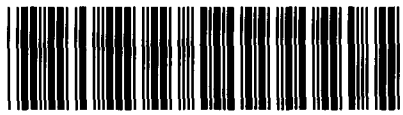

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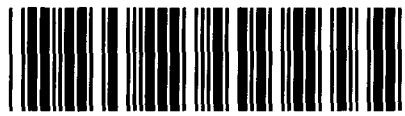

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PROJECT NO. 49125

REVIEW OF ISSUES RELATED TO ELECTRIC VEHICLES	§	**PUBLIC UTILITY COMMISSION**
	§	
	§	**OF TEXAS**

THE REP COALITION'S RESPONSES TO STAFF'S QUESTIONS FOR COMMENT

The REP Coalition[1] respectfully files these Comments addressing the questions on issues related to Electric Vehicles ("EVs"), as filed by the Public Utility Commission of Texas ("Commission") Staff on December 13, 2019. These comments are timely filed by the February 3, 2020 deadline established by the Commission.[2]

I. INTRODUCTION

The REP Coalition appreciates the opportunity to provide comments and commends the Commission for proactively evaluating how widespread deployment of EVs may affect the ERCOT market and soliciting comments from market participants on how to address this expected significant change over the next ten years. We urge the Commission to approach the issues regarding deployment of EVs in ERCOT from the perspective that, where possible, cost-effective competitive market solutions should be relied upon to resolve issues regarding deployment of EVs in Texas. Market participants in the retail, generation, or competitive energy services sectors are likely to be the appropriate sectors for integrating widespread adoption of EVs in ERCOT, rather than subsidized through a utility-owned and –operated asset that is included in rate base paid for by REPs (and ultimately the REPs' end use retail customers). In ERCOT, transmission and distribution utilities ("TDUs") will have a very important role to play in building and operating the backbone infrastructure that will support the integration of EV loads into the grid. But any TDU participation in or subsidization of customer-facing competitive energy services such as public EV charging would result in unintended adverse consequences for the competitive markets in ERCOT.

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[1] For purposes of these Comments, the REP Coalition is comprised of the following: the Alliance for Retail Markets ("ARM") and Texas Energy Association of Marketers ("TEAM"). The participating members of ARM are Calpine Retail, Direct Energy, NRG Retail Companies, and Vistra Energy Retail Companies. The participating members of TEAM are: Amigo Energy, APG&E, Infinite Energy, Hudson Energy, Just Energy, Stream Energy and Veteran Energy.

[2] *See* Public Notice of Request for Comments (Dec. 13, 2019).

This approach is consistent with Public Utility Regulatory Act ("PURA") § 39.001(d), which requires the Commission to authorize or order competitive, rather than regulatory, methods to achieve the retail and wholesale competition goals in Chapter 39 to the greatest extent possible, and with the least impact on competition. In the REP Coalition's view, competitive forces are likely to yield more cost-effective solutions that best meets the customers' needs when compared to the more traditional regulatory solutions that include capital assets in TDU rate base subject to a regulated rate of return. Moreover, a TDU is statutorily prohibited from participating in the sale of electricity or to otherwise participate in the competitive market for electricity, except for purchasing electricity for its own use.[3]

To that end, the REP Coalition believes that deployment of EVs in ERCOT raises three important policy considerations that the Commission should evaluate in deciding whether and how to adopt rules to accommodate widespread deployment of EVs: (1) the cost of commercial charging and associated utility tariff implications (*e.g.*, demand charges and customer class creation or assignment); (2) retail structural determinations such as where the meter ends and the retail relationship begins; and (3) customer protection and disclosure requirements.

II. COMMENTS

1. The Commission requests that parties provide current data sources and projections for the expected deployment of electric vehicles over the next ten years. If available the data projections should attributed the projections by vehicle class (i.e., personal, commercial short-haul including fleets and buses, and commercial long-haul electric vehicles).

Predicting the long-term growth of a nascent market that faces significant supply-side, demand-side, technological, and regulatory uncertainty is a difficult and inexact science, and the Commission is likely to receive various inputs on this topic. The REP Coalition has highlighted certain relevant information from ERCOT's December 2018 Long-Term System Assessment ("2018 LTSA") report that reviewed traffic flow information from the Texas Department of Transportation to estimate that there will be more than 3 million EVs deployed in Texas by 2033.[4]

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[3] *See* PURA 39.051(a)-(c) (requiring each electric utility to separate its three principal business activities from each other no later than January 1, 2002. After that date, PURA 39.105(a) prohibits the unbundled TDU from selling electricity or otherwise participating in the competitive electricity market, except for the sole purpose of buying electricity to serve its own needs.

[4] *See* Long-term System Assessment for the ERCOT Region, p. 10 (Dec. 2018), available at: http://www.ercot.com/content/wcm/lists/144927/2018_LTSA_Report.pdf.

Table 2: EV Penetration and Charging Demand Estimation for Emerging Technology Scenario

Type	Number of Vehicles in 2033	Per Vehicle Charging (kWh)	Peak Charging Demand (MW)
Cars	3,000,000	20	5,940
Short Haul/Buses	80,000	350	2,800
Long Haul Trucks	200,000	600	10,200

ERCOT estimated that transportation electrification will start slowly but grow exponentially when charging facilities become more accessible, and that adoption rates will vary by type of vehicle: [5]

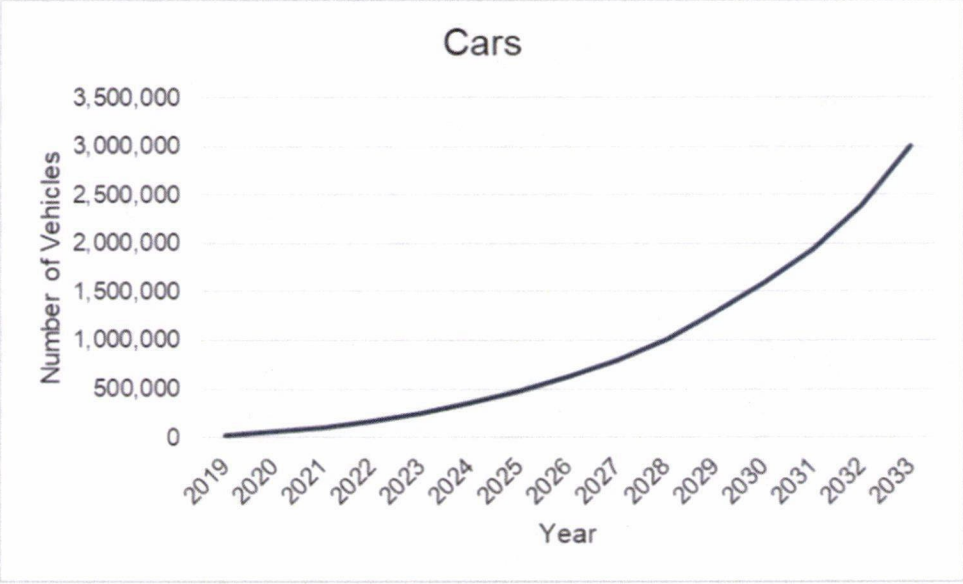

Figure I. 18: Adoption of Electric Cars during 2019-2013

[5] *See* 2018 LITSA at pp. 49-50.

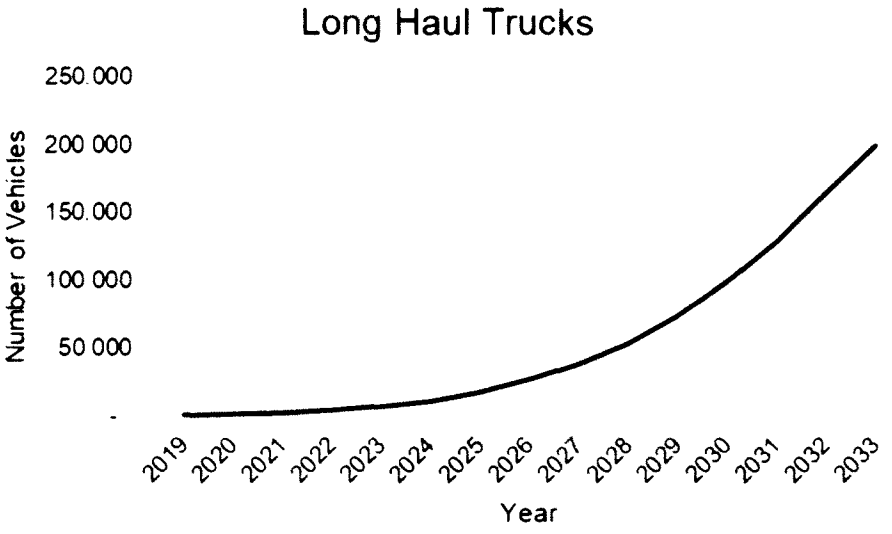

Figure I. 19: Adoption of Electric Long-haul Trucks during 2019-2013

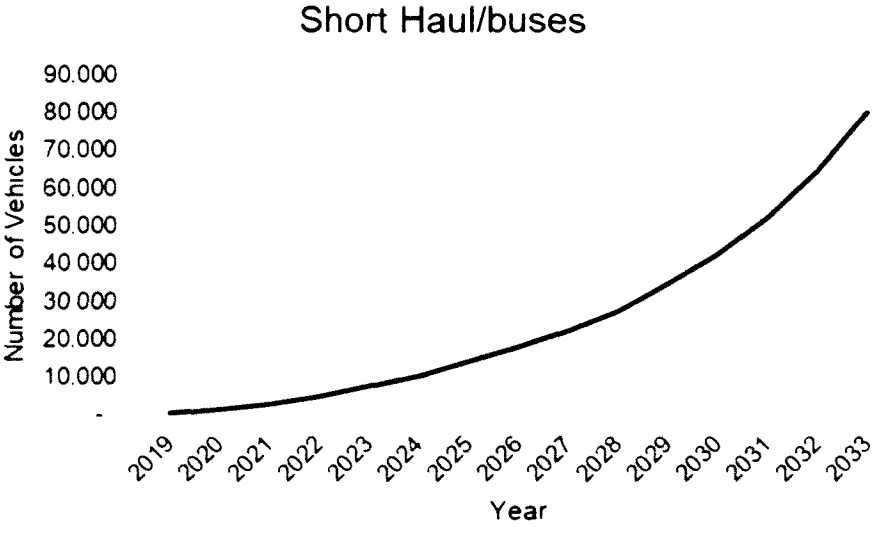

Figure I. 20: Adoption of Electric Short Haul/Buses during 2019-2013

2. ***Please provide any current data sources for information on the expected amount of new load attributable to electric vehicles over the next ten years. If available, the data sources should attribute this load by vehicle class (i.e., personal, commercial short-haul including fleets and buses, and commercial long-haul electric vehicles).***

The December 2018 LTSA report found that increased adoption of electric vehicles in ERCOT could result in a significant shift in hourly load profile, while increasing demand.[6] In particular, ERCOT projected that by 2033 EV charging would shift the system-wide summer peak from 4:00-6:00 p.m. to approximately 10:00 p.m. and increase the peak load by 16%.[7] REPs can help shape this distribution of load by offering retail electric plans that encourage customers to charge their EVs at times that would cause less stress on the grid.

> Figure 9 below shows the impact of EV charging on a hot summer day in 2033 with high distributed solar penetration. In this scenario, the magnitude of the peak is approximately 16% higher than load at the traditional peak hour. Given that both distributed solar generation and EV charging behavior is currently not controlled by grid operators, this scenario may pose resource adequacy and operational challenges.

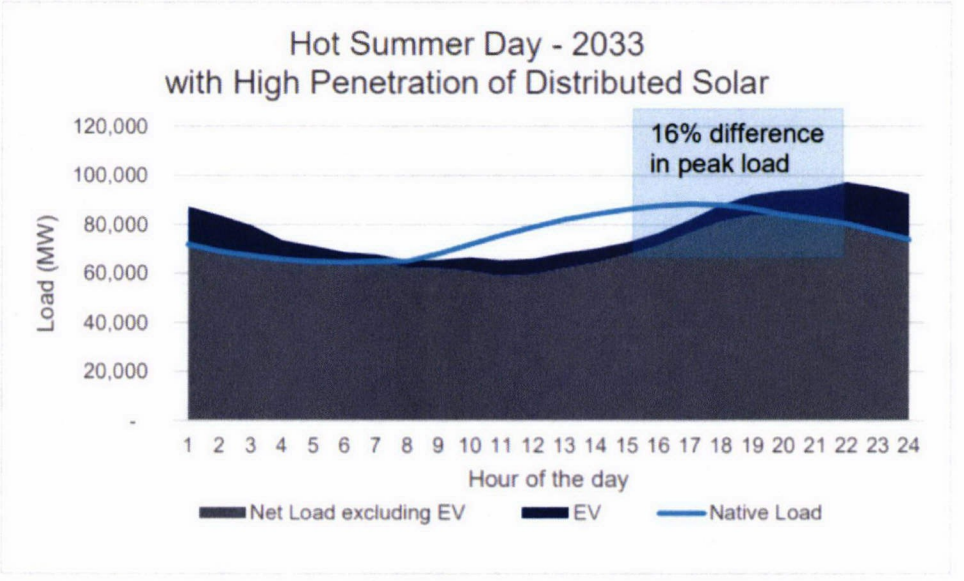

Figure 12: A Sample Hot Summer Day in 2033 with High Distributed Solar Penetration

The REP Coalition does not have preliminary comments on the specific technology questions in the Staff's list at this time; however, the REP Coalition may offer comment additional on these issues as this project moves forward.

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[6] *See* December 2019 LTSA at pp. 9-10.

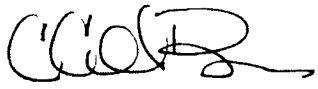
[7] December 2018 LTSA at p. 12.

III. CONCLUSION

The REP Coalition appreciates the opportunity to file these Comments and looks forward to working with the Commission to address issues regarding deployment of EVs in ERCOT.

Date: February 3, 2020

Respectfully submitted on behalf of the REP Coalition,



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