April 24, 2023

Aida Camacho-Welch
Secretary of the Board
44 South Clinton Avenue, 1st Floor
Post Office Box 350
Trenton, NJ 08625-0350

RE: Docket No. Q021010085, IN THE MATTER OF MODERNIZING NEW JERSEY'S INTERCONNECTION RULES, PROCESSES, AND METRICS

Dear Secretary Camacho-Welch:

On behalf of Tesla, Inc. ("Tesla"), thank you for the opportunity to provide written comments in response to the Board of Public Utilities' ("BPU") proposed revisions to the process for interconnecting distributed generation resources to the state's electric grid. We are largely supportive of the BPU's proposed changes, which align with recommendations voiced by solar and battery storage industry trade groups in the Grid Modernization ("GridMod") proceeding. We are particularly supportive of the proposed revisions requiring the Electric Distribution Companies ("EDCs") to improve the accuracy of hosting capacity maps, increase the Level 1 threshold from 10 kW to 25 kW, institute a pre-application process for Level 2 or Level 3 projects, provide additional information for applicants to track the status of their interconnection request, institute a dispute resolution process, and to make proactive system upgrades aimed at allowing for greater installation of distributed energy resources (DER). These changes will give New Jersey a greater likelihood of achieving the goals in the State's 2019 Energy Master Plan (EMP).

However, as the BPU modifies the EDC interconnection rules to facilitate faster and greater deployment of DERs, it is overlooking a simple and proven method to accelerate installations at no cost to ratepayers by failing to require EDCs to allow for the installation of meter collar adapters that meet certain national standards. We reiterate comments we filed in the GridMod proceeding and urge BPU to incorporate requirements for meter collar adapter approval as part of this interconnection rulemaking proceeding.

The BPU Should Require EDCs Allow for Meter Collar Adapter Installation

Meter collar adapters are a proven technology with a track record of being safely installed and operated. Given the capability of meter collar adapters to make DER installations faster and

less costly right now, delaying their incorporation into interconnection rules until a "regulatory sandbox" process is established – as recommended by BPU staff – will effectively restrict the pace of installs and unnecessarily force state residents to pay higher prices for residential clean energy systems than they would otherwise. Instead, the BPU should approve interconnection rules in this proceeding requiring EDCs to allow for the installation of meter collar adapters that meet certain national standards.

Meter collars adapters are devices installed between the utility meter and the meter socket, which facilitate the installation of various clean energy technologies. Due to the advantageous location of where meter collars are installed on a home, the devices can allow for battery storage and solar systems to be installed more than 10-times faster, with significantly less rewiring, and can help avoid the need for panel upgrades. These materials and labor savings often are passed onto customers, cutting the price of residential battery storage or solar by hundreds to thousands of dollars. There are a variety of meter collar adapters in the market and in development, which serve various functions. Those functions range from interconnecting solar, to facilitating home EV charging installs, and, in the case of the Tesla Backup Switch and other meter collar adapters serving the same function, simplifying the provision of whole-home battery backup.

Tesla's Backup Switch leverages the customer's meter socket to provide a disconnection point that enables the home to be safely and effectively isolated from the grid during an outage. This isolation is critical to ensure that the battery system does not backfeed onto the grid while it is providing power to the home during an outage. The Backup Switch also ensures that once grid power is restored, the home loads are reconnected to the grid. Providing this disconnection point without a meter collar adapter can require substantial rewiring or even replacing a customer's electrical panel at great expense to the customer.

As a result of using the Backup Switch, a Tesla install crew can deploy multiple battery storage systems in a single day instead of just one, and similar time and materials savings also exist for meter collar adapters that facilitate other clean energy technologies. That capability of performing faster installs with a single crew is more important than ever as the U.S. faces an electrician shortage that threatens to bottleneck the clean energy transition.[1] The Bureau of Labor Statistics, the U.S. currently needs about 80,000 new electricians every year to facilitate mass

[1] "U.S. Faces Electrician Shortage as It Tries to Go Green." *Wall Street Journal*. 27 March 2023. https://www.wsj.com/story/us-faces-electrician-shortage-as-it-tries-to-go-green-1b990742

electrification, but electricians in the field say it will be difficult to fill jobs at pace with that need.[23] Meter collar adapters are one way that an electrification bottleneck can be avoided.

Meter collars have been proven to be safe. Tesla's recommended approach would require EDCs to approve only meter collar adapters that are approved or listed by a National Recognized Testing Laboratory (NRTL) and which meet other safety standards. In order to be certified and listed, meter collar adapters are subject to a battery of tests by NRTLs that have themselves been certified by the Occupational Safety and Health Administration to conduct these tests and to determine whether or not a device should be listed as safe. Tesla's Backup Switch has been installed over 7,000 times nationally and is certified to several UL standards, including the same standards that apply to the customer meter socket, the utility meter, and to energy management systems.

Despite the demonstrated safety track record of meter collar adapters, BPU staff in the GridMod proceeding recommended meter collars be explored as part of a "regulatory sandbox" approach in which EDCs would be required to assess certain untested and innovative grid and customer-sited technologies. BPU staff made this recommendation despite specifically noting that meter collar adapters are a currently deployed technology that allows for faster and less costly installation of DERs. While regulatory sandboxes are useful for assessing untested and innovative grid and customer-sited technologies, meter collar adapters are not untested and are increasingly commonplace. If New Jersey waits to approve meter collar adapters until it creates a regulatory sandbox process in its interconnection rules, it could delay installation of meter collars in the state for another two-plus years.

Meanwhile, dozens of utilities around the U.S. already have approved meter collars for use in their territory. Colorado requires all its investor-owned utilities to assess and approve the devices.[4] The Arizona Corporation Commission in interconnection manual updates required the state's two largest electric utilities to allow for meter collar adapters to be installed if the devices meet certain standards.[56] All three California investor-owned utilities currently are piloting meter

[2] "Occupational Outlook Handbook: Electricians." *U.S. Bureau of Labor Statistics*. 24 Jan. 2023, https://www.bls.gov/ooh/construction-and-extraction/electricians.htm#tab-6
[3] "A labor shortage stands in the way of the clean energy transition." *Marketplace*. 30 March 2023. https://www.marketplace.org/2023/03/30/a-labor-shortage-stands-in-the-way-of-the-clean-energy-transition/
[4] S.B. 21-261. https://leg.colorado.gov/sites/default/files/2021a_261_signed.pdf
[5] APS Interconnection Manual, Docket No. E-01345A-20-0152
[6] TEP Interconnection Manual, Docket No. E-01933A-20-0116

collar adapters. And at least two other eastern U.S. states are planning to include meter collar adapters in their upcoming interconnection rulemakings. Delaying the approval of meter collar adapters in New Jersey until a later interconnection proceeding would be a missed opportunity for the state to allow use of a technology that numerous other utilities and states already have deemed as safe and beneficial.

We recommend the following changes to the interconnection rules:

Under § 14:8-5.1 Interconnection definitions, we recommend adding a definition for meter collar adapters as follow:

"Meter collar adapter" means an electronic device that is installed between a residential electric meter and the meter socket, for the purpose of facilitating the deployment and interconnection of an onsite electricity generation source or for the purpose of isolating a customer's electrical load to enable the provision of backup power.

Under § 14:8-5.3 Certification of Customer-generator Interconnection equipment, we recommend adding the following language:

(e) Each EDC shall authorize the installation and operation of a meter collar adapter, whether owned by a residential customer, by the utility, or by a third-party. An electric public utility shall approve or disapprove a meter collar adapter for installation in its service area no later than 60 days after a manufacturer or third party submits a request for approval of the meter collar adapter. An electric public utility shall provide public notice of all decisions approving a meter collar adapter, including by posting the information on the utility's Internet website. Should an electric public utility disapprove a meter collar adapter, the electric public utility shall provide an explanation to the requesting vendor enumerating the reasons the application was denied. A manufacturer of a meter collar adapter, a third-party, or an electric public utility may install, maintain, or service a meter collar adapter or associated equipment, provided that the work is performed by a duly qualified and licensed electrician or electrical contractor. Meter collar adapters must meet the following criteria:

(1) the meter collar adapter is qualified to be connected to the supply side of the service disconnect pursuant to the applicable provisions of the National Electric Code;

(2) the meter collar adapter is approved or listed by a nationally recognized testing laboratory and is rated appropriately for the meter socket into which it is intended to be installed;

(3) the meter collar adapter is certified to meet all applicable standards, as determined by a nationally recognized testing laboratory; and

(4) the meter collar adapter does not impede access to the sealed meter socket compartment or the pull section of the service section of the electric meter or switchboard, as applicable.

Conclusion

There is no reason New Jersey consumers should have to wait for approval of a well-tested, safe, and money-saving device that also can accelerate deployment of residential solar and battery storage systems to help meet state goals. Reducing the complexity of installations and costs is critically important to battery storage adoption, and the more battery storage devices that are interconnected to the grid will yield greater benefits to all ratepayers. Thank you for the opportunity to provide comments.

Sincerely,

/s/ Jordan Graham
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