

CAPITOL RESEARCH

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State Utilities Law and Electric Vehicle Charging Stations

The electric car, long besmirched as a niche vehicle, may finally be making its way out of the woods. The electric vehicle sector more than doubled its sales in the first half of 2013.¹ Despite this growth, electric vehicles represent only 3.8 percent of the U.S. vehicle market share.²

This relative success is thanks to many factors. Government support of the electric vehicle market has been extremely beneficial to the fledgling industry. Tesla Motors was successful in making a profit in the first quarter of 2013 through the utilization of California's zero emission vehicle credits.³ Electric vehicle buyers have benefited from a federal tax credit of up to \$7,500 since 2008.⁴ Electric vehicle buyers also benefit from tax incentives in 21 states and the District of Columbia.⁵

These subsidies are far from the only way governments interact with the electric vehicle market. The dense regulatory framework surrounding utilities has the potential to present a stumbling block for companies looking to supply public electric vehicle charging stations in some states. Public chargers include those found at workplaces, retail locations and at public parking.

Most states regulate the sale of electricity through a public utility commission or similarly named body. As public chargers become more common, states must make a clear decision on how electric vehicle charging stations located in public spaces will be regulated, either by the authority of the commission itself or by legislation. Many states have not yet made a distinction between the retail sale of power and the provision of public electric vehicle charging services; some states have explicitly exempted the stations from existing utility regulation and some states have a de facto unregulated position that has yet to be challenged, ruled or legislated upon.

The potential for regulating electric vehicle charging as a utility presents potential benefits and complications for the electric vehicle market. Public utility commissions could guarantee a stable price for service at electric vehicle charging stations and could be important in managing the entrance of actors into the market. Managing the number of companies selling charging services could prevent one seller from monopolizing the whole market and prevent



too many sellers from oversupplying the market and making the network unsustainable.

One concerning feature of many regulatory programs established for the sale of electricity, however, is the high regulatory burden to enter that market. Many states set conditions companies that are solely concerned with the sale of charging services could not meet. The Public Utility Commission of Texas, for instance, requires retail providers of electricity to demonstrate the ability and “the financial and technical resources to provide continuous and reliable service to customers in the area for which the certification is sought,” and “the managerial and technical ability to supply electricity at retail in accordance with customer contracts.”⁶ These regulations were established for entities concerned with providing power to people’s homes and businesses, but the same regulations are being applied to the relatively simple task of powering people’s plug-in vehicles. Ultimately, this regulatory hurdle is too high for many potential sellers to pass.



Public charging stations are one part of a major infrastructure challenge for electric vehicle manufacturers trying to convince consumers to make the jump from conventional automobiles to electric vehicles. The National Association for Convenience and Fuel Retailing listed 156,065 gas stations in the U.S. at the end of 2012; by comparison, the U.S. Department of Energy (DOE) listed only 6,331 “electric stations” as of July 2013.^{7,8}

Ubiquitous charging options are essential for reducing consumer anxiety over the range of electric vehicles. The DOE noted, “Most (electric vehicles) can only go about 100-200 miles before recharging—gasoline vehicles can go over 300 miles before refueling.”⁹ An ideal network of chargers at consumers’ homes, work and retail establishments would give consumers the peace of mind that no matter where they were going, they would be able to top up once they arrived.

Is EV Charging Like the Sale of Power?

The most important issue in establishing the regulatory purview of a public service commission or similar body is whether that commission will treat electric vehicle charging stations like existing electric utilities or other kinds of public services. This is done by interpreting existing state law or passing new regulations.

Texas

The Public Utility Commission of Texas found that the charging stations did fall within the regulatory authority of the commission. Texas allows for competition in the sale of electricity in parts of the state not served by a municipal owned power company or cooperative. Both competitive and noncompetitive jurisdictions, however, set a high regulatory bar for the sale of electricity. This led to innovative

partnerships in cities such as Austin, where the municipal owned electric company, Austin Energy, partnered with local businesses for the creation of Plug-In EVerywhere, a network of electric vehicle charging stations throughout the metro area. Consumers can pay \$25 for a six-month membership or \$2 for a one-hour charge. No local business could sell electric vehicle charging within the jurisdiction of the city, but with the cooperation of Austin Energy, businesses can install an electric vehicle charger and attract customers for the duration of a charge.

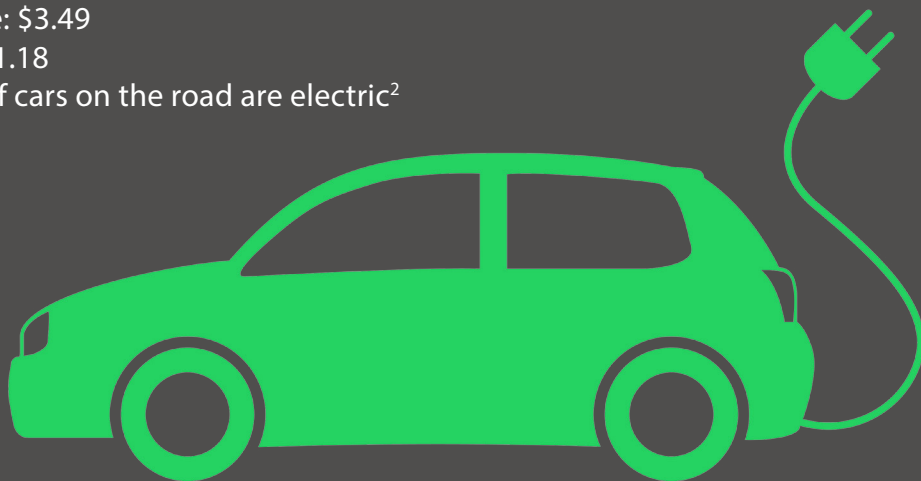
Houston, by contrast, lies within a competitive zone. Despite the ability of retail electric providers to resell power, the regulatory burden necessary to be certified is still too high for local businesses to sell power or for a charging network operator to enter from out of state. This requires cooperation between existing retail electric providers, local businesses and the California based ECOTality, owner of the Blink charger network. Blink also charges a base rate of \$2 per hour. The Public Utility Commission of Texas found that retailers not part of similar arrangements within a competitive zone can give away power, but they cannot charge for the service.

California

Electric vehicle charging is exempt from existing California electric utility law. The California Public Utility Commission found that electric vehicle charging stations did not constitute the resale of electricity under the guidance of California Law in Rulemaking 09-08-009.¹⁰ This was then codified by the legislature with the passage of Assembly Bill 631. Gov. Jerry Brown signed the law into law Oct. 5, 2011.¹¹ In a second ruling, California banned utilities from owning public electric vehicle charging stations, finding that it was unlikely that utility ownership of

KEY INDUSTRY FACTS ►

- Plug-in electric vehicles sales tripled from 17,000 in 2011 to 52,000 in 2012.¹
- Sales are on track to more than double in 2013; Americans bought more than 40,000 vehicles during the first six months of the year.¹
- The Department of Energy metric for the price of running an electric vehicle versus a conventional gas-powered vehicle is known as the eGallon. (July 2013)¹
 - Price per Regular Gasoline: \$3.49
 - Price per Electric eGallon: 1.18
- By July 2013, 3.84 percent of cars on the road are electric²



charging stations would increase safety or lower rates and that the potential for limited customer choice outweighed potential gains.¹²

Utility Ownership of Charging Stations

A separate regulatory issue is whether utilities can own and operate charging stations. States, often via their public service commissions, can choose to not allow existing sellers of electric power operate or own electric vehicle infrastructure due to potential issues regarding fairness. A state's public service commission may worry that a large investor-owned utility may attempt to bully other sellers of charging services out of the market with their control of the electric power market.

Arizona

The Arizona Corporation Commission has yet to rule on whether charging stations will be regulated like a utility. Instead, the commission ordered that Arizona Public Service, Arizona's largest electric utility, could not deploy public chargers and that Arizona Public Service would conduct a study to determine if the federally funded grant programs would be sufficient in providing enough infrastructure for Arizona's electric vehicle users.¹³ If Arizona Public Service proves that there are problems in the deployment or operation of current efforts to expand electric vehicle infrastructure, the Arizona Corporation Commission will consider granting Arizona Public Service the legal capacity to own and operate chargers once again.

Oregon

In contrast to Arizona, the Public Utility Commission of Oregon found value in allowing all possible stakeholders the ability to own and operate electric vehicle charging

stations. The commission did not find that investor-owned utility participation in the sale of electric vehicle charging would be detrimental to the market. Utility companies are permitted to own and operate electric vehicle charging stations in Oregon as a nonregulated utility investment.¹⁴ The commission also declined to mandate specific rates for electric vehicle charging.

Washington

The Washington legislature chose to permit investor-owned utility ownership of electric vehicle charging stations, but placed the service provided by those stations within the regulatory authority of the public utility commission. Washington exempts all other station owners from regulation should the entity not already be under its purview.¹⁵

Conclusion

As the electric vehicle market grows, so will the need for ubiquitous charging stations. In turn, if policymakers want the electric vehicle market to continue its current rate of growth relative to conventional automobiles, they will need to set policies that facilitate the stable growth of the electric vehicle charging network. The regulatory scheme must be both clear and flexible for all stakeholders in the electric vehicle charging market if charging is going to be both fair and abundant. States without clear exemptions should codify those exemptions, by legislation or through the relevant commission's rulemaking authority, to provide assurances to parties potentially interested in providing public electric vehicle charging. With the right assistance and the right assurances, the electric vehicle market can move from a niche product to a competitor suitable to challenge conventional automobile dominance.

KINDS OF CHARGERS ▶

The electric vehicle industry has not yet fully standardized its chargers. Most electric vehicle consumers can choose from two types of plugs. The Society of Automotive Engineers created the J1772 plug standard and is backed by most automakers outside of Japan, including American automakers GM and Ford. The Society of Automotive Engineers recently created a variation of the J1772 plug to provide for faster charging.¹⁶ Mitsubishi and Nissan have worked hard to expand their network of CHAdeMO plugs developed in coordination with Tokyo Electric Power.¹⁷ Tesla Motors also has its own proprietary plug technology for their Superchargers and has created an adapter for the CHAdeMO plug.¹⁸ Standards unity through regulation or industry cooperation may be yet another hurdle to convincing more consumers to make the jump to electric vehicle use. Each plug is used with different charging services which provide different rates of charge.

	Level 1 Charging	Level 2 Charging	DC Fast Charging
Rate of Charge	2-5 miles per hour	10-20 miles per hour	60-80 miles per 20 mins
Voltage	120v	240v	480v
Plug Type	J1772	J1772	CHAdeMO, J1772 "Combo"

Do States Exempt Electric Charging From Existing Regulation?



Kendrick Vonderschmitt, CSG Research Assistant | kvonderschmitt@csrg.org

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State	Exempt	Notes
Alabama	No	
Alaska	No	
Arizona	No	
Arkansas	No	
California	Yes	
Colorado	Yes	
Connecticut	No	
Delaware	No	PSC has chosen not to exercise its authority
Florida	Yes	
Georgia	No	
Hawaii	Yes	
Idaho	No	
Illinois	Yes	
Indiana	No	
Iowa	No	
Kansas	No	
Kentucky	No	
Louisiana	No	
Maine	No	
Maryland	Yes	
Massachusetts	No	
Michigan	No	
Minnesota	Yes	
Mississippi	No	
Missouri	No	
Montana	No	
Nebraska	No	
Nevada	No	
New Hampshire	No	
New Jersey	No	
New Mexico	No	
New York	No	Open for public comment
North Carolina	No	
North Dakota	No	
Ohio	No	
Oklahoma	No	
Oregon	Yes	
Pennsylvania	No	
Rhode Island	No	
South Carolina	No	
South Dakota	No	
Tennessee	No	
Texas	No	
Utah	No	
Vermont	No	
Virginia	Yes	
Washington	Yes	
West Virginia	No	
Wisconsin	No	
Wyoming	No	
District of Columbia	Yes	