



Control Number: 49125



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PROJECT NO. 49125

**REVIEW OF ISSUES RELATING
TO ELECTRIC VEHICLES**

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**BEFORE THE
PUBLIC UTILITY COMMISSION
OF TEXAS**

COMMENTS

from

Texas Electric Transportation Resources Alliance (TxETRA)

INTRODUCTION

The Texas Electric Transportation Resources Alliance (TxETRA) is pleased to submit answers to the following questions in Project No. 49125. TxETRA is comprised of utilities, electric vehicle manufacturers, charging companies and non-profit consumer and environmental organizations. The answers to the questions below are a result of a series of meetings held to discuss our answers that we agree to between ourselves. Further answers by individual members are being submitted. This set of answers does not necessarily reflect the diversity of our members' positions.

In developing responses to the Commission's second round of question on Project 49125, TxETRA considered the following overarching questions:

- What should the policies be that determine the optimal installation of chargers?
- What policies best serve electric vehicle (EV) drivers and assure charging stations are widely available?
- What is the appropriate number of chargers and how should that be measured?
- How do we promote an open and competitive market and "wire in solutions" in areas where the market is likely to fail?
- What are appropriate mechanisms to use in underserved areas?
- How have other states answered these questions?

QUESTION #1

As a matter of policy, which entity or entities should be permitted to own or operate an electric vehicle charging station in the Texas competitive electric market?

We believe electric vehicle charging is a competitive service under Texas law. Charging services have been and should continue to be treated as such. For more detail, see Appendix A, “Electric Vehicle Charging infrastructure – Regulatory Issues,” by Michael Jewell for TxETRA.

It is the policy of the State and the Commission to encourage competition and not restrict competition in areas of the state where there is a competitive market.

Operating an electric vehicle charging station is like opening a gas station: you should be able to do it if you meet certain permitting requirements.

Is a different ownership structure appropriate for service areas not open to retail competition?

Non Opt-In Entities (NOIEs) have been leaders and innovators in the electric vehicle charging market. Municipally Owned Utilities (MOUs), for example, have adopted policies that include both MOU ownership of charging stations and allowing third party charging station owners to operate in their territory. We believe this model should be able to continue in Texas. Allowing MOUs (or electric cooperatives) to own and operate charging stations allows for the installation of charging stations in areas desired by that community (or cooperative) but that may not yet suit the immediate business plans of a third party charging station operator. At the same time, allowing third party charging stations in NOIE service territories allows regional and national networks of EV chargers to operate in areas deemed most suitable by those networks. Most importantly, a policy of allowing both NOIE ownership of charging stations and third party operators in NOIE territories fosters innovation and the proliferation of EV charging infrastructure in Texas.

The Regulatory Assistance Project (RAP) has developed a Roadmap for Electric Transportation that has suggested policy options that can provide guidance for commissions to use to determine whether and when to permit utility ownership of charging stations.¹

¹ Regulatory Assistance Project (RAP), Roadmap for Electric Transportation: Model Legislation, Feb. 2020, pages 70-78, see especially page 77, <https://www.raponline.org/wp-content/uploads/2020/03/rap-roadmap-electric-transportation-model-legislation-2020-february.pdf>.

QUESTION #2

Is the operation of an electric vehicle charging station a retail sale of electricity?

No.

Thirty five states have looked at this question and decided that is not retail sale of electricity.² The charging station owner is the retail electric customer. The charging station owner must purchase the electricity from either a competitive retail electric provider in areas of the state open to retail competition or from the NOIE whose service territory it is located in. Similarly, in areas served by investor owned utilities outside of ERCOT, the charging station owner must purchase the retail electricity from that provider.

The vehicle receiving that charge from the station is *not* purchasing retail electricity, but a service provided by the charging station. Charging the battery in a vehicle is analogous to charging the battery in a cell phone, laptop or other battery electric devices. Those uses, although smaller than those of an EV, are not regulated and neither should be the charging of an electric vehicle.³

QUESTION #3

As a matter of policy, how should the cost of the distribution system infrastructure associated with an electric vehicle charging station be recovered in the Texas competitive electric market?

A distribution utility should be allowed to recover the costs associated with the interconnection of an EV charging station in the same way it is allowed to recover the costs incurred to interconnect any other new load on the grid. The T&D companies should be charged with facilitating competition in these types of service areas. They should be able to recover costs for the expenses incurred in “make ready” or to build out the infrastructure to the meter and should be allowed to put these expenses into the regulatory assets until the next rate case. RAP has done an analysis of options for cost recovery for utility investment in EV Service Equipment (EVSE).⁴

² ChargePoint comments on Project 49125, Aug. 28, 2020.

³ RAP, page 63.

⁴ RAP, pages 76-78, see especially Option 1, page 77.

QUESTION #4

Is the answer to Question 3 different for an electric vehicle charging station located in a remote area, primarily for use by long-distance rather than local motorists?

In general, there is not a difference in the way in which costs associated with the development of an EV charging station in a remote area should be recovered as discussed above.

However, by their nature, there are different policy considerations and strategies the Commission should consider to ensure the development of EV charging stations in remote areas (and also in urban areas that traditionally have been under-served). TxETRA believes that, as a matter of policy, the Commission should help to fund two types of charging stations if they are not developed in the competitive market:

1. charging stations in rural areas
2. charging stations in low-income areas.

Providing charging services in these areas may not develop without some short-term market intervention. Texas legislators and regulators have recognized the need for these types of interventions in the past.

Potential EV drivers say that they are reluctant to buy an EV because of concerns about range anxiety and about the availability of charging stations to get from one location to another across this vast state. Developing a border-to-border charging network and placing chargers in low-income areas will be essential to the universal development of electric transportation and for the continued growth of the electric industry in a time where demand is being reduced due to more efficient appliances and conservation.

It is a classic chicken-and-egg problem. Potential buyers of EVs in these two types of communities won't buy an EV if they don't see a way to charge it, and if they don't buy one, the charging services won't come.

If we fail to develop these policies, we will create a transportation divide in our state that is similar to the digital divide we currently see in the lack of broadband services and computers in rural and low-income areas of Texas. The failure to timely address the digital divide is causing tragic consequences in the ability of Texans to work from home and students to continue their education through remote learning. The Texas Tribune reported recently that one in every three Texas households does not have adequate broadband to allow for working from home,⁵ one in six Texas public school students do not have access to high-speed internet, and 30% of students do not have access to a dedicated and adequate laptop or tablet for remote

⁵ Ross Ramsey, Analysis: A digital divide with dire consequences for Texas, The Texas Tribune, Apr. 1, 2020, <https://www.texastribune.org/2020/04/01/digital-divide-dire-consequences-texas/>.

learning.⁶ It is essential that we develop policy in Texas to get ahead of this problem for charging stations, to assure universal charging access, so that we do not create a transportation divide on top of our digital divide.

We suggest that the Commission determine, as a matter of policy, that the provision of electric vehicle charging services is critical to the successful and universal adoption of electrified transportation and adopt a policy that no community should be left behind in this technological transformation because it is rural or due to poverty

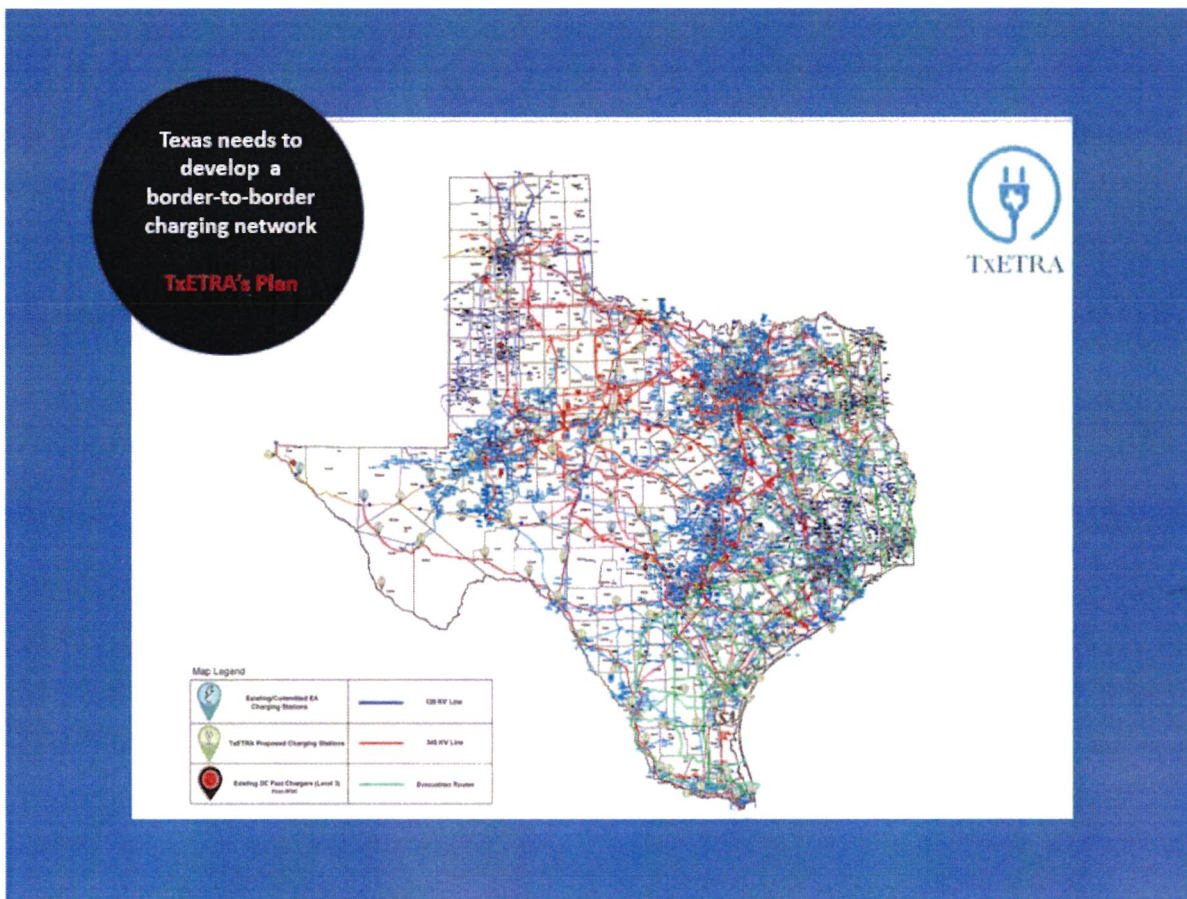
We urge the Commission to adopt a definition of an “Essential Public Charging Network” which shall:

- (1) provide sufficient public charging infrastructure to support a significant expansion in the use of plug-in electric vehicles in the State and consumer confidence in using these vehicles;
- (2) integrate electric vehicle charging with the electric distribution system and the electric transmission system; and
- (3) provide a reliable level of public charging infrastructure.⁷

TxETRA has developed and recently updated a map that would provide a charging station every 50 miles, where the transmission and distribution system is adequate to support high speed charging on interstates and on major secondary roads. A station with 4 charging ports every 50 miles is the standard developed by Electrify America. This map also places charging stations at border crossings and every 50 miles along major traffic flow corridors from the border and along evacuation routes.

⁶ Ross Ramsey, Shopping for students without schoolrooms, Texas is spending \$250 million to narrow the divide, August 14, 2020, <https://www.texastribune.org/2020/08/14/texas-schools-remote-internet-access/>

⁷ RAP, page 22.



Some of these stations will be unlikely to be built without assistance, so this is a classic case where public policy needs to be developed to resolve anticipated market failures.

There are several programs funded by the VW settlement to provide charging infrastructure. The Electrify America corporation was funded as part of the VW settlement to build a highspeed EV charging network, but it is a profit-making business not designed to meet the needs of unserved areas.

The Texas VW rebate plan will also provide high speed charging grants for stations based on submission of business plans that can demonstrate commercial viability.

In addition, there is some limited state funding for charging stations in the Texas Emissions Reduction Program (TERP) to support fueling stations for electric and natural gas vehicles, but that is limited to the routes between the state's most polluted areas.

None of these programs are designed to provide charging services in the two predictably underserved areas of rural and low-income communities.

Fortunately, we have a number of examples where Texas has acted to resolve market failures.

This is analogous to rural electrification of the last century. Unique policies were developed in Congress and by Texas to support the installation of the infrastructure that served electricity needs of rural Texans.

Texas also created universal service fees that were used to provide telecommunications to rural and low-income communities in the past.

What are some of the tests for market failure in providing charging stations that might require some sort of market intervention? Over the next biennium, the Commission should do an assessment of charging infrastructure deployment⁸ and create a test for 'temporary' market failure and needed short-term remedies that should be reviewed 4 years after implementation. In order to assure that charging stations that are planned are included in that assessment, the Commission may need to develop a procedure to register charging stations and their expected load with their TDSP. This will also help assure that a given substation is not overloaded.

A few of these tests might be:

EV traffic volume is not yet high enough to support the operation of commercial chargers, but they are needed because it is a critical highway corridor, on an evacuation route or is in a rural or low-income community.

The test for a market that has failed may be simple, for instance, an insufficient number of charging stations are built or planned after some period of time, e.g., by 2024, Charging facilities should be developed to meet a Commission finding that there should universal access to charging infrastructure, that a station at a given location would serve as an essential link in the statewide electric transportation plan, or that some stations should be installed based on the principle that no community should be left behind in technological transformation because it is rural or low-income.

What strategies could be used to figure out how many charging stations would be needed?

The U.S. Department of Energy's Alternative Fuels Data Center model, Electric Vehicle Infrastructure Projection Tool "EVI-Pro Lite"⁹ allows states and communities to enter a set of assumptions and a projected number of EVs. The model will then determine what an adequate number of chargers would be to serve that number of vehicles. While a user can dial in its own assumptions, their projections roughly estimate that 40 chargers per 1000 registrations would be adequate to serve the needs of a community.

⁸ RAP pages 31-33.

⁹ <https://afdc.energy.gov/evi-pro-lite>.

As an example, if the Commission were use this tool to estimate the number of needed chargers with the projections submitted by TxETRA in the first round of questions in this docket (see below),¹⁰ based on the Bloomberg New Energy Finance (BNEF) scenario used by ERCOT in 2018, it would project a need for 68,536 L2 and L3 chargers by 2030 for our projection of 1,714,418 EVs being on Texas roads by 2030.

Projected 2030 Texas EV Fleet by Scenario

	Light Duty	Bus	Truck	Total
IEA NPS	506,948	2,691	4,947	514,586
BNEF	1,670,784	34,594	8,040	1,713,418
SUV Analogue	3,725,701	34,594	8,040	3,768,335

The ERCOT Regional Planning Group (RPG) has been debating a updated scenario for EV adoption as part of their 2020 Long-Term System Assessment that projects 5.9 million electric light duty vehicles on the road by 2035.¹¹ Therefore, we assume that the number of chargers needed by 2035 would be significantly greater and suggest that development of future Commission charging system adequacy goals should follow ERCOT's biannual analysis.

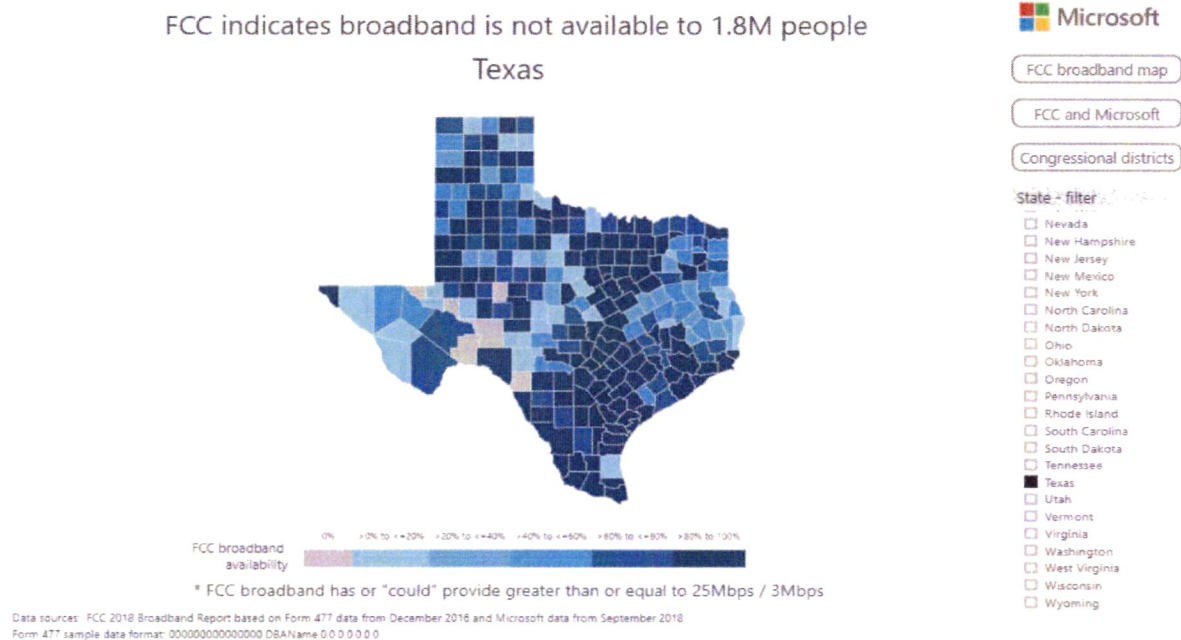
It will be essential for the Commission to adopt a biannual projection of expected EVs and unserved needs in order to allow other agencies to budget the unserved need for charging stations.

Today, it is estimated that 80% of EV owners charge at home, yet more that 50% of urban Texans live in rented spaces. It is unclear what percentage of the apartment complexes will offer charging services, but some large percentage of those residents will need publicly available or workplace charging to participate in the electric vehicle market.

One can assume that the availability of EV charging station coverage will occur much like that of the internet, i.e., based on wealth and density, leaving rural and low-income areas uncovered. Making this assumption could give the Commission a reasonable map of areas likely to be underserved by charging stations.

¹⁰ Comments from TxETRA on 49125, Feb. 2, 2020, https://interchange.puc.texas.gov/Documents/49125_17_1050900.PDF.

¹¹ Presentation: ERCOT 2020 LTSA Update, May 2020, RPG Meeting.



Several funding options might exist to fund electric vehicle charging stations whether on the highways or in servicing apartment dwellers and low-income consumers:

- A temporary additional fee on registration of EVs for a limited time, e.g., 6 years. This is used in several western states. However, we do not support this model because it unfairly taxes owners of Tesla's and other EV manufacturers that in the future may provide charging services only to the owners of their vehicles.
- A small fee on the use of any commercially available charger to pay for the build out of the system in underserved areas, which would be a classic user fee.
- Use of TERP funds (that may result from future amendments) for chargers in areas where demand has not yet hit a level where a commercial charger might be profitable.
- Allowing transmission and distribution utilities to include chargers in the rate base for a short time until commercial viability is reached.

Competitive services are the preferred method of meeting those needs in areas open to competition but there will be market failures. How to address these market failures is an emerging issue that is being discussed around the country. We encourage the Commission to work with interested parties to analyze the problem and develop policy recommendations to resolve this issue over the next biennium.

APPENDIX A

Electric Vehicle Charging Infrastructure - Regulatory Issues

By Michael Jewell for TxETRA

ELECTRIC VEHICLE CHARGING INFRASTRUCTURE – REGULATORY ISSUES

Michael J. Jewell
June 5, 2020



Project No. 49152 Issues

- Are there limits regarding who may own public electric vehicle chargers in Texas' electricity markets?
- Should Public Utility Commission of Texas regulatory requirements be applicable to public charging of electric vehicles?

Texas Electricity Markets at Issue

- Categories of Texas Electric Market Structures
- Electric Reliability Council of Texas (ERCOT)
 - Areas Open to Retail Electric Competition (Oncor, CenterPoint, AEP, TNMP)
 - Non-Opt In Entities (Municipal Electric Utilities and Electric Cooperatives)
- Non-ERCOT (Entergy, El Paso, SWEPCO, Xcel)

Key Statutory Provisions

- Limitations on Electric Utilities in ERCOT:
 - Sec. 39.105. LIMITATION ON SALE OF ELECTRICITY. (a) After January 1, 2002, a transmission and distribution utility **may not sell electricity or otherwise participate in the market for electricity** except for the purpose of buying electricity to serve its own needs.
 - Sec. 39.051. UNBUNDLING. (a) On or before September 1, 2000, each electric utility shall **separate from its regulated utility activities its customer energy services business activities that are otherwise also already widely available in the competitive market.**
 - PUC Rules: §25.5. Definitions. (136) Transmission and distribution business unit (TDBU) - Except as specifically authorized by statute, a transmission and distribution business unit **shall not provide competitive energy-related activities.**
- But there are exceptions:
 - Sec. 39.905. GOAL FOR ENERGY EFFICIENCY. (i) For an electric utility operating in an area open to competition, on demonstration to the commission, after a contested case hearing, that the requirements under Subsection (a) **cannot be met in a rural area** through retail electric providers or competitive energy service providers, the utility may achieve the goal of this section by providing rebate or incentive funds directly to customers in the rural area to promote or facilitate the success of programs implemented under this section.

Key Statutory Provisions - continued

- Retail Electric Providers
 - Sec. 17.002. DEFINITIONS. (6) "Retail electric provider" means a person that **sells electric energy to retail customers** in this state after the legislature authorizes a customer to receive retail electric service from a person other than a certificated retail electric utility.
 - Sec. 39.352. CERTIFICATION OF RETAIL ELECTRIC PROVIDERS. (a) After the date of customer choice, a person, including an affiliate of an electric utility, **may not provide retail electric service in this state unless the person is certified by the commission as a retail electric provider**, in accordance with this section.
 - PUC Rule §25.107. Certification of Retail Electric Providers (REPs) - (1) A person must obtain a certificate pursuant to this subsection before purchasing, taking title to, or **reselling electricity in order to provide retail electric service**.

What is an EV Charging Station?

- Is it just another load?
 - What if there is a large battery that is part of the station?
 - What if it offers ancillary services to ERCOT?
- Is it providing a "retail electric service" to its customers?
 - 34 states, D.C., and Austin have ruled that EV charging is not a utility or retail electric provider.

What is an EV Charging Station – Cont.

- Does the manner of charging customers matter?
 - Subscription model
 - Charging included in whole or part of purchase of vehicle
 - Pay for minutes of charging
 - Pay for kWh charged
 - Other models?
- Does it matter if it is a mobile charger?
 - Charging Van
 - Portable Charger
 - Temporary Charger

How is Texas Handling Charging Stations Today?

- ERCOT – Competitive Providers; Procure electricity supply from REPs
- Municipal Electric Utilities – Both Utility and Non-Utility Providers
- Electric Cooperatives – Both Cooperative and Non-Cooperative Providers

How Do We Move Forward in Texas?

- NARUC Report: Electric Vehicles; Key Trends, Issues, and Considerations for State Regulators (Oct. 2019) – Table 2 starting at page 17 provides summary of frequently cited reasons for Commission approaches to charging infrastructure ownership.
- Is PUCT clarification required?
- Is legislation required?

Respectfully submitted,

A handwritten signature in black ink that reads "Tom 'Smitty' Smith". The signature is written in a cursive, flowing style with a horizontal line at the end.

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