



July 19, 2022

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 New Jersey Grid Modernization / Interconnection Process**

Dear Secretary Camacho-Welch:

On behalf of Tesla, Inc. (“Tesla”), thank you for the opportunity to provide written comments in the Grid Modernization (“GridMod”) stakeholder proceeding being conducted in the above-referenced docket by the New Jersey Board of Public Utilities (“BPU” or “Board”) and its consultant in the matter, Guidehouse. Tesla is appreciative of Guidehouse’s *Draft Grid Modernization Study* and its numerous recommendations aimed at “removing barriers to and improving the effectiveness of the interconnection process for distributed energy resource (DER) adoption and integration with the electric distribution system.” Tesla is particularly supportive of recommendations contained in Finding #5 regarding New Jersey leveraging practices from existing interconnection rules such as California Rule 21, employing best practices from other sources, and establishing processes to incorporate and pilot new technologies and procedures on an ongoing basis to achieve the goals in the State’s 2019 Energy Master Plan (EMP) and avoid replicating lengthy stakeholder processes.

However, we have concerns regarding specific applications of the recommended “regulatory sandbox” if, in the near-term, it results in delaying the deployment of proven technologies such as meter collar adapters that already have been deployed successfully in numerous other jurisdictions and have been certified and listed by nationally recognized testing laboratories. If left unaddressed while the regulatory sandbox process is hashed out, the delay would result in rooftop solar and battery energy storage customers unnecessarily absorbing the costs of higher priced and less efficient technological means for installing solar and batteries – an outcome in contrast to stated goals of the GridMod study.

Tesla's mission is to accelerate the world's transition to sustainable energy through the deployment of electric vehicles and sustainable energy products, such as storage and solar energy systems. We respectfully submit the following comments on Guidehouse's draft findings and recommendations.

**Comments on Finding #5: New Jersey EDCs do not have EDC-specific interconnection rules or tariffs**

If implemented properly, a regulatory sandbox could be a valuable regulatory tool to quickly pilot new and untested technologies and regulatory approaches. However, we caution that it should not be used to reexamine and delay deployment of technologies that already have been approved, widely deployed in other jurisdictions, and listed by nationally recognized testing laboratories. One such proven technology, for which approval should not be delayed, is meter collar adapters. We urge New Jersey Electric Distribution Companies ("EDCs") and the BPU to act expeditiously in taking action to approve the deployment of meter collar adapters as quickly as possible to support EMP efforts.

Meter collar adapters can make the deployment of rooftop solar and batteries more efficient and less expensive by utilizing the customer meter socket to reduce the complexity of installations. There are a variety of meter collar adapters in the market that serve various functions, ranging from interconnecting generating resources, converting overhead service to underground service, and, in the case of the Tesla Backup Switch and other meter collar adapters serving the same function, facilitating 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. Meter collar adapters bypass the need for this upgrade by connecting the solar before the main breaker and in a location other than within the main panel, eliminating concerns about overloading the existing hardware. As a result, a homeowner installing batteries and solar can save hundreds to thousands of dollars and the time taken to install these technologies can be reduced by several hours. While the customer savings associated with the Backup Switch will vary based on customer-specific circumstances, we estimate cost reductions ranging from \$500 for the typical customer to several thousand dollars per installation.

Utilities and jurisdictions across the country have seen widespread utilization of this technology. Meter collar adapters are currently being deployed in more than 14 utility service territories. Tesla estimates that there are tens of thousands, if not hundreds of thousands of meter collar devices deployed throughout the country today. The Tesla Backup Switch itself is currently being deployed as a generally approved device or on a pilot basis in a growing number of utility service territories including, among others, Pacific Gas and Electric (CA), the Sacramento Municipal Utility District (CA), NV Energy (NV), Tucson Electric Power (AZ), PPL Corporation (PA), Xcel Energy (CO), Bluebonnet Electric Coop (TX), Pacific Power (OR), Rocky Mountain Power (UT), and Green Mountain Power (VT).

Despite the wide adoption and extensive testing of meter collar adapters, during BPU's and Guidehouse's June 27, 2022, *Grid Modernization Study Draft Findings and Recommendation* presentation, meter collar adapters were listed as an example of an ideal technology well suited for regulatory sandbox testing. We respectfully disagree. Requiring meter collar adapters to go through a regulatory sandbox testing process is completely unnecessary given the widespread use of meter collar adapters nationally and the existence of robust and nationally recognized standards and certification processes. In the case of the Tesla Backup Switch, the device is certified to several UL standards, including UL 414, UL 2735, and UL 916. These are the same standards that apply to the customer meter socket, the utility meter and to energy management systems, respectively. In order to be certified and listed, meter collar adapters are subject to a battery of tests by Nationally Recognized Testing Laboratories 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. Moreover, the New Jersey Department of Community Affairs noted that the Tesla Backup Switch meets the requirements of N.J.A.C 5:23-3.8(d)2i, and that "...the code enforcement community as well as the public utilities, should not refuse the use of this product."<sup>1</sup>

We are concerned that delaying deployment of meter collar adapters in New Jersey until a regulatory sandbox process is in place will burden customers who are installing solar and storage with easily avoidable costs. At the aforementioned June 27, 2022, meeting, Guidehouse's presentation ranked Finding #5 – which includes the regulatory sandbox recommendation – as having a lower degree of "implementation readiness" compared to several other recommendations. The presentation suggested

---

<sup>1</sup> New Jersey Department of Community Affairs. "Construction Code Communicator" Volume 33, Number 4. Winter 2021. Pg. 5, available from: [https://www.nj.gov/dca/divisions/codes/publications/pdf\\_ccc/CCC\\_Winter\\_2021.pdf](https://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/CCC_Winter_2021.pdf)

that process of designing and implementing the regulatory sandbox may require a protracted workshop process and proceeding, which we estimate could take cumulatively over a year. While Tesla understands the need to design the regulatory sandbox process to account for a broad range of technologies and processes, this delay is unwarranted for proven and much-needed technologies, such as meter collar adapters.

EDCs have the authority to immediately and independently implement a process to review and approve meter collar adapters but have yet to do so. For all the aforementioned reasons, Tesla implores EDCs to use this discretion to modify their electric service requirements to enable use of customer and third party provided and owned meter collar adapters, without the need for regulatory sandbox testing or BPU approval. However, if EDCs do not decide to approve use of meter collar adapters or if the BPU thinks the rules as currently constructed need to be modified to allow for the devices, the BPU should work to approve meter collar adapters in whichever regulatory pathway will allow the devices to be deployed at the soonest possible date. That can include the upcoming interconnection rulemaking proceeding or as part of the development of a “regulatory sandbox” process. Either regulatory process should result in EDCs being required to approve customer and third party-provided and owned meter collar adapters in no more than sixty days so long as the established criteria, such as the following, has been met:

1. The device must be equipment qualified to be connected to the supply side of the service disconnecting means under applicable provisions of the National Electric Code.
2. The device must be approved or listed by a nationally recognized testing laboratory and must be suitable per the device’s UL listing documentation for use in meter sockets that are rated up to two hundred amperes.
3. The device must be certified to all applicable standards as determined by a nationally recognized testing laboratory.
4. The device must not impede access to the sealed meter socket compartment or pull section of the service entrance section

## **Conclusion**

There is no reason New Jersey consumers should have to wait so long for approval of a well-tested, safe, and money-saving device that simplifies what can be an otherwise complicated process. 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

Sr. Energy Policy Advisor

Tesla Inc.

[jordgraham@tesla.com](mailto:jordgraham@tesla.com)