A QUICK LOOK INTO IMPORTANT ISSUES OF THE DAY

BY ANNA SMITH

Although they currently represent only about 1 percent of all light-duty cars sold in the U.S., electric vehicles (EVs) are becoming more popular all the time. Nearly 200,000 plug-in electric vehicles were sold in 2017, and the network of public charging stations is rapidly expanding. Data from the U.S. Department of Energy suggest the U.S. now has 16,000 public electric vehicle charging stations with 43,000 connectors (power cords for individual cars).

Plug-in electric vehicles are powered by batteries that are charged by plugging them into a standard wall socket or a more powerful charging station. The electricity they use is produced by domestic sources such as coal, natural gas, and nuclear and renewable energy. By tapping into domestic energy sources, these vehicles help states diversify the transportation fuel mix and increase the use of local energy resources.

Total emissions from an electric vehicle are typically less than those from a conventional car, one that uses gasoline or diesel to power an internal combustion engine. They can be significantly lower in regions where wind, hydropower and natural gas make up a higher proportion of energy sources because less gasoline and diesel are used to power the vehicles.

According to a study by the University of Michigan, the average annual cost to operate an electric vehicle in the United States is $485, while the average cost

**A Range of Electric Vehicle Fees**

What states are charging, at a glance.

* States that assess a separate fee on plug-in hybrid electric vehicles (PHEV) or hybrid electric vehicles. Georgia’s PHEV fee applies only if the owner purchases an alternative fuel license plate. South Carolina assesses a biennial fee. Source: NCSL, 2018

**Electric Vehicle Incentives and Fees**

BY ANNA SMITH

- Around 1832, the Scottish inventor Robert Anderson developed the first crude electric vehicle, but it wasn’t until the 1870s that electric cars became practical.
- By 1900, electric cars enjoyed a heyday, making up about a third of all vehicles on the road. New York City even had a fleet of more than 60 electric taxis.
- Nearly 200,000 plug-in electric vehicles were sold in 2017.
for a gasoline-powered vehicle is $1,117. The study only examined fuel costs, but maintenance costs for electric vehicles also have been found to be lower because the engines have fewer moving parts.

**State Action**

As more people buy and drive electric vehicles, states are working both to promote their use and make up for lost gas-tax revenues.

**Incentives.** Financial incentives, including tax credits and reduced registration fees, are popular ways to promote electric vehicles. Forty-five states and the District of Columbia currently offer incentives for certain hybrid or electric vehicles, or both. Rebates or tax credits for purchasing the vehicles range from $50, offered annually to vehicle owners in California’s San Diego Gas and Electric service area, to a $10,000 one-time break in Delaware and other states. Additional incentives include tax credits for electric charging stations, research project grants and alternative fuel technology loans.

In May 2014, eight states released an action plan to put 3.3 million zero-emission vehicles (ZEVs) on the road by 2025. The plan—agreed to by California, Connecticut, Maryland, Massachusetts, New York, Oregon, Rhode Island and Vermont—calls for consumer incentives, including allowing ZEV drivers to use high-occupancy vehicle lanes and building additional charging stations.

State legislatures and governors are not the only ones offering incentives to plug-in electric vehicle buyers. Some electric utility companies in Colorado, Delaware, Florida, Georgia, Indiana, Kentucky, Maryland and Pennsylvania offer a $10,000 rebate to their customers and employees who purchase a new 2017 Nissan Leaf at participating dealerships. And, in what is considered the largest single investment by any state to promote electric vehicles, California utility regulators in June approved up to $738 million to fund EV projects. The projects will be carried out over five years by the state’s three investor-owned utilities.

Some states have also recently introduced incentives to encourage businesses and residents to install charging stations. For instance, the Massachusetts Electric Vehicle Incentive Program provides grants of 50 percent of the cost, up to $25,000, to workplaces that install a charging station. Several utilities have introduced programs that provide rebates and grants for these projects. Iowa’s Alliant Energy offers a $500 rebate to residential customers who purchase and install a station, and Minnesota’s Dakota Electric offers a similar rebate.

**Fees.** With increased use of electric vehicles comes a decrease in gas tax revenues, which typically pay for the upkeep of roads and other infrastructure. To make up for the loss, legislatures are increasingly levying fees on electric vehicles. Nine states enacted new fees last year, although the Oklahoma Supreme Court struck down that state’s measure as unconstitutional. Utah is the only state as of June 2018 to pass new fees, bringing the total number of states with fees to 19. Many fee increases were included in larger transportation funding packages, alongside hikes in gas taxes, vehicle registration fees or other transportation-related revenues.

Connecticut, Illinois and other states, along with the District of Columbia, have reduced annual registration fees for electric or alternative fuel vehicles.

Oregon and South Carolina have taken slightly different approaches. Oregon’s fee doesn't take effect until 2020, but the state was the first to adopt a road-usage pilot program. Called OReGo, it charges vehicles a small fee for every mile driven instead of assessing a flat rate. It’s open to traditional and electric vehicles, with a reduced fee for electric cars.

States have yet to realize significant revenue gains from these special fees since the market share for hybrid and electric vehicles is still small.

**Federal Action**

Several federal incentives support developing and deploying alternatives to conventional vehicles. One, a $7,500 federal tax credit on electric vehicle purchases, is available in addition to state incentives. Once 200,000 qualified vehicles have been sold by each automotive manufacturer, the credit is scheduled to expire. However, policymakers are considering expanding the vehicle cap, as it could harm two large American automakers, GM and Tesla. Because they began selling electric vehicles before the tax credit was available, their customers would not benefit from the incentives, giving automakers who were late to the market a competitive advantage.

Another federal tax credit—covering up to 30 percent of equipment costs, not to exceed $30,000—is available to offset the cost of installing alternative fueling equipment. Other incentives include federal grants to convert older vehicles to new technologies, research grants and alternative fuel technology loans.

Utilities are asking Congress for help as they attempt to keep tapping into electric vehicle demand. Thirty-six of the nation’s largest utilities wrote a letter to congressional leadership in March, asking for a lift of the cap on electric vehicle tax credits. The signatories include California’s Pacific Gas & Electric, New York’s Consolidated Edison, North Carolina’s Duke Energy and utilities from nearly every state.