UNITED STATES OF AMERICA
BEFORE THE
FEDERAL HIGHWAY ADMINISTRATION

Request for Information: Development of Guidance for Electric Vehicle Charging Infrastructure Deployment	)))	Docket No. 2021-25868

COMMENTS OF NRG ENERGY, INC.

I. BACKGROUND

At NRG, we are bringing the power of energy to people and organizations by putting customers at the center of everything we do. We generate electricity and provide energy solutions, natural gas, and home services to approximately six million residential, small business, and commercial and industrial customers through our diverse portfolio of brands. Our business model based on customer choice, has led to the contracting of 1.8 GWs of renewable generation. A Fortune 500 company, operating in the United States and Canada, NRG delivers innovative solutions while advocating for competitive energy markets and customer choice, and by working towards a sustainable energy future. More information is available at www.nrg.com.

NRG is not a rate-regulated utility. We do not have captive ratepayers or a guaranteed rate of return on the capital that we invest. We have to earn our customers. For example, our shareholders—not our customers or the taxpayer—bear the risks associated with capital we invest.

NRG is committed to lowering the carbon intensity of electricity we sell, both through reducing the absolute level of emissions from our own dispatchable generation, and by purchasing additional renewable resources from the market for the benefit of our present and future customers. We seek to empower our customers to reduce their own carbon intensity in the ways that they choose, providing green energy products and solutions that may be right for them. We are pleased that Congress has created two large funds for building out electric vehicle charging and alternative fueling. We ask that customer choice is a priority for design and implementation of these programs.

II. COMMENTS

1. The distance between publicly available EV charging infrastructure

There should be no defined distance between publicly available EV charging infrastructure. Defining the acceptable distance in regulation will hamper competitive firms from making the best siting decisions and could lead to low utilization rates and wasted capital in deployment.

The majority of EV charging occurs at home and at the workplace today, a trend that is expected to persist. Meanwhile, in the rapidly evolving EV industry, median and maximum vehicle ranges continue to increase. For example, the 2022 Lucid Air, has a range of 520 miles. Range concerns may even be obviated by new technologies such as battery swapping or electric roads. As the median range of on-road EVs increases, the need to rely on public charging decreases, as does the required ubiquity of charging stations.

2. Connections to the electric grid, including electric distribution upgrades; vehicle-to-grid integration, including smart charge management or other protocols that can minimize impacts to the grid; alignment with electric distribution interconnection processes, and plans for the use of renewable energy sources to power charging and energy storage

An electric distribution grid is a natural monopoly but providing EV charging is not. The question above combines a variety of services, some of which are traditionally provided by rate-regulated, monopoly utilities, and others which need not and should not be monopolized, to ensure competition leads to innovation. This competition also allows for an allocation of risk to shareholders of private capital investment in any public-private partnership. Consequently, the Federal Highway Administration ("FHWA") should be clear that vehicle-to-grid integration, smart charge management, and the provision of electricity to supply electric vehicle charging infrastructure and, thus, EVs are all subject to competition as a condition of receiving federal funds. At a minimum, the FHWA should encourage and not exclude competitive suppliers of electricity services who are capable of structuring long-term services and power-purchase agreements to accommodate this program's core policy purposes. At the same time, it is appropriate for the FHWA to acknowledge that the electric distribution system is a natural monopoly.

Appropriate firms to participate in EV charging should not be narrowly understood to be populated by EV charging network companies either, because many kinds of firms can be positioned to compete with different strengths. Traditional gas stations, competitive energy suppliers, real estate companies, or tech companies are some examples of

competitive firms that could participate directly or indirectly in the public EV charging space, and they can leverage their own expertise to bring innovation to the EV charging space. For example, the energy market expertise of competitive energy suppliers can optimize a charging station's participation in grid reliability services or wholesale markets. Please also see NRG's response to Question #5.

The co-existence of utility monopolies in a market with competitive firms undermines the efficacy of the market, regulated utilities should not participate in the retail end of providing EV charging nor in the wholesale provision of energy if there are competitive firms that can participate.

Utilities do, however, have an important role through interconnecting EV charging stations to the grid in an efficient and competitively neutral manner, and making grid upgrades to handle increased loads. Utilities should be allowed to receive federal funds to make capital investments and address operating expenses for investments they make to directly support awarded projects under these appropriations, so long as they are not permitted to charge their customers for the same amounts.

We believe FHWA should align this program with the strategic goals of the federal energy regulator, the Federal Energy Regulatory Commission ("FERC"). A robust competitive market for distributed energy resources ("DERs") is one effective solution for optimizing EVs positive impacts on the grid. Retail competitive markets administered by states, such as Texas, provide another avenue. FERC Order 2222 contemplates the aggregation of DERs to participate in organized wholesale markets, and various Regional Transmission Organizations are even now working to implement this requirement. In state plans, utilities should be directed to facilitate competitive firms' efforts to aggregate

and monetize EV charging, distributed renewable generation, and battery storage for energy management, demand response, vehicle-to-grid, and other DER services in order to participate in both FERC-jurisdictional wholesale programs and state retail markets.

3. The proximity of existing off-highway travel centers, fuel retailers, and small businesses to EV charging infrastructure acquired or funded under the Program

NRG has no additional comments. See comments on question 1.

4. The need for publicly available EV charging infrastructure in rural corridors and underserved or disadvantaged communities

A robust competitive market will provide charging infrastructure in high EV-traffic areas even without subsidy since these areas will likely be profitable. Therefore, NRG agrees that federal funds should prioritize EV charging projects in rural, underserved, and disadvantaged communities (potential 'charging deserts'), but should nevertheless rely on competitive firms to build, own, and operate such infrastructure. While an investment case in a charging desert might be marginal without a grant, such projects can meet investment much more easily with one. Giving priority to rural, underserved, and disadvantaged communities in state plans will maximize EV charging coverage.

State plans should include a comprehensive gap analysis that considers the evolution of market demand, anticipated changes in technology, and investments of current market participants to consider where such charging deserts may develop.

5. The long-term operation and maintenance of publicly available EV charging infrastructure to avoid stranded assets and protect the investment of public funds in that infrastructure

NRG submits that the FWHA should allow the operation and maintenance of EV charging infrastructure to be a service provided as a bundled product together with energy supply services. Doing so can mitigate stranded asset risks and allow for a combined structure where a party like NRG provides an up-front contribution to the project's capital cost and services through the life of a contract. For example, a public entity interested in installing EV infrastructure could sign a long-term power purchase agreement with a competitive energy supplier with an agreement that the energy supplier ensures the installation of the equipment and recoups its investment over time with a small adder on the price of the power it supplies. By involving players like competitive energy suppliers, they can also use their energy expertise to provide energy management, innovative products like time-of-use pricing, or optimize market participation with demand response or vehicle-to-grid products, as described in response to Question #2.

Allowing such arrangements would ensure that firms that stand to benefit from grants of public funds shoulder some financial risk. That is not something that will happen automatically if the program does not readily accommodate competitive suppliers of

electricity services. Competitive firms that receive federal funds to build, own, and/or operate EV charging stations should demonstrate adequate capitalization to sustain operating losses for an extended period of time. Funds could be made available as forgivable loans, with terms of forgiveness including a certain period of continuous operation, or other metrics that will assure that the use of public funds is justified.

6. Existing private, national, State, local, Tribal, and territorial government EV charging infrastructure programs and incentives

NRG has no comments.

7. Fostering enhanced, coordinated, public-private or private investment in EV charging infrastructure

Please see the response to Question #5.

8. Meeting current and anticipated market demands for EV charging infrastructure, including with regard to power levels and charging speed, and minimizing the time to charge current and anticipated vehicles

FHWA should recognize that EV charging is still a nascent industry and faces investment risks in technology. Grants should remain technology neutral and leave competitive firms to make their own choices regarding the charging technology used.

EV charging also faces siting risks, especially as this program incentivizes building infrastructure before market demand warrants it. The law anticipates this risk by limiting its scope to defined alternative fuel corridors. Within those parameters, competitive EV charging firms who face other investment risks (real estate investment risk, opportunity risk, and the like) are best placed to make good decisions about market demand.

States and other entities should be aggressive but realistic about the electrification of the automotive fleet. The conversion faces other hurdles aside from EV charging infrastructure. EV technology is rapidly advancing, battery prices continue to drop, manufacturing capacity is still low, and public familiarity with EVs is in its infancy. If EV charging infrastructure is built far ahead of the need of EV drivers, many assets will be left under-utilized and will risk becoming obsolete before they are ever economic. States and other entities participating in the program should make careful and realistic forecasts of EV adoption and should plan to build infrastructure in stages to keep pace with demand without getting too far ahead of the need.

9. Please describe any other factors that you suggest that we consider in developing the EV Charging Program guidance

NRG has no comments.

10. FHWA also requests comments to inform the implementation of the Charging and Fueling Infrastructure Program to provide discretionary grants for corridor and community charging. Specifically, please provide examples of best practices relating

to project development of EV charging infrastructure and hydrogen, propane, and natural gas fueling infrastructure at the State, Tribal, and local levels

NRG has no comments.

11. **What topics do you suggest that we address in guidance on project development of EV charging infrastructure and hydrogen, propane, and natural gas fueling infrastructure at the State, Tribal, and local levels to allow for the predictable deployment of that infrastructure?**

    NRG has no comments.

12. **Please provide any suggestions to inform the administration of competitive grants under the Charging and Fueling Infrastructure Program for corridor and community charging.**

    NRG has no comments.

III. CONCLUSION

NRG believes the best way to maximize value for customers is to give them choice, and that value includes decarbonization through the electrification of the nation's car fleet. We believe the best way to proceed with the build-out of the nation's EV charging infrastructure is to keep the idea of customer choice front of mind. While regulated utilities may provide states with an obvious partner for transformation, by their very nature they do not give consumers choice. And

without that market discipline, we will not be able to build a charging network that is nimble, innovative, efficient, or cost effective. So, above all, we urge FHWA and other bodies to design their programs to recognize the power of competitive markets to drive change and to empower competitive firms to lead the transformation.

Respectfully submitted,

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