

States Partner With Utilities for Next Big Push in Electric Vehicles

After Years of Incentives for Consumers, States Move on to Infrastructure

Industry Insight

The recent surge in electric vehicles (EVs) highlights the crucial role of electric utilities in developing comprehensive charging networks, including public charging stations. As more EVs draw electricity from distribution systems, **state regulators must balance reliability, cost-effectiveness, and utility planning.** According to the Department of Energy (DOE), the U.S. sold a total of over **750,000 plug-in electric vehicles (PEV)** through 2017. Between 2011 and 2017, annual PEV sales increased from under 18,000 to almost 200,000, **growing by 49 percent year-on-year on average.**



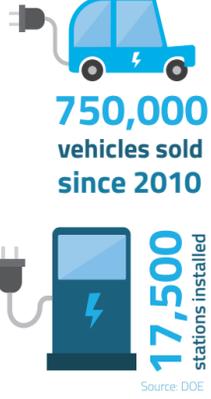
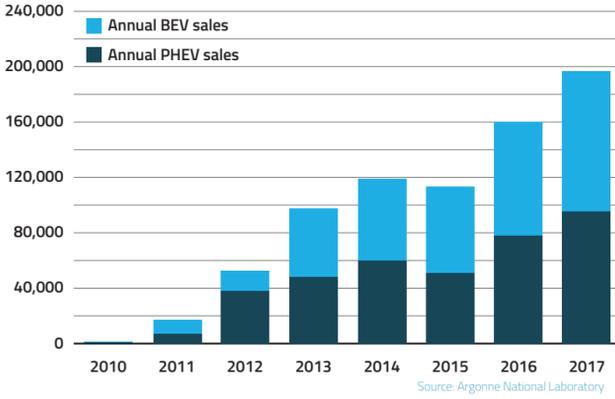
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#1: Rapid EV Growth Drives Cooperation

According to a January 25 report from DOE's Argonne National Laboratory, since 2011, over 750,000 PEVs have been sold in the U.S., consuming over 5.4 TWh of electricity. In 2017, PEVs, which includes plug-in hybrid electric vehicles (PHEVs) and battery electric vehicles (BEVs), reached 1.1 percent of the total national sales market for new light-duty vehicles.



Coastal Coalition

In 2014, eight states – California, Connecticut, Maryland, Massachusetts, New York, Oregon, Rhode Island and Vermont – released an action plan detailing an agreement announced in 2013 to put 3.3 million zero-emission vehicles (ZEVs) on the road by 2025. Together, the signatory states have introduced almost 60 programs that support the adoption of EVs.

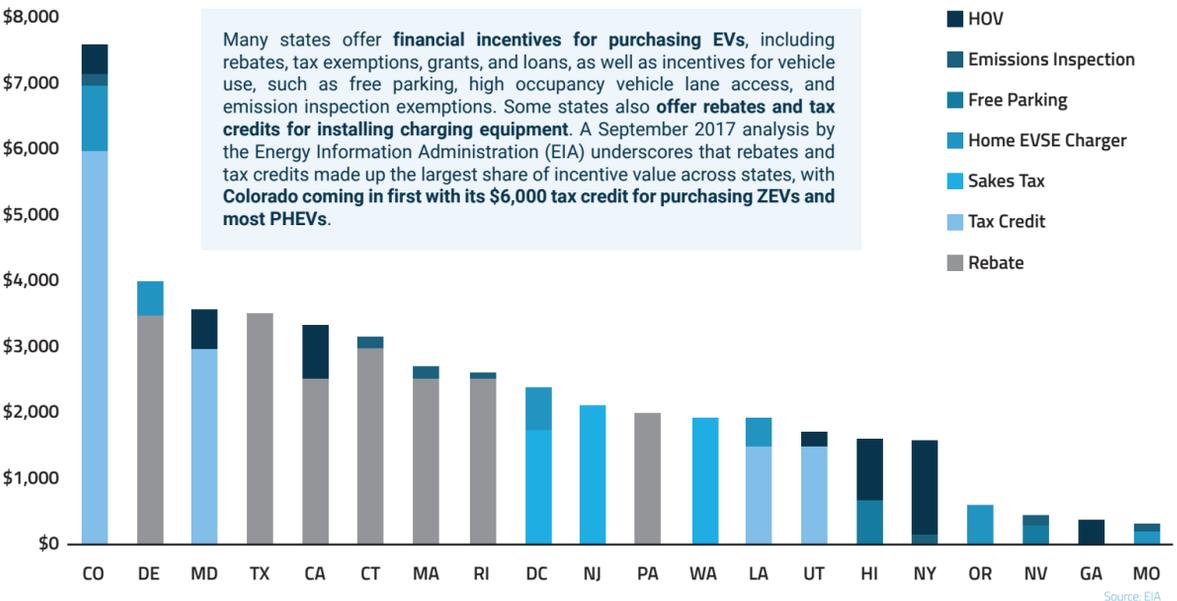


Seven Nation Army

In October 2017, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming announced a plan to develop a regional EV corridor spanning more than 5,000 miles of highway across major corridors to reduce range anxiety and allow smaller communities to plug into the regional system. Western states already have more than 20,000 EVs (including PHEVs) on the roads.

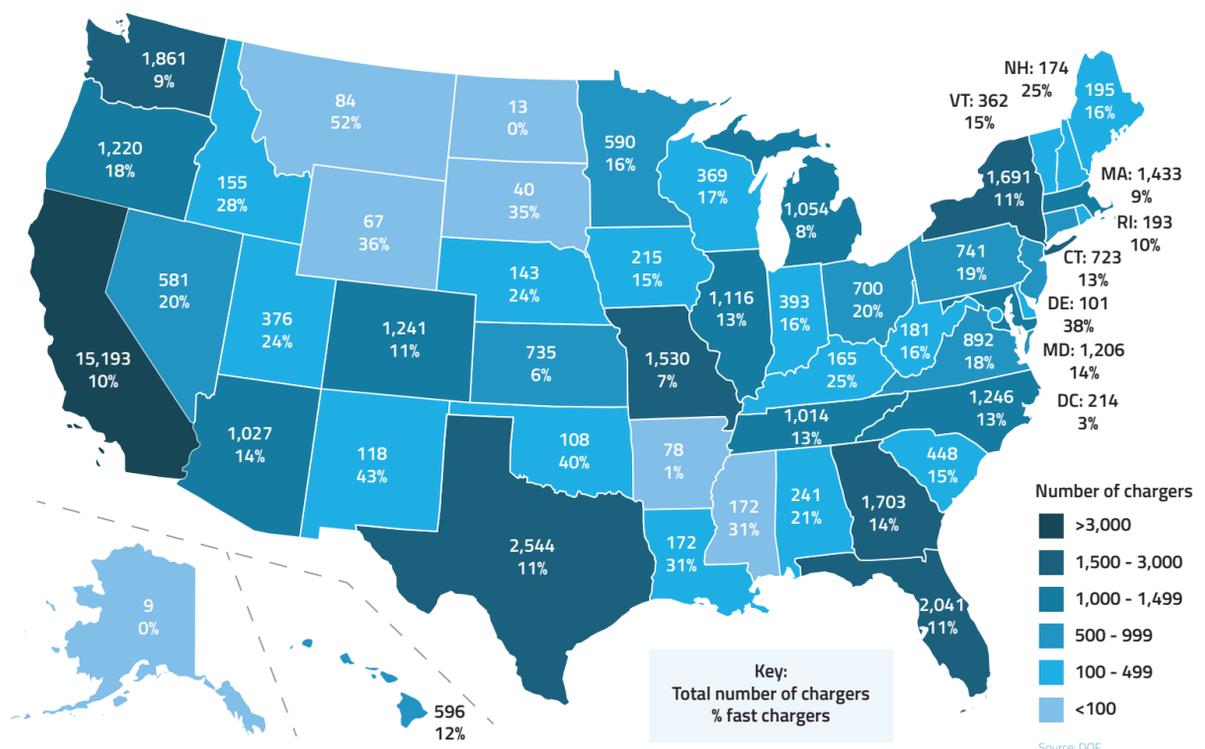


#2: Assorted Incentives



#3: Infrastructure Development

Following years of financial incentives for consumers, states have turned to the role of utilities in the development of charging infrastructure. As of December 2017, **California leads the nation with over 15,000 charging units, ten percent of which are fast chargers.**



#4: States Engage Utilities

- CA** A1701020: On January 17, the California Public Utilities Commission authorized 15 pilot projects by the state's three largest electric utilities, approving budgets totaling approximately \$41 million.
- MI** U-18368: On December 20, the MI PSC announced a follow-up PEV conference on the impact of EV pilot programs on charging infrastructure, utility rates, and the grid.
- NY** 16-M-0411: On February 21, a 40-member coalition of industry and environmental groups petitioned the NY PSC to order state utilities to accelerate the deployment of charging stations by April. Governor Andrew Cuomo recently expanded the state's Charge NY goal to deploy 10,000 charging stations by 2021.
- CT**: On February 8, the Connecticut Department of Energy and Environmental Protection released its final Comprehensive Energy Strategy calling for a rapid expansion of renewable energy, increased energy efficiency investments, and EV infrastructure.
- CA**: On January 17, PG&E launched a program to deploy 7,500 level 2 charging stations at customer sites including workplaces and multi-family residential locations.
- CO**: On January 24, Colorado Governor John Hickenlooper, a Democrat, detailed a plan to boost EVs with a focus on building out fast-charging infrastructure through public-private partnerships.
- MD** 9478: The Maryland Office of People's Counsel, in a March 8 filing with the MD PSC, reiterated its request for a full evidentiary proceeding to consider the EV portfolio proposal filed by the EV workgroup in January, allowing enough time to review the NREL analysis before submitting comments. Maryland aims to have 300,000 registered EVs by 2025. The portfolio proposes an investment of \$104.7 million between mid-2018 and 2023 in over 24,000 smart chargers in residential, commercial, and public areas.
- CA**: On January 26, California Gov. Jerry Brown increased the state's target to 5 million ZEVs by 2030, up from the current goal of 1.5 million zero-emission vehicles by 2025. Brown also proposed an 8-year, \$2.5-billion program to continue clean vehicle rebates and fund ZEV charging and refueling stations.
- MN** 17-817: On November 17, Northern States Power requested the MI PSC to approve an EV pilot program to test the potential for cost savings by combining new equipment and off-peak rate design, and to minimize the upfront costs of charging equipment with an option to pay for it through a fixed monthly charge.
- AZ**: On January 30, Arizona Corporation Commissioner Andy Tobin unveiled the Arizona Energy Modernization Plan, a proposal that strengthens renewable energy targets, sets a goal to deploy 3 GW of energy storage by 2030, and directs utilities to expand EV charging options.
- MO** ET-2018-0132: On February 26, Union Electric Company, a subsidiary of Ameren Corporation, requested approval from the MO PSC to implement its "Charge Ahead" initiative that encourages EV use among residents and businesses. The programs will provide incentives for electric machinery, such as forklifts, and help meet the cost of installing public and private charging stations.

Bottom Line

Early Starters
The EV market is maturing thanks to increasing demand, diverse vehicle models, and initiatives to expand charging infrastructure. States that prepare for EVs early can benefit from lower consumer costs and emissions today, while others may have to build expensive generation and charging infrastructure quickly to respond to the growing demand. Utilities can also benefit from the increasing power sales at the charging stations they own.

Danger, Spikes
However, as EVs spread, utilities must prepare themselves to meet two challenges. One, the growing demand for electricity could raise grid costs and threaten reliability. Two, a broader network of fast charging stations could create dangerous spikes in demand. Here, California's utility programs, given their scale and reach, could offer valuable lessons for other states.

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