Leading the Charge

By **LISA WOOD**

The electric vehicle is back! In 1900, one-third of the cars in Boston, Chicago, and New York City were powered by electricity. By the 1910s, however, customers seeking greater range and more horsepower started to buy gasoline-powered vehicles, and, during the 1920s, production of electric vehicles stopped.

Today, technology improvements, customer interest, declining costs, and increasing fuel efficiency standards and environmental regulations are driving the electric vehicle market forward. Nearly 160,000 plug-in electric vehicles (PEVs) were sold in 2016, bringing the total number of PEVs on the road to almost 600,000 today. In a new report—"Plug-in Electric Vehicle Sales Forecast Through 2025 and the Charging Infrastructure Required"—the Edison Electric Institute and the Institute for Electric Innovation estimate that more than 7 million PEVs will be operating in the United States in 2025.

PEV owners want to be able to charge their cars wherever they are. The development of electric charging infrastructure to meet this desire is crucial to PEV growth. Based on the estimates in our report, nearly 5 million charge ports will be required; this represents a significant investment in PEV charging infrastructure.

The PEV Value Proposition

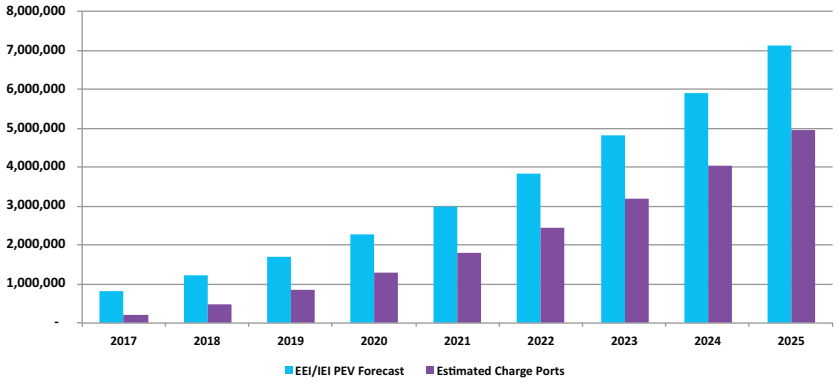
While the vast majority of PEV charging occurs at home, developing a more robust charging infrastructure is critical to supporting PEV ownership. Fortunately, electric companies across various states already are well-positioned both to help develop PEV charging infrastructure and to support the smart integration of PEV load into the energy grid. This includes:

- developing "make-ready" energy grid infrastructure, which might include PEV service connection upgrades and new supply infrastructure;
- owning and operating charging stations;
- incentivizing PEV charging at specific times of the day; and
- helping charging site owners to connect with PEV charger equipment providers.

For example, in 2016, the California Public Utilities Commission approved PEV charging pilots for its regulated electric companies. The pilots will establish 12,500 new charging locations by 2020. Electric companies in Georgia, Kansas, Missouri, and Washington also are supporting the development of PEV charging infrastructure.

By helping to develop PEV charging infrastructure, electric companies can help move the electric transportation market forward while supporting state-level clean energy goals and meeting customer needs. EP

PEV Stock and Charging Infrastructure (Charge Ports) Needed (2017–2025)



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The Institute for Electric Innovation focuses on advancing the adoption and application of new technologies that will strengthen and transform the energy grid. The Institute's members are investor-owned electric companies that represent about 70 percent of the U.S. electric power industry and are committed to an affordable, reliable, secure, and clean energy future.

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