



April 27, 2020

VIA ELECTRONIC FILING

Hon. Michelle L. Phillips
Secretary to the Commission
New York State Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

Re: Comments on Department of Public Service Staff Make-Ready Whitepaper in Case No. 18-E-0138: Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure.

Dear Secretary Phillips:

Tesla, Inc. ("Tesla") thanks the Public Service Commission ("Commission") and Department of Public Service Staff ("Staff") for the opportunity to provide comments in response to Staff's Whitepaper Regarding Electric Vehicle Supply Equipment and Infrastructure Deployment ("Whitepaper") filed on January 13, 2020. New York State has ambitious climate mitigation goals including the Climate Leadership and Community Protection Act, as well as being a key sponsor to the Multi-State Zero Emissions Vehicle ("ZEV") Memorandum of Understanding that sets a target of 850,000 ZEV in NY by 2025. The Statewide Make-Ready program proposed in the Whitepaper is equally ambitious and can help NY achieve its climate and ZEV goals.

With the 2025 ZEV goal rapidly approaching, it is imperative that the Make-Ready program accelerate investment. This can be achieved by streamlining the program, and leveraging existing tariffs, utility processes and charging deployment strategies so as not to create delays or unintended cost increases. With the electric vehicle ("EV") industry and charging technology still in its relatively early stages and rapidly innovating, we recommend modifying aspects of the program to provide participants with greater flexibility in order to maximize the program's charging deployments and societal benefits.

Our recommendations include:

- Grounding the program's eligibility and technology requirements in the benefit-cost analysis ("BCA") framework. All EV customers, use cases or technologies that can provide significant societal benefits should be included in the program on equal footing, while technologies or investment requirements that increase program costs should be avoided.



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- Modifying the program into two distinct incentive tracks. The first being an EV make-ready program that modifies utility tariffs and is integrated into existing service request processes to cover infrastructure investments only on the utility's side of the meter. This track would waive all, or a portion, of contribution in aid of construction ("CIAC") or excess distribution fees ("EDF"). The second track is a program for make-ready investments on the customer side of the meter. Program participants would have the option to apply for incentives under one, or both, of the tracks.
- Removing proposed program requirements that are redundant or in conflict with external processes such as electrical and building permit requirements, or negotiated contractual terms between charging operators and site hosts. For example, requirements to future-proof charging stations with additional connection points for future chargers may not be permitted by site hosts and should not be required.
- Adopting an annual program review process beginning in January 2022. Potential program modifications should also be proposed and considered as part of the annual review process.
- Extending eligibility to medium- and heavy-duty vehicles.
- Expanding charging connector eligibility to Tesla Level 2 plugs that are located at non-public locations, including workplaces, fleets or multi-unit dwellings.

The remainder of our comments expounds on the recommendations above, and provide feedback on topics raised in the Whitepaper. Finally, we respond to the Commission's seventeen questions issued in the Notice of Comments on February 5, 2020.

About Tesla

Tesla's mission is to accelerate the world's transition to sustainable energy through the deployment of electric vehicles and sustainable energy products, including battery storage and solar energy systems. Globally, Tesla has produced more than 1 million all-electric vehicles. Tesla's vehicle line-up includes the Model S sedan, Model X crossover vehicle, Model 3 sedan, and our newest offering, the Model Y crossover vehicle. The vehicles have all-electric range of up to 391 miles per charge, and industry leading efficiency, performance, and safety ratings. Tesla is also planning to launch a Roadster sports car, a Cybertruck pickup, and a Class 8 heavy-duty vehicle, the Tesla Semi.

In support of these vehicles and our customers, Tesla has uniquely made substantial investments in developing, owning and operating a direct current fast charging ("DCFC") network, The Supercharger Network, to provide drivers with quick and convenient access to charging. There are currently more than 1,900 Supercharger locations and 17,000 Supercharger stalls globally. In New York State, there are 48 Supercharger locations and a total of 419 Supercharger stalls. Tesla has periodically offered free Supercharger access as an incentive to purchase a vehicle. Customers that utilize Superchargers and do not have free credits are billed on a \$/kWh basis in New York with prices varying between

\$0.26/kWh and \$0.30/kWh depending on the location.¹ Supercharger equipment is manufactured at Tesla's Gigafactory in Buffalo, NY.

Tesla also has an extensive Level 2 "Destination Charging" network with chargers located at hotels, restaurants and shopping centers around the world. Destination Chargers operate on 208/240 volt, alternating current circuits and can provide about 25 to 50 miles of range per hour. There are more than 27,000 Destination Chargers globally. There are currently 446 Destination Charging locations and a total of 1,046 chargers in New York. Unlike the Supercharger network, Tesla does not own Destination Chargers. Instead, Tesla works with businesses and property owners to install the charging equipment, and the site host owns the equipment and pays for electricity while Tesla markets the chargers to drivers. Use of Destination Chargers is free. Tesla also works with businesses to deploy banks of Tesla Wall Connectors, Tesla's Level 2 charging product, at workplaces and multi-unit dwellings. The Tesla Wall Connector is available for purchase from Tesla's website.

Creating a seamless and convenient charging experience is key to enabling mass market EV adoption because it ensures people do not need to compromise to drive electric. Since the Tesla Supercharger network's initial development in 2012, Tesla has gathered valuable experience about the challenges and barriers to deploying, owning and operating DCFC infrastructure. At the same time, Tesla continues to innovate on how to provide a reliable network with a seamless customer experience. Last year, Tesla launched its V3 Supercharger capable of operating up to 250 kW and providing up to 75 miles of range in as little as 5 minutes.² The new V3 hardware along with other software and vehicle updates are expected to cut charging time in half relative to the previous Supercharger hardware.³

Grounding the Program Eligibility and Requirements in BCA Framework

The fundamental purpose of EV Make-Ready programs is to provide electric service where vehicles are parked so that a customer can connect a charging station. The "make-ready" concept is similar to standard line extension or new service requests that provide electric service to a parcel or building.⁴ A key tenet of line extensions is that utilities provide the service on a non-discriminatory basis so long as the customer does not create system reliability issues. In other words, the utility or regulator do not dictate what the customer uses the electricity for, and equipment or appliances they use. Connections

¹ Staff's Whitepaper incorrectly states that Tesla Supercharger customers are billed on a per minute basis in New York. See Whitepaper pg. 13.

² Staff's Whitepaper states that ultra high-powered chargers including V3 Superchargers have not yet been widely deployed (pg. 18). There are currently three V3 Supercharger locations operational in NY, and nearly all new Supercharger locations will be V3 hardware.

³ The V3 Supercharger is an entirely new charging architecture that includes site-wide power sharing in order to minimize the size of the utility service connection while maximizing the capabilities of the service.

⁴ Albeit, EV Make-Ready programs also tend to allow for utilities to cover connection costs on the customer's side of the meter and some additional costs on the utility side that are not covered under traditional line extension allowances.

are permissible as long as the customer's electricity consumption does not exceed the capacity of the connection and capabilities of the grid. In most utility territories, line extension policy provides for "cost allowances" to help cover the cost of interconnection of new load by offsetting the initial utility upgrade costs with expected future revenues from the new customer being interconnected. Beneficial line extension policies are justified in the case of electric vehicle charging given the findings that EVs can provide downward pressure on electric rates for EV-owners and non-EV owners alike.⁵

New York's Make-Ready program should build off the tried-and-true non-discriminatory service connection process rather than imposing arbitrary eligibility and technology requirements that are not based on safety or reliability standards. Instead, the Make-Ready program should be strongly rooted in the BCA framework. Any EV use cases and technologies that can provide significant societal benefits should be included in the program on equal footing with the same incentive levels. This is the approach that the Washington, DC Public Service Commission took last year when it approved a non-discriminatory make-ready program available to all vehicle and charging connector types.⁶

The Whitepaper notes the intention of maximizing ratepayer benefits as part of the proposed program design.⁷ However, an assessment of the program's different technology or process requirements was not conducted to ensure that the requirements do, in fact, yield maximum benefits.

The BCA cited in the Whitepaper found net benefits of EV deployments for New Yorkers.⁸ It is important to note, however, that the analysis did not determine the types of vehicles, brand of charger or standards that would be utilized to yield the benefits. That is because, ultimately, those factors are largely irrelevant. In a Societal Cost Test of EV adoption, benefits for all New Yorkers include EV drivers' vehicle O&M savings, avoided fossil fuel costs, avoided CO₂ and criteria air pollutants, security value of fuel, and any applicable Federal tax credits. The benefits are agnostic to vehicle brands, types of vehicles, and types of charging connectors. Benefits largely accrue as long as electric vehicles are adopted, utilized, and displacing fossil fuel vehicles.⁹

Given the need to achieve New York's climate goals and maximize societal benefits, the Make-Ready program should seek to be as inclusive as possible and avoid picking technology winners and losers.

⁵ Jason Frost, Melissa Whited, Avi Allison. June 2019. "Electric Vehicles are Driving Electric Rates Down." <https://www.synapse-energy.com/sites/default/files/EV-Impacts-June-2019-18-122.pdf>

⁶ Washington DC Public Service Commission. Order No. 19983 in Formal Case 1130, filed August 2, 2019. At pg. 13.

⁷ See Whitepaper at pg. 2-3.

⁸ See Whitepaper pg. 22. Benefit-Cost Analysis of Electric Vehicle Deployment in New York State, prepared for NYSDERDA by Energy & Environmental Economics, ICF, and MJ Bradley & Associates (February 2019 EV BCA), (February 2019). Available at: <https://www.nysderda.ny.gov/-/media/Files/Publications/Research/Transportation/19-07-Benefit-Cost-Analysis-EVDeployment-NYS.pdf>.

⁹ Once EVs are adopted, there are also potential incremental benefits based on their usage profiles.

It is also important to avoid program requirements that may increase program costs or ultimately hinder the transition to electric transportation in New York.

Separating the Make-Ready Program into Two Tracks

The Make-Ready program as constructed in the Whitepaper appears administratively cumbersome with prescriptive requirements, steps and processes. Parsing the program into two separate and distinct tracks can help streamline the process and provide additional flexibility for applicants. The first track would be an EV make-ready program that covers infrastructure investments in front of the meter and is rooted and integrated into existing line extension and serve request processes. Since line extensions are addressed in utility tariffs, the program can be developed relatively quickly by directing utilities to update tariff sheets with new allowances for commercial EV charging accounts without other technology, process, or program requirements. Support for a customer's EV charging deployment would come in the form of waiving all, or a portion, of CIAC or EDF charges. Budgets and cost-containment mechanisms for this track can be designed in different ways, including setting a per site or stall allowance for upgrades on the utility side of the meter, or extending the revenue test to ten or more years.¹⁰

The second track is a more encompassing program that includes make-ready investments on the customer side of the meter and follows the form described in the Whitepaper. In this track, front of the meter costs would be included as well as customer side work. The utility either installs the make ready equipment themselves with a project allowance, or the customer would install and receive a rebate from the utility for the make-ready work.

The benefit of our proposed modification is that applicants would have the flexibility to pursue relief via a minor modification to existing utility tariffs and line extension processes, and to also pursue Make-Ready support behind-the-meter in a more encompassing program if they are interested.

Remove Requirements that are Redundant or in Conflict with External Processes

Even if the program were split into two tracks, the behind the meter track would benefit from additional refinement in order to streamline the process and reduce risks of potential cost increases or project delays. Proposed program requirements in the Whitepaper that are redundant or in conflict with external processes such as electrical and building permit requirements, should be removed. We recommend removing the following program requirements:

¹⁰ The Florida Public Service Commission recently approved a utility-side of the meter make-ready program for Tampa Electric Company that utilized a 10-year revenue generation test when calculating an applicant's CIAC. See Order NO. PSC-2020-0108-PAA-EI issued April 16, 2020.

- *Future proofing should be optional, not required.* Later in our comments we go into greater detail about future proofing considerations, but in general, future proofing may not be permissible in all instances because of site host preferences and limitations. For example, a site host may only be willing to allow a developer to install chargers in four parking stalls because of space constraints. Requiring developers to plan and install equipment for future expansions may be off-putting to some site hosts, particularly those that are not entirely convinced hosting a charging station is good for their property, and therefore could jeopardize developments. It would also increase project costs with materials or infrastructure that may never be utilized. If customers want to future proof, it should be optional, and they should describe the future proofing measures being planned as part of their application.
- *Do not require a process to qualify contractors.* The Whitepaper did not describe what the process for becoming a qualifying contractor would entail,¹¹ but it appears to be an unnecessary step that may slow the process and potentially limit the pool of available contractors. Local building and electrical permitting requirements already require use of certified contractors to ensure the stations are constructed safely and in compliance with all relevant codes.
- *Limit the data sharing requirements to categories that inform grid planning and general usage trends.* Requiring program participants to provide charging session-level data on a quarterly basis is administratively cumbersome. It is unclear how session-level data would provide more value to utilities, the commission or ratepayers relative to 15-minute interval data from the utility's meter. We recommend that separately metered EV charging accounts participating in the behind-the-meter program not be required to submit session level data, and instead the 15-minute interval data from utility meters be utilized to understand station usage patterns.

Adopt an Annual Program Review Process Beginning in January 2022

The Statewide DCFC per-plug incentive program has seen very limited uptake in the first year of the program,¹² and modifications to the program design were recently Ordered after Tesla issued a Request for Modification.¹³ Given the ambitious scale of the make-ready program, and urgency of deploying new charging infrastructure, it is crucial that the program be widely subscribed soon after it is launched. If there are unintended consequences or issues that arise from the program, or low uptake, those issues should be remedied quickly rather than waiting until 2023 to initiate a review process.

Holding an annual program review process that begins January 2022 will help ensure that the make-ready program keeps pace with evolving market conditions, technology advancements and EV

¹¹ See Whitepaper pg. 29.

¹² See Whitepaper fn. 26.

¹³ Commission Order in 18-E-0138 issued on March 19, 2020.

customer preferences. Moreover, it may be beneficial for the Commission and utilities to host review sessions for interested stakeholders that coincide with the utilities' quarterly program reports.

Extending Program Eligibility to Medium- and Heavy-Duty Vehicles

The Make-Ready program, as proposed, is limited to light duty applications. For New York to meet its ambitious climate, air quality, environmental justice, and EV goals, the program should be expanded to include medium and heavy-duty vehicle ("MD/HD") applications. It has been evident from stakeholder engagement throughout this proceeding, especially during the Make-Ready Conference, that the Commission should not delay this process. Diesel buses and trucks emissions are concentrated in disadvantaged communities and cause adverse public health outcomes including high rates of asthma and lung disease. Expediting the electrification of these sectors is vitally important for improving air quality and public health in disadvantaged communities.

In the last five years, the commercial maturation of electric buses and trucks has been significant with commercially available models now available from numerous manufacturers across an assortment of vehicle applications. Since the announcement of the Semi, Tesla has been engaged with truck fleets across the country. These fleets are oftentimes making purchasing decisions based on total cost of ownership which includes getting charging infrastructure in place to allow them to operate their trucks effectively. Building out charging infrastructure for a fleet is a potentially complicated and expensive proposition and can be a significant impediment to electrification for most operators. It is critical that New York prioritize utility support for these efforts through the Make-Ready program, in order for these fleets to begin planning their transition to electric vehicles in the near term.

While MD/HD vehicles have unique charging needs compared to light duty non-fleet vehicles, there is not a huge deviation when it comes to service connection issues when compared to other EV charging use cases. For instance, the power levels needed for the charging infrastructure for a mid-size fleet of vehicles can be similar to a large DCFC charging location. In both cases, the utility would provide the same essential make-ready services on the utility and customer side of the meter – there would be no difference from a utility build out perspective. The planning horizon, however, may be longer for MD/HD fleets with high-power charging making it even more important to include them in the Make-Ready program from the start. From a program administration perspective, it would be fairly straightforward to expand eligibility in this program to include medium and heavy-duty charging infrastructure.

Expanding Charging Connector Eligibility to Tesla Level 2 Plugs

Staff proposes that only J1772 Level 2 connector types be eligible to participate in the program.¹⁴ This restriction unfairly inhibits potential applicants from utilizing Tesla Wall Connectors. As previously

¹⁴ See Whitepaper pg. 30.

noted, the societal and ratepayer benefits arising from EVs don't depend on whether an EV is charged with a Tesla connector or a J1772 connector. What matters most is that there's an EV and it is being charged. Tesla understands the potential sensitivity of utility programs enabling the Tesla Wall Connector at public locations because only Tesla vehicles can utilize the equipment and Tesla vehicles come standard with a J1772 adapter. However, Tesla Wall Connectors should, at minimum, be eligible to participate in the program at non-public locations, including workplaces, multi-unit dwellings and fleet depots. Since these locations are not public, site hosts should be able to utilize charging equipment that best fits the needs of their fleet or location rather than be incentivized into sub-optimal experiences that require frequent use of adapters.

Considerations for Future-proofing

While future-proofing is an admirable goal of any infrastructure project, care must be taken when developing program requirements because there's a fine line between future-proofing and "gold-plating". One often stated goal of future-proofing is to protect ratepayer investments from becoming obsolete. Future-proofing often entails adding more technology, equipment and capabilities than are necessary in the present in order to expand service in the future. That leads to additional project costs for capabilities that may never be utilized in the future. Future-proofing should not be a program requirement, but instead an option for applicants that have plans to expand stations over time.

In Tesla's experience, the most crucial form of future-proofing is simply the establishment of utility service at the charging location. Establishing a utility connection can be challenging and lengthy process, but once service is there, it's essentially there indefinitely. Operators can replace older charging equipment for new equipment in the future. If the new charging equipment is higher powered and exceeds the existing transformer's capabilities, all that may be required is a larger transformer.

As previously noted, future-proofing may not be aligned with the interests of site hosts because they are not able or willing to commit to future site expansions at the time of initial development. Moreover, operators may prefer to develop many new sites to meet EV driver needs over time rather than upgrading existing stations. For example, Supercharging, generally has two distinct applications and the network is planned accordingly. The first is intended to enable long-distance travel with charging stations conveniently located along highway corridors. The second is intended to make charging ubiquitous in urban metros where charging for some residents can be a challenge given the lack of charging in multi-family homes or workplaces.

Station planning has some similarities to utility system planning in that station capacity is designed to serve peak demand and kWh throughput requirements (i.e., miles of added range) while trying to minimize station congestion since congestion results in poor customer experience. Additional charging capacity in the form of multiple chargers at a location is akin to a utility's reserve margin, and helps

ensure DCFC operators can still provide a level of service customers expect in the event of an equipment malfunction, or station congestion. Additional charging stalls and capacity are added to the network to relieve congestion. Similar to a utility adding capacity on their grid, the capacity may be added at the congested station in the form of additional charging stalls, or at a new charging location nearby that will rebalance demand on the network.

Responses to the Commission's Questions from the February 5, 2020 Notice of Comments

- 1. Staff recommends incentive level step-downs should be informed by key factors influencing station economics including station utilization, operating costs, and charger costs from data the Joint Utilities will publish in quarterly reports. What other factors should be considered? How frequently should these step-downs occur? What notice process should the developer community receive prior to such stepdown?**

In-line with our recommendation for an annual program review and modification period, any potential step-downs in incentive levels should arise from the review process. Stakeholders should have the opportunity to provide input on potential modifications and incentive step-downs. If an incentive stepdown should occur, program applicants and charging developers should be provided at least 12 months' notice because of the long-lead time to develop charging locations.

- 2. Should performance incentives be awarded to utilities for driving down costs, encourage beneficial siting, and engage proactively and successfully with developers? How should the incentive be structured and what outcomes will measure performance?**

Performance incentives are potentially powerful tools to help reduce costs, but should be considered as a foundational mechanism for *all* utility processes or programs they administer, rather than creating one-off programs that are potentially disruptive to customers. In other words, utilities should be rewarded for driving down costs for all programs and in a consistent fashion. For instance, basing performance incentives on factors including customer satisfaction of the program, the utility's timelines to process applications, the overall number of participants, and how the program performs relative to the per charger or location budget would be appropriate. These types of designs would be more closely aligned with participant's interests, whereas incentivizing utilities to more actively interject in station siting and review may lead to competing interests with sites hosts and charging operators, and ultimately delay deployments.

As previously noted, the Make-Ready program should not create additional processes that are incompatible with charging development processes or that may disrupt an already lengthy and delicate process to contract with site hosts and develop stations. As currently constructed, the proposed design in the Whitepaper appears to instruct utilities to dictate where chargers should be located. It is not clear

whether the intent is for the utility to tell the applicant where equipment should be located on the applicant or site host's property, or whether the utility would be incentivized to direct which properties are developed. The former is more appropriate but still potentially problematic. Tesla often engages utilities prior to submitting formal service request in order to identify service connection points and potential lower cost locations on the site, and has found it to be a helpful practice. However in some cases, due to space constraints or preferences from the site hosts, chargers must be located in specific areas of the property even if it's not theoretically the lowest cost option. Directing utilities to take a more active role in siting locations after a service request is submitted can lead to additional costs to redesign stations, resubmit building and local permits, renegotiate contract terms and easements with site hosts, and ultimately lead to project delays or abandonment.

3. Staff recommend that the several upstate Regional Economic Development Councils ("REDC") be designated as strategic locations where a limited quantity of stations will be eligible for additional incentives... How should the competitive process be administered? How should sites be selected, including identifying any locations within an REDC that should be targeted or excluded, ensuring geographically dispersed sites, and determining the size of the program? How should locations be identified within an REDC? Does this proposal best support the need for a minimum network of public charging?

Prior to proceeding with the proposed competitive procurement process or additional incentives for stations in upstate REDCs, additional work should be done to understand developments that may already be underway or planned in the regions by other charging developers, such as the New York Power Authority, and whether other funding mechanisms such as grants from New York's share of Volkswagen Appendix D funds could be used to develop the locations. Moreover, there may be lower cost alternatives than increasing incentive amounts from a ratepayer cost perspective, including reforming utility rates so that rates DCFC stations effectively pay are more closely in-line with average commercial customers.

If the REDC competitive solicitation were to proceed, it can be designed in such a way that proposals for discrete areas within each region are requested, such as applicants within two miles of the New York State Thruway between mile markers 350 and 410. Florida's Department of Environmental Protection is using a similar approach to award grants along highway corridors in 40 mile increments under their Volkswagen Appendix D program.¹⁵ Utilizing the same approach in NY would ensure that there is adequate foundational coverage to allow EV drivers to travel to all areas of the State.

¹⁵ See Florida Department of Environmental Protection's Request for Application for Electric Vehicle Charging Infrastructure Phase 1. RFA No. EVCI-RFA-01. Pgs. 4-7. Available from <https://floridadep.gov/sites/default/files/EVCI-RFA-01%20-%20Deadline%20Extended.pdf>

- 4. Staff proposed that existing Commission policy preserving the conventional cost-of-service ratemaking approach be maintained, and that the Commission revisit the issue at the DCFC per-plug incentive program’s midpoint review. Are there ratemaking activities that may be complementary to the existing DCFC per-plug incentive program and the proposed Make-Ready program?**

Utility rate reform will be critical if New York is to meet its Climate and ZEV goals. Rate reform should be viewed as a foundational action complementary to all future programs because rates signal to customers about the best times to charge. Revisiting rate design in 2023 is far too late and likely puts significantly more utility ratepayer funding at risk than encouraging investment via rate reform in the near-term. Even if the rates weren’t revenue neutral and instead were subsidized in some way, the costs of doing so would likely pale in comparison to alternative measures taken to encourage EV adoption and charging infrastructure development including this proposed Make-Ready program. For one, potential costs of new rate designs are dependent on station utilization, and are incurred over time rather than as large upfront incentives. Moreover, incentive rates can be designed in such a way that the incentive automatically declines as load factor increases, thus reducing program administrative costs.

It is also important to note that conventional cost-of-service ratemaking and electric vehicle rates are not mutually exclusive. The Whitepaper asserts that revenue neutral time-of-use rates will not likely generate incremental benefits to charging station developers.¹⁶ It goes on to claim that revenue neutral time-of-use (“TOU”) rates will create winners and losers relative to applicable demand billed service because higher utilization stations would see less favorable economics on a revenue neutral TOU rate.¹⁷ Multiple utilities and commissions around the country, however, have developed revenue neutral rate designs that reduce costs for charging operators because of the beneficial load profiles stations have.¹⁸

Directing utilities to develop rate proposals, whether they be specific to commercial EV accounts or TOU rates generally applicable to all commercial customers, and the Commission formally investigating rate options would complement the actions taken in the DCFC per-plug incentive program and proposed Make-Ready program.

- 5. Staff proposed that 20 percent of each utility’s publicly accessible DCFC Make-Ready Program budget be directed towards stations within 10 miles of disadvantaged communities. How should LMI and environmental justice communities be identified?**

¹⁶ Whitepaper at pg. 59

¹⁷ Whitepaper at pg. 60

¹⁸ See NV Energy Electric Vehicle Commercial Charging Rider Time-of-Use schedule as part of Nevada PUC Docket Numbers 20-03024 and 20-03025. See Eversource Energy Connecticut EV Rate Rader in Docket No. 17-10-46RE01. See PG&E Commercial Electric Vehicle Rate in California PUC Application 18-11-003. See Xcel Colorado S-EV Rate Tariff, Colorado PUC Proceeding No. 19AL-0209E.

What are the appropriate siting criteria and rebate level to promote EV penetration into environmental justice areas?

Utilities should work with local stakeholders to design disadvantaged community criteria that best reflect the conditions of their territory rather than adopt a statewide standard or metric. Higher incentive levels would also be appropriate to encourage charging siting in or near disadvantaged communities.

It is also important to include MD/HD vehicle eligibility as part of the program because many MD/HD fleets are located in or near disadvantaged communities, and therefore, residents of those communities are constantly subject to poor air quality.

6. How should existing utility programs, established in negotiated multi-year rate cases, that address similar make-ready costs be incorporated into Staff's proposed Make-Ready program?

If there are existing utility make-ready programs or line extension programs for EV charging, and those programs have more favorable terms and incentive levels than those proposed as part of the statewide Make-Ready program, those existing programs should remain in place until funds are exhausted or it is fully subscribed. Once those programs are exhausted, the statewide program should be implemented.

If existing utility programs exist but they provide less support than the programs proposed in the Whitepaper, those programs should be replaced by the statewide program. Otherwise those existing programs may not see any customer participation as applicants seek better terms in the new program.

7. Staff proposed that all installations participating in the Make-Ready Program be sufficiently future-proofed by oversizing all components that can be oversized with minimal incremental cost. On the customer side, this includes trenching and conduit, and likely the panel. What distribution system components should be future-proofed by oversizing or other means, and what are the associated incremental costs?

As previously noted, future-proofing should not be a requirement of the program given the potential added costs, and site host and location considerations. Recommendations for future proofing can be made, including building a larger transformer pad or space for additional panels or switchgear in case of future expansion. This is particularly relevant for new construction, or sites and fleets with clear future expansion plans, where it may make sense to plan for future EV charging needs upfront in order to save significant costs.

- 8. A common EV conductive charging system and interoperable communications systems are important aspects of an efficient public EV charging infrastructure network. How can the proposed Make-Ready Program stay current and encourage leading technology types and standards?**

The Make-Ready program should focus on establishing electric service in a non-discriminatory fashion without imposing interoperability requirements at this time. NY can stay current by tracking customer preferences and new technologies that are introduced over time during the program evaluation periods.

- 9. While not proposing make-ready funds at this time, Staff's proposal suggests implementing policies that encourage fleet electrification. How can the Commission best promote fleet electrification that minimizes impacts to the distribution grid?**

The most efficient way for New York to encourage fleet electrification and minimize impacts to the distribution grid is to reform rates. In particular, introducing TOU rates would signal to fleets about the best times to charge. TOU rates are also easier for fleets to manage from a business planning and cost forecasting perspective when compared to demand charges.

Without rate reform, fleet electrification in New York will likely be limited relative to other States. Unlike diesel prices which are relatively uniform nationally, the effective electricity prices paid by fleets can vary widely by State and utility. The disparity is primarily a function of utility rate designs, and in particular, demand charges. Fuel costs, including electricity costs, are a significant component of the evaluation of the total cost of ownership for operating a fleet and therefore need to be addressed upfront to create more certainty and provide fleets with the confidence to be able to transition to electric options in the near term.

- 10. Staff's proposal recommends that the Joint Utilities file quarterly reports and annual program overview reports. What Make-Ready Program information should be reported in addition to: the number of station owners participating in the Make-Ready Program; the number of sites for which incentives were issued; the number of Level 2 and DCFC plugs installed; program costs incurred detailed by equipment and installation; and, billed usage?**

The data points included in the question are sufficient for utility overview reports. However, it is important to ensure that customer, equipment or manufacturer specific information is not disclosed publicly or to third-parties as that information can may reveal business sensitive information and trade secrets.

11. EVs and EV infrastructure represent a point of potential value to the grid. What actions can be taken to optimize this value?

In the near term, the most efficient way to increase the potential value of EVs to the grid is to reform utility rates by introducing TOU rates. Sending customers signals about the best times to charge will incentivize them to change their behavior in order to minimize their costs, which will increase the value to the grid. Any administrative interjection that is not based on rates that reflect grid costs and values would be economically and administratively inefficient.

12. Staff's Whitepaper contemplates that the automated, connected, electric, smart vehicles of the future will adopt varying software, depending on the targeted market and manufacturer. Staff did not propose that the Commission regulate vehicle software systems, but did underscore the importance of current software systems enabling future use cases. How should smart charging be approached and enabled?

The most efficient way to approach smart charging today is to reform utility rates by introducing TOU rates. Seeking to change charging behavior through software or administrative interjections without providing clear and predictable price signals first will be economically and administratively inefficient and lead to a bad customer experience.

13. How should developer feedback be incorporated into the utility planning process, particularly to account for EV load growth?

Similar to other commercial and industrial customers, utilities can survey charging providers about their expansion plans and needs. Potential locations for electric MD/HD fleets can be identified by mapping where existing diesel fleets and logistical hubs are located to assist with long term utility planning.

14. The focus of the Staff EVSE&I Whitepaper is a utility Make-Ready Program for light-duty EVs; what are the critical issues to resolve and what are the critical achievements to ensure the charging infrastructure needs of medium- and heavy-duty fleets are met? With what timing and sequencing? What considerations support your recommendation?

As discussed above, MD/HD fleets should be included in the proposed Make-Ready program. From a technical perspective, there is no significant difference between a large DCFC charging station and a fleet's charging infrastructure. Utilities have experience in other sectors with similar power demands and should be able to provide the same make-ready services without needing a newly designed program that will take months, if not years, to get off the ground. Fleets also tend to have the longest lead times for their infrastructure build outs in terms of planning so they will need to begin the process immediately for New York to meet its climate and air quality goals.

- 15. Should resiliency measures be considered when determining Make-Ready Program eligibility? What specific thresholds and measures should be considered? For example, Con Edison uses the Federal Emergency Management Agency (FEMA) 100-year flood map plus three feet as the threshold for determining when storm hardening and resiliency measures such as elevating, sealing and protective barriers are needed to protect critical assets from flooding concerns. How should resiliency measures for charging infrastructure participating in the Make-Ready Program be funded? For example, should developers who locate charging infrastructure in flood-prone areas be required to fund the flood mitigation measures to incentivize developers to avoid high risk locations?**

Station resiliency measures should not be considered when determining Make-Ready program eligibility because these types of considerations are already reviewed as part of local planning, building and electrical permit processes. For example, local planning boards may require equipment to be elevated if it is located in a floodplain. Station site design and resiliency planning should be left to local authorities having jurisdiction.

- 16. Staff recommends that the Joint Utilities develop a common Interconnection On-Line Application Portal (IOAP) for EV charger applications and a common load serving capacity map tool so that developers have a common experience across all New York utilities. By when should the Joint Utilities be required to have these EV IOAP and load serving capacity map tools functioning?**

At this time, Tesla does not have a position about when an EV IOAP and load serving capacity map tool should be required.

- 17. Staff recommends that DCFC station developers be allowed to 1) bundle costs from multiple DCFC site locations within a service territory if all plugs are completed during a developer-chosen 18-month period, and 2) amend an approved bundling application with additional sites if those sites will also be completed during the same period. Would an alternative bundling approach or bundling period be more feasible or efficient?**

Tesla appreciates the Whitepaper's novel design for developers to bundle project costs as part of the program, however, we do understand that there may be administrative challenges for implementation and the concept may not work for all charging business models. Therefore, we do not have an opinion about the proposed bundling mechanism or alternative approaches at this time, but reserve the right to comment on the proposal during Reply Comments.

Conclusion

Tesla appreciates Staff's work to develop a comprehensive statewide Make-Ready program, and for the opportunity to provide recommendations and feedback. It is crucial that New York rapidly accelerate charging deployments and EV adoption in order to achieve its climate and ZEV targets. The Make-Ready program has the potential to lead a meaningful increase in charging deployments. Streamlining and simplifying the program requirements by leveraging existing utility tariffs and line extension processes will provide applicants with flexibility and ensure ratepayer benefits of the program are maximized.

Respectfully submitted,



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