fueled generation: 34% of total system electric generation
- Renewables (I included nuclear and large hydro because I believe these are renewable): 60% of total electric generation
- Other generation, about 6% (I would assume most of this is not renewable)

Thus in 2023, 60% of the electricity used to charge EVs had zero to very low greenhouse gas (GHG) emissions. I would guess that this year that percentage would be higher (strong hydro). Contrasting that, an IC-powered car has high GHG emissions.

I need to reference the last paper I wrote (posted in April, 2026) with a similar subject to this one:

Upcoming 2025 & 2026 EVs: This was a wide-ranging peek at the subject light-EVs that will be available in the U.S. However, keep in mind that many EV manufacturers limit their sales to a single area (frequently California, but also California plus a few other states).

https://www.energycentral.com/customer-engagement-experience/post/upcoming-2025-2026-evs-r5tePXtePuJsZ52

Now your author has a confession to make. I don't purchase new cars very often. The last car I purchased (a low-mileage company car from Siemens, my former employer) was a 2008 Dodge Charger. Both of my other cars are 1993 models, one purchased in 1993 (a new Honda Civic that currently has over 300,000 miles on it), and one purchased in the late 1990s that now has over 130,000 miles on it (a Ford Explorer). However, I maintain both of my older cars very well and always have. Also, since I live in California, all of these cars are smog-tested annually, and are required to be kept in good enough conditions to have "like new for their manufacture-year" maximum emissions.

2. EV Future Growth

The future of electric vehicles in the U.S. is growing — but slower than anyone forecast before October 2025. In Q3 2025, EVs hit a record 10.6% market share as buyers rushed to claim the expiring $7,500 federal tax credit. That credit disappeared on September 30, 2025. By Q1 2026, new EV sales had dropped 28% year-over-year to 216,399 units, and market share fell to 5.8%. The industry didn't collapse — it corrected. And the correction revealed exactly how much of the EV boom was incentive-driven rather than demand-driven.[1]

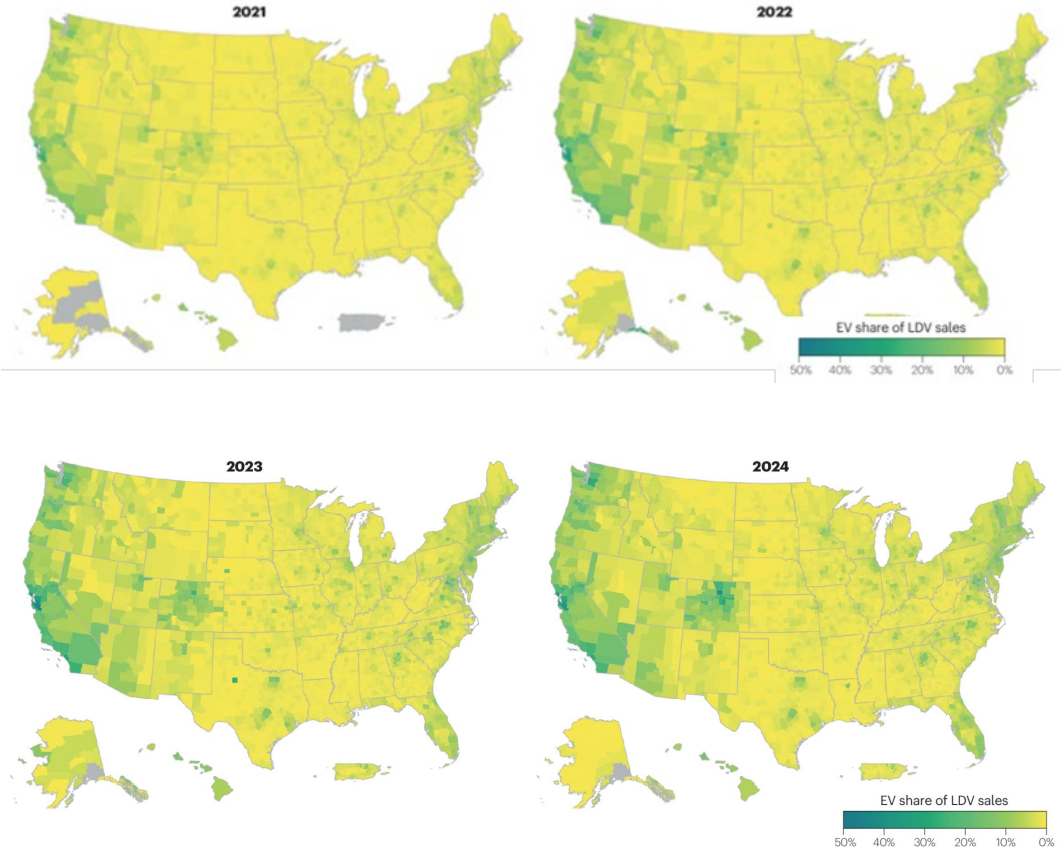
This article covers where the U.S. EV market actually stands in 2026, where it's going through 2030 under post-credit conditions, and the specific variables — used EVs, charging infrastructure, battery costs, and state policy — that will decide whether the market hits 15% or 25% share by decade's end.

During the past 10 years, plug-in electric vehicles (EVs) have grown from a niche technology to a mass-market option, accounting for 22% of passenger cars sold globally during 2024. About 1 in 10 new light-duty vehicles sold in the USA during 2024 was an EV. EVs are also finding new applications beyond light-duty passenger cars to include commercial vehicles, with early market adoption of electric buses, vans and trucks, and growing interests in electrification of larger vehicles. However, adoption rates continue to vary considerably within the USA and between different consumer demographics, with adoption intense in some areas and for commercial applications (see maps below).

[1] James Carter, Drive Authority, "Future of EVs in the U.S.: 2026–2030 Outlook," February 27, 2026, https://driveauthority.com/future-of-electric-vehicles-in-the-u-s/

Fig. 1: County-level electric vehicle sales share in the USA.

From: Trends and 2025 insights on the rise of electric vehicles in the USA



In the above figures, note that "LDV" is light-duty vehicles." The US Department of Transportation defines this as:

… "light-duty" can refer to passenger cars and light trucks, which are generally vehicles with GVWRs up to about 10,000 pounds, depending on the specific regulatory context…

Note that in the 2024 map above much of the California major metropolitan areas (SF Bay Area in the coastal north-central part of our state, the Los Angeles and San Diego Metro Areas in coastal-to-central Southern California, and the Sacramento Area east of the SF Bay Area) are dark to medium green, representing 40% to 50% EV percentage of light-duty vehicle sales. This is consistent with what I have seen on SF Bay Area streets and freeways (Livermore, which is your author's home-city) over the last few years.

2.1. General Trends

A Microsoft Bing Copilot search with the query-phrase "Upcoming Electric Vehicles for the U.S." came up with the following general trends.

Electric vehicles are projected to become a major part of the U.S. automotive market, potentially reaching 40–50% of new car sales by 2030, supported by falling battery costs, expanded charging infrastructure, and evolving federal policies.

2.2. EV Adoption Trends

As of early 2026, EVs account for 10–12% of new U.S. vehicle sales, up from roughly 1% in 2018, reflecting a rapid market shift.

Forecasts suggest that by 2030, EVs could represent 14–20% of new car sales under current policy trends, with more optimistic projections reaching 40–50% of total passenger car sales.

By 2035, the total number of EVs on U.S. roads is projected to reach 78.5 million, or over 26% of all vehicles, with annual sales potentially hitting 12.2 million by 2035.

2.2.1. Technological Advancements

Battery technology is a key driver of EV adoption. Battery costs are expected to fall below $80/kWh, bringing EV purchase prices closer to parity with gasoline vehicles.

Innovations such as solid-state batteries promise higher energy density, faster charging, and improved safety, with production targets set for the late 2020s.

EVs now offer ranges exceeding 250 miles per charge, with premium models surpassing 400 miles, and software integration is enhancing driver experience through AI-assisted navigation and over-the-air updates.

A query of Bing regarding EVs with a 400+ mile range resulted in the following response:

Lucid Air Grand Touring: *Offers the longest range among U.S. EVs at approximately 512 miles on a single charge, thanks to a 118-kWh battery and highly efficient aerodynamics, making it ideal for long-distance driving and luxury performance*

Tesla Model S Long Range: *The dual-motor version delivers over 400 miles of EPA-rated range, combining luxury, performance, and access to Tesla's Supercharger network.*

Rivian R1T (Dual Max): *This electric pickup achieves over 400 miles with its largest battery pack, offering off-road capability and strong acceleration for adventure-oriented drivers*

Rivian R1S: *The three-row SUV variant also exceeds 400 miles in its dual-motor configuration, providing family-friendly space and long-range touring capability*

Chevrolet Silverado EV: *Equipped with a 205-kWh battery, it reaches an estimated 460 miles, making it one of the longest-range electric trucks available in the U.S.*

I would guess that not all of the above "400-mile-range" EVs are available in all states. Thus, readers may need to perform some additional research for their state and locality. I would guess that the above models are available in all California major metro areas, and probably in California medium-sized metro areas.

2.3. Charging Infrastructure

The expansion of charging networks is critical. By 2035, the U.S. will require approximately 42.2 million charge ports and 325,000 DC fast charging stations to support projected EV growth.

Standardization of charging ports (NACS) is expected to reduce compatibility issues by 2027–2028, making EV ownership more convenient. Home charging with time-of-use rates can reduce energy costs to $0.03–$0.05 per mile, roughly three times cheaper than gasoline.

2.4. Policy and Incentives

Federal incentives, such as the $7,500 EV tax credit, have been a major driver of adoption. However, this incentive expired on September 30, 2025.

According to the U.S. Department of Energy, six states plus the District of Columbia offer tax incentives for purchasing and using an electric vehicle. Ariana, Colorado, Maryland, New Jersey, Utah, and Wisconsin all provide tax benefits to those residents who choose to use electric vehicles.[2]

These tax incentives are related to the vehicle (such as New Jersey's Zero Emission Vehicle tax exemption) and the reduced use of fuels by the vehicles, as seen in Wisconsin's Alternative Fuel Tax Exemption.

Most states offer some form of rebate for the purchase and use of electric vehicles. These can be state incentives or incentives offered by private utility companies. Only Alabama, Arkansas, Hawaii, Idaho, Kentucky, Montana, and North Dakota do not offer any tax incentives or rebates for electric vehicles. Thirteen states offer one rebate for residents. Most states offer between two and eight rebates for their residents.

California leads the way with twenty-three rebates that residents may qualify for. Because some of these are provided by specific utility providers, no one would qualify for all of them, but there is a chance that most residents would qualify for multiple rebates. This will help residents transition more easily and affordably to electric vehicles. This is important because California plans to phase out the sale and use of gas-powered vehicles by 2035.

State-level policies, emissions regulations, and infrastructure investments will continue to shape the market. Automakers are adjusting strategies in response to changing incentives and consumer demand, with hybrid offerings expanding.

2.5. Challenges and Market Dynamics

Despite strong growth, challenges remain, including battery supply chain constraints, infrastructure gaps, and consumer education.

EV sales have shown volatility, with demand peaking before federal incentives ended (September 30, 2025) and dropping afterward, highlighting the importance of policy stability and market adaptation.

Automakers are recalibrating investments to align with realistic demand while continuing to innovate in EV technology.

2.6. Outlook

The U.S. EV market is entering a structural transformation, driven by technology, policy, and consumer adoption. The period from 2026 to 2030 is critical for buyers, fleet operators, and investors, as falling battery costs, expanded charging networks, and maturing vehicle technology converge to reshape the automotive landscape.

With coordinated action, EVs are poised to become a mainstream, scalable solution for transportation in the United States.

[2] https://worldpopulationreview.com/state-rankings/electric-car-incentives-by-state

3. Factors Driving Up Consumer Demand

Consumer demand for EVs has risen significantly over the past few years. The number of EVs on the road jumped from about 22,000 to a little over 2 million over the 2011–21 decade.[3] Several factors are expected to continue to drive consumer demand for EVs over the 2021–31 decade: environmental concerns, greater vehicle choice, improved battery capacity, and cost savings.

A YouGov poll of drivers shows that the top reason for considering buying an EV was to protect the environment. Similarly, a survey from CarMax found that most car owners were concerned about fuel emissions and perceived the main advantage of EVs to be that they are good for the environment.

In addition, consumers can now choose from a wider range of vehicles, as auto makers have introduced a greater variety of EV models into the market, including the much-preferred large-size vehicles (see section 2.2.1 above). Until recently, compact cars like sedans and hatchbacks were virtually the only EV options available, yet trucks and SUVs were about 78-percent of new vehicle sales in the United States in 2021. Choice is only set to expand (see next paragraph).

Major EV launches for 2025–2026 include the Audi A6 e-tron, Mercedes-Benz CLA EV, Polestar 4, BMW iX3, Acura RSX, Afeela 1, Jeep Recon, Chevrolet Bolt (new generation), Kia EV4, and Honda 0 Series, with ranges typically between 250–450 miles and prices from about $28,000 to over $130,000.[4]

Improved vehicle range is another factor that should encourage higher uptake of EVs. Range anxiety—the fear of running out of battery power before reaching a charging location—has long deterred consumers from purchasing an EV. However, battery capacity and range have greatly improved (from a median of 68 miles on a single charge in 2011 to 234 miles in 2021 and up to over 400 miles today (see section 2.2.1 above, and note that three vehicles in this list are trucks and large SUVs. Also see the previous paragraph above) and is expected to continue to increase with further advances in battery technology.

Furthermore, studies have found that switching to EVs saves consumers money, especially over the long run. For example, in addition to saving on fueling costs, EVs yield about $8,000 to $12,000 worth of savings on maintenance over the lifetime of the vehicle. Moreover, battery pack costs should continue to fall, bringing EV prices closer to those of conventional cars.

Author's comment: I mentioned above that I do not own any EVs, but a few years ago I installed a large rooftop photovoltaic (PV) array and a medium-sized battery energy storage system (BESS) at my primary residence (in Livermore, CA). If I had any EVs at that point or was seriously planning to buy one or more, it would have been simple to expand the PV/BESS to accommodate these, reducing my fuel cost for the EVs to near-zero.

[3] By the end of 2025, over 7.3 million plug-in electric vehicles (EVs) were registered on U.S. roads per a query of Microsoft Bing.

[4] This paragraph is the result of the following query of Microsoft Bing Browser: "New electric vehicles for 2025 and 2026."

3.1. Policies Driving Demand for Electric Vehicles

The Infrastructure Investment and Jobs Act, signed into law in November 2021, allocated $7.5 billion to building out a nationwide charging network. The funding has initially focused on installing fast chargers along the interstate highway system, which would help mitigate battery range fears and enable long-distance travel. The legislation also included large investments to upgrade the nation's power grid—key for accommodating rising electricity demand as EV adoption grows—and to expand domestic battery production and recycling capacity. On the consumer side, tax credits spur demand. For instance, the Inflation Reduction Act, signed into law in August 2022, extended a tax credit of up to $7,500 for the purchase of new EVs until 2032 and provided, for the first time, that tax credits could be used for purchasing used EVs.

State government policies also offer incentives, such as rebates, to encourage EV ownership by helping offset the high upfront costs of EVs.16 A number of states have also implemented a zero-emission vehicle (ZEV) program, which requires auto manufacturers to sell a set quota of battery-electric or plug-in hybrid-electric vehicles, and have passed laws that ban the sale of new gas-powered vehicles by 2035.

In 2025, electric vehicles (EVs) made up about 23.6% of California's light-duty vehicle sales in the second half of the year.

3.2. Automaker Commitments to Electric Vehicles

Automakers have unveiled strategies to speed up the electrification of new cars and trucks. Most major companies plan to roll out dozens of new electric vehicle models over the next decade, are implementing electric vehicle sales targets, and committing to eventually end fuel-powered vehicle production. To achieve their electrification goals, automakers plan to invest billions of dollars over the next decade in research and development and building new manufacturing plants, particularly for battery production.