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NRG Energy Inc.'s Comments to Texas Department of Transportation Regarding Its National Electric Vehicle Infrastructure State Plan

NRG Energy Inc. ("NRG") appreciates the opportunity to comment on the Texas Department of Transportation's ("TXDoT") deployment plan ("State Plan") for participating in the National Electric Vehicle Investment ("NEVI") program, created by the Infrastructure Investment and Jobs Act. We recognize that this program is a key building block for the electrification of the Texas' light-duty vehicle fleet. Our comments respond to the May 20, 2022 draft State Plan. While we are encouraged by many of its contents, we believe that TXDoT should be more specific in its final State Plan in describing the role of those responsible for supplying energy to the charging infrastructure that will be deployed through NEVI.

NRG is a leading integrated power company build on dynamic retail brands and diverse generation assets, headquartered in Houston. A Fortune 500 company, NRG supplies energy to millions of homes, businesses, electric vehicle charging stations, and users of electricity every day. In Texas, we offer innovative retail products that allow our customers to manage the risk of energy supply, access the state's plentiful clean-energy resources, and customize to purpose the products they need. For the purpose of these comments, NRG owns a number of Retail Electric Providers ("REPs"), which are the entities licensed by the Public Utility Commission of Texas ("PUCT") to provide retail electric service to customers, including electric-vehicle charging stations,[1] in the parts of the Texas electricity marketplace that are open to retail competition.

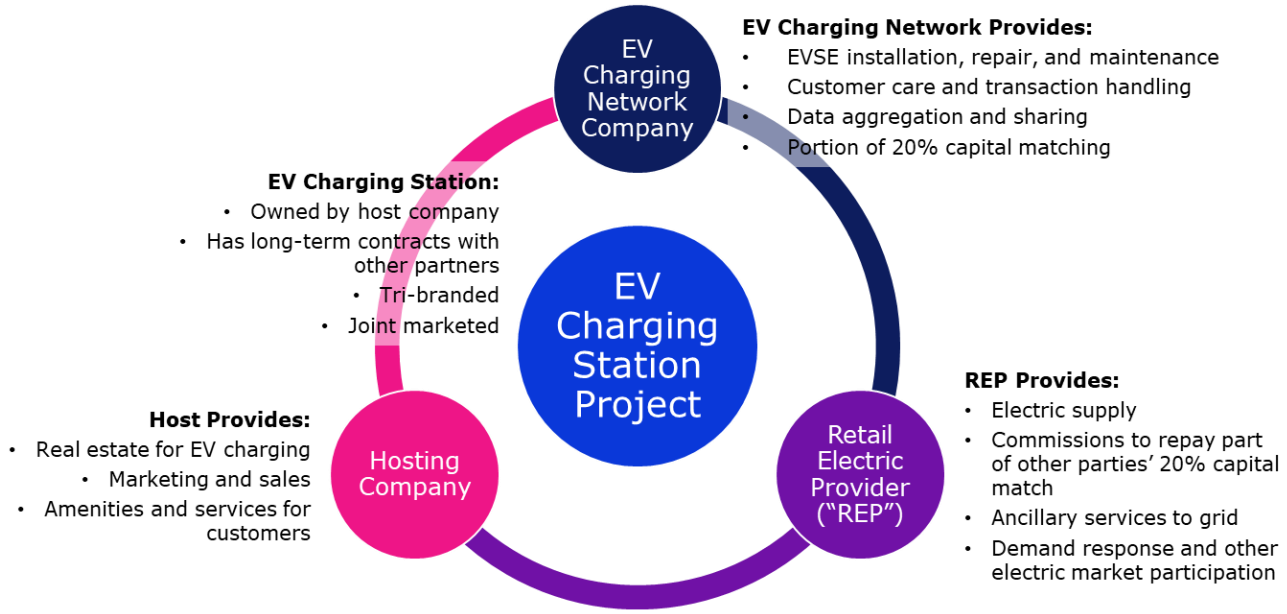
[1] Public Utility Regulatory Act, Tex. Util. Code Ann. § 17.002(6) (defining "retail electric provider"); 16 Texas Administrative Code (TAC) § 25.107 (providing that an entity must obtain a certificate from the PUCT before purchasing, taking title to, or reselling electricity in order to provide retail electric service to retail customers in an area in which customer choice is in effect).

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Executive Summary

Electric vehicle ("EV") charging along transit corridors sits at the intersection of a few industries, but not squarely in the center of any of them. EV charging network companies have many core competencies when it comes to operating transit corridor charging, but they lack expertise in ERCOT energy and ancillary markets. Retail Electric Providers ("REPs") can bring expertise to leverage the charging stations from the NEVI program to also be effective distributed energy resources ("DER") on the grid. Every station also needs a site host that not only can dedicate real estate for charging activities, but is also expert at providing amenities and hospitality to travelers. To leverage these three competencies, we urge TXDoT to favorably consider consortia with companies from each of these three industries to maximize the benefits of the NEVI charging stations. Alternatively, TXDoT should consider as part of its plan the selection of one or more dedicated REPs to supply electricity to charging stations made possible under NEVI, and to bear responsibility for maximizing any value of associated DER revenues from sales of energy or reliability services into ERCOT.

Figure 1: A proposed consortium model



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The presence of a REP can ensure that energy prices for EV charging stations are known in advance and stable over a period of years through an electricity contract whereby the REP stands between the volatile ERCOT market and the cost structure of the charging station and its ultimate sales of charging services to drivers.

This approach also accommodates the 20% minimum contribution that must come from sources other than federal funding for projects awarded under NEVI. Since the total cost of the projects already are substantially reduced through subsidization by individuals who are mostly non-users of this EV infrastructure—federal taxpayers, including Texans—NRG submits that the remaining 20% should not come from state tax proceeds or from the utilities' regulated rates that are charged to customers indiscriminately. Instead, the 20% match should come from revenues that the charging stations and associated equipment earn from EV users or from the electricity market. NRG suggests that having REPs price into their offers a commission that can flow back to financing parties who contribute the 20% match is an appropriate way to raise some of this matching revenue. This aligns the incentives of private parties involved, to ensure these EV charging stations have less of a risk of becoming stranded assets.

NEVI can also be used to ensure the electric reliability of charging stations and, potentially, can assist with improving the reliability of the grid itself. At certain EV charging locations, such as those along hurricane evacuation routes, it may be appropriate to equip the site with DER for power generation and storage, should the grid be incapable of delivering electricity to the site during storms. When this co-located equipment is not offering energy services to the charging station, it can be offered into ERCOT's bulk electric system under applicable rules governing the electricity market, providing reliability services that both exist today and which may expand as the Public Utility Commission of Texas considers its deliberations on ERCOT market reform. To this end, as TXDoT considers proposals for grants funded by NEVI for charging stations, the department should accept proposals that include DER assets that can augment the performance of the station.

For more detailed comments, please see the following sections, which follow the format of the State Plan for your convenience.

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Detailed Comments

1. TXDoT State Agency Coordination

We understand that TXDoT is already engaged in this matter with the Texas Commission on Environmental Quality (TCEQ) and the State Energy Conservation Office at the Texas Comptroller (SECO), which we applaud. We believe the NEVI program is as much an opportunity to improve the infrastructure of energy as it is for transportation. For this reason, we encourage TXDoT to also engage with the Public Utility Commission of Texas to leverage their expertise on the electrical grid.

2. Public Engagement

We also encourage TXDoT to engage the Electric Reliability Council of Texas ("ERCOT") and the energy industry for expertise on how best electric vehicle charging infrastructure can be leveraged to benefit the grid.

3. TXDoT Vision and Goals

NRG commends TXDoT's plan to split excess NEVI funds after the completion of charging in the Alternative Fuel Corridors between an effort to broadly electrify in rural areas by putting charging in every county seat and an effort to improve community charging by working with Municipal Planning Organizations.

4. Contracting

4.1. Contracting for installation, operation, and maintenance

In the Draft Plan, TXDoT anticipates selecting vendors who will then identify installation sites, work with stakeholders, and complete the installation and operation of the charging station.[2] To

[2] Texas Department of Transportation, *Texas Electric Vehicle Infrastructure Plan, Version 0.53*, May 20, 2022, p. 16.

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make maximum use of these assets, we believe the competencies of several industries – an EV charging network company, a Retail Electric Provider (or a Non-Opt-In Entity ("NOIE") in places where retail competition for electricity does not exist), and a travel site host company – are necessary. We address this issue more extensively below, in Section 7 on Implementation.

The Draft Plan's discussion of contracting indicates that contracts will include provisions for five years of operations and maintenance. One of the most significant expenses for charging stations will be the cost of the energy they sell to charging customers. The State Plan should address specifically how these costs should be handled. While a charging station must buy power from a REP in the competitive areas of ERCOT regardless, a NEVI grant beneficiary should engage a 5+ year initial contract for power with a REP (in competitive areas) that would provide predictability around energy costs in order to guard against the vacillation of dependent charging prices. REPs should be expected to shoulder the majority of risk around underlying commodity pricing, while the risk associated with charger utilization should be balanced between the various participants in a consortium. Charging stations in areas of Texas not open to retail competition would be subject to the rates from their applicable NOIE or (if outside of ERCOT) vertically integrated utility.

In the alternative, TXDoT should also consider as part of its State Plan the selection of one or more dedicated REPs to supply energy to charging stations made possible under NEVI. If TXDoT is providing for the operating expenses during the first five years of operation as indicated in the Draft Plan, TXDoT could contract directly with REPs for an aggregation of charging stations for the initial five-year period (or longer) to leverage the agency's buying power and obtain a customized product that results in reasonable and certain user fees.

Consortia can give small businesses a place at the table. While by the nature of their industries, EV charging networks and expert REPs are not small, host companies may be small and can rely on the expertise of their consortium partners to not only deploy and manage charging infrastructure, but also to navigate the relationship with TXDoT and the NEVI program, as well as being a source of funding for the requisite 20% capital match.

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4.2. Ownership

The Draft Plan does not overtly address how ownership of EV charging stations will be addressed. At one point, the Draft Plan notes, "language will also be added to handle ownership/operations issues after the 5-year operation and maintenance assistance ends."[3] It is not clear if TXDoT is considering holding ownership for the initial five years. We recommend that the Final Plan expressly address the question of ownership.

Interest from investors and companies in EVs and charging is robust, and there is no reason Texas taxpayers should need to provide any of the 20% matching capital funds required by the federal program. As much as possible, TXDoT should rely on companies that stake their capital at risk to fund the State's 20% cost-share and to take ownership of the electric vehicle infrastructure. Having this "skin in the game" is a crucial incentive to ensure charging stations do not become stranded assets. The capital contributions of the private sector, meanwhile, should be repaid by revenues from the use of the charging stations, as well as any revenues they earn from selling energy or reliability services to the ERCOT marketplace. Private ownership will ensure that EV charging stations will compete in a robust competitive market like gas stations do today.

Regulated utilities should not be granted ownership of EV charging stations with the benefits of these grants. Regulated utilities should also not be allowed to provide the capital contributions for the 20% matching funds required by the program if they intend to recoup such capitalization from ratepayers. Nevertheless, utilities will no doubt need to make upgrades on the grid to accommodate EV charging infrastructure. Grant funds should be allowed to be used by recipients to pay utilities for any upgrades they make to accommodate EV charging stations.

[3] *Texas Electric Vehicle Infrastructure Plan, Version 0.53*, p. 16.

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5. Existing and Future Conditions Analysis

NRG applauds FHWA's guidance that TXDoT should do a detailed analysis of both existing and anticipated conditions in the State's EV charging landscape.[4] If infrastructure plans focus solely on the supply of charging infrastructure without reasonable forecasts of the actual demand, the State runs the risk of wasting NEVI dollars on uneconomic installations. In these comments, NRG has proposed ownership and funding structures that ensure that private parties have "skin in the game" to ensure EV charging infrastructure does not become stranded assets and they will face markets risks. A robust analysis by TXDoT can set a useful common baseline of knowledge from which all participants can operate.

6. EV Charging Infrastructure Deployment

6.1. Funding sources

As described in Section 4, the State's 20% cost-share should be funded from the competitive firms seeking to own, operate, and energize charging stations in the State. Given the very active participation by many competitive firms in electric vehicles and EV charging, it is unnecessary for the State to itself fund any of the costs from taxpayer funds. Partners should come forward with the necessary capital. In most cases, these competitive firms or consortia of companies should have ownership of the charging stations. But even if the State retains ownership, it should not be necessary for the State to provide capital. Long-term contracts, for example, could be signed with station operators or REPs to compensate them over time for providing upfront capital.

As discussed in Section 7, the State should encourage and favor consortia of companies that can bring the right mix of competencies to a proposed EV charging station grant. These

[4] *National Electric Vehicle Infrastructure Formula Program Bipartisan Infrastructure Law Program Guidance*, Federal Highway Administration, February 10, 2022, p. 12.

consortia can fund the 20% cost share, take all risk, and do all work necessary to build, own, operate, energize, and maintain EV charging sites.

Such a consortium with a dedicated REP could include in its retail pricing contract a commission whose proceeds can be used to defray the private-sector capital obligations. This ensures that revenue from users ultimately will pay for the cost of the project—avoiding the possibility that these costs otherwise will be borne by taxpayers or broadly socialized to ratepayers of regulated utilities.

Because EV charging networks and sophisticated energy companies are multi-state participants, they are ideal partners for creating a seamless national EV charging network.

6.2. 2022 deployments

NRG has no comments on 2022 deployments.

6.3. 2023-2026 deployments

NRG has no comments on 2023-6 deployments.

6.4. State, regional, and local policy

NRG has no comments on interactions with other policy.

7. Strategy Implementation

TXDoT should encourage the formation of consortia of companies to bid for EV charging grants. Because EV charging lies at a nexus of energy, technology, and travel amenities that no single company can holistically cover by itself, TXDoT should favor partner consortia that can aggregate these competencies:

A host company: To dedicate real estate for the EV charging infrastructure and to provide amenities and attractions to travelers;

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A charging network company: To provide EV charging equipment installation, transaction handling, charging customer relationship management, and data capture;

A retail electric provider (REP): To provide retail electric service to the EV charging station, as well as energy management, and to offer DER or demand response capabilities into the electricity market to offset the project's cost with additional revenues.

Additional consortium members, such as a financing company, may bring additional competencies.

In the alternative, in the absence of a formal consortium, TXDoT should consider designating one or more REPs as dedicated suppliers to the EV charging infrastructure subsidized under NEVI, to the degree it is located in the retail competitive market of ERCOT. This approach will ensure rate consistency across charging stations and the ability to execute a 5-year PPA with a guaranteed price term.

According to the guidance from the Federal Highway Administration (FHWA), "Renewable energy generation and storage… would be considered directly related [to the charging of a vehicle] if it leads to lower overall construction and operating costs, and therefore would be eligible."[5] In consideration of this criteria, TXDoT should include expected revenues from participation in energy markets, ancillary markets, and other economic opportunities that would arise for onsite DER.

TXDoT should specifically consider encouraging the inclusion of onsite batteries not only for its potential to participate on the electric grid but to increase the resiliency of EV charging stations themselves, especially in times of disaster potential outages on the grid. The FHWA's guidance recommends that stations be at least 97% resilient.[6] Recharging for vehicles is most urgent during disasters, but it is during disasters that the chance for electric service interruption on the grid is greatest. TXDoT should accept investment in DER to achieve higher degrees of reliability, if cost-effective. Meanwhile, batteries and associated distributed generation can enable the site to provide

[5] *Program Guidance*, p. 15.
[6] *Program Guidance*, p. 22.

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ancillary services to the grid, demand response, and electricity market arbitrage that can provide additional revenue streams to the station.

While it should require a high degree of reliability at these charging stations, TXDoT should be wary of putting too many specific requirements on how applicant charging stations conduct their operations or design their products so long as they meet key program metrics. Private companies participating in the program will face many market, financial, technological, and other risks as they compete with one another for market share. By giving them freedom to be innovative in their product offerings and business operations, they will be able to create a more robust EV charging industry in Texas.

NRG has no comments on Sections 8 to 13.

Respectfully submitted,

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