STATE OF WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

ATTENTION: Jeff Killip
Executive Director and Secretary
Washington Utilities and Transportation Commission

Petition of ConnectDER to Establish a Statewide Process for Meter Socket Adapter Model Approval

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Submitted by

ConnectDER

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I. Introduction

Pursuant to the Revised Code of Washington 34.05.330, ConnectDER hereby requests that the Washington Utilities and Transportation Commission (the "Commission") commence a rulemaking and, following a public comment period, establish a statewide process for customer-owned meter socket adapter (MSA) models to be approved for the purpose of facilitating the deployment of distributed energy resources (DERs).

Meter socket adapters are proven, safe, and innovative technologies that simplify the interconnection process for distributed energy resources and significantly reduce associated costs for consumers. Meter socket adapters are already in use across utility territories within Washington State and nationwide. They enable consumer adoption of technologies such as rooftop solar, battery storage, and electric vehicles.

Currently, Washington consumers' ability to install distributed energy resources using MSAs differs based on their electric utility: MSAs are currently in use in Pacific Power territory, and Avista recently submitted an affiliate filing to the Commission to begin testing one MSA model to facilitate electric vehicle charging. While these programs show important progress and will benefit customers and businesses in those service territories, Washington can build on this momentum and expand public benefit by setting a consistent statewide process across utility service territories to facilitate testing and approval of a broad range of MSA models that facilitate DER deployment. The Commission can provide certainty to consumers, businesses, and utilities by creating a standard process for utilities to test and approve MSA models. This will benefit Washington small businesses, like solar and EV charger installers, and consumers who wish to install distributed energy resources to support Washington's climate goals and reduce energy costs.

Our petition explains meter socket adapters' technical features, benefits, and status across Washington and other states, and outlines how Washington can establish a statewide process for utilities to review and approve MSAs as a class of products aligned with the processes set by other utilities. We believe that our petition for rulemaking to create a process for MSA approval

addresses the rule's statutory authorization, alignment with relevant laws, and other elements outlined in RCW 34.05.330.[1] We further elaborate on these features below.

II. Background on Meter Socket Adapters

ConnectDER is one of many companies that manufacture meter socket adapters. MSAs are proven safe, reliable, and innovative technologies that simplify the process to interconnect distributed energy resources for utilities and consumers. They can also significantly reduce DER installation costs for Washingtonians.

A meter socket adapter is an enclosed hardware interface designed for installation between a customer-owned meter socket and the utility meter. Utilities across the country have installed meter socket adapters for decades to support a variety of utility facing applications, such as meter form conversion or surge protection. In recent years several original equipment manufacturers (OEMs) have developed MSAs to support deployment of DERs, including serving as an enabling technology for residential solar, battery storage, and electric vehicle chargers.[2] This new generation of products is owned, installed, and operated by a customer,[3] in the same way that a customer owns their meter socket. MSAs are not part of the utility infrastructure, do not affect the ability of utilities to meter electricity, and are not used for billing purposes.

MSAs are critical, proven technologies that simplify the interconnection of residential DERs and can save customers thousands of dollars. MSAs lower costs for project deployment by enabling residential customers to bypass main panel replacements in favor of a lower-cost, easy-to-install technology. For residents who choose to install rooftop solar, battery storage, electric vehicle chargers, or other DERs, existing service panels represent a major barrier to installation. About half of existing residential service panels cannot accommodate interconnecting DERs.[4] Installing a new service panel can cost a consumer $2,500 to $5,000 per

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[1] *Washington State Legislature. (n.d.). RCW 34.05.330: Petition for adoption, amendment, or repeal of rules—Procedure—Agency consideration—Appeal. Revised Code of Washington. https://app.leg.wa.gov/rcw/default.aspx?cite=34.05.330.*

[2] *For more information on the characteristics and specifications of meter socket adapters, see National Electrical Manufacturers Association US 80016-2022 Meter Socket Adapters. https://www.nema.org/docs/default-source/technical-document-library/nema-us-80016-2022-aspublished.pdf?sfvrsn=a4caa6df_3#:~:text=A%20meter%20socket%20adapter%20is,grown%20steadily%20over%20the%20years.*

[3] *References to customer ownership, installation, and operation in this document should be understood to mean qualified personnel acting on behalf of the customer - i.e., a licensed electrical contractor performing the installation - as opposed to reliance on utility personnel.*

[4] *EPRI US Residential Electric Panel Survey: https://www.epri.com/research/programs/109396/results/3002026736*

premise, and can create a burden on utilities due to the significant amount of planning involved.[5] MSAs can offer a significantly lower-cost alternative to service panel upgrades, enabling program participants to bypass a cost they would have otherwise incurred.

Importantly, MSAs can also streamline and standardize work for solar and battery storage system installers and authorities overseeing interconnection by eliminating the need for complex and site-specific wiring solutions. Simplifying installs saves on the costs of both materials and labor needed to install residential DERs, providing savings for customers. Additionally, MSAs can allow for faster installation of DERs, allowing for more systems to be deployed in a shorter time frame. These benefits also make technologies like rooftop solar or electric vehicles a more viable option for a larger set of customers, including those with lower incomes.

III. Background on Meter Socket Adapter Use across the United States

MSAs have been in use for nearly a decade, and have been deployed in tens of thousands of households around the country. MSAs are accessible in utility service territories serving over 35 million Americans nationwide, including in Pacific Power territory in Washington.

To date, third party MSAs to facilitate DER deployment have been approved in utility jurisdictions in over 20 states, including Arizona, Colorado, Illinois, Maryland, New Jersey, California, and Massachusetts. In these states, regulatory bodies have worked with utilities and stakeholders to set basic product safety requirements for MSAs and a standard process for introducing new MSAs to the market to ensure that consumers are protected and have the freedom to utilize this equipment. For states including Illinois[6], Maryland[7], and Connecticut,[8] Public Utility Commissions established expectations for a timeline and process for approval of qualified MSA devices. Additional states have passed legislation that established a process for

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[5] *Service Upgrades for Electrification Retrofits Study Final Report: https://www.redwoodenergy.net/research/service-upgrades-for-electrification-retrofits-study-final-report-2*

[6] *Illinois Commerce Commission. (2024, December 19). Order Requiring Ameren Illinois Company to file an Initial Multi-Year Integrated Grid Plan and Initiating Proceeding to Determine Whether the Plan is Reasonable and Complies with the Public Utilities Act. https://icc.illinois.gov/docket/P2022-0487/documents/359319/files/629463.pdf.*

[7] *Maryland Public Service Commission. (2023, September 28). Small Generator Facility Interconnection PC44 Interconnection Workgroup Phase V Final Report. https://webpscxb.psc.state.md.us/DMS/rm/RM81.*

[8] *Connecticut Public Utilities Regulatory Authority. (October 16, 2024). Annual Residential Renewable Energy Solutions Program Review – Year 4. https://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/af4d6b4d91dd1b6785258bb8004e6ffb/$FILE/240802-101624.pdf.*

utilities to evaluate MSA models. Two examples include New Jersey[9] (standalone bill approved in September 2023) and Massachusetts[10] (included in November 2024 Climate Law). Statewide guidelines have benefitted consumers, contractors, and utilities by providing clarity and consistency.

Utilities have also collaborated with MSA manufacturers to encourage adoption, such as Avista's recent affiliate filing with ConnectDER. In addition, Ameren, one of the largest utilities in Illinois, included proposals related to meter socket adapters (referred to as "Meter Collar Adaptors" in the filing) as part of their 2024 Multi-Year Integrated Grid Plan.[11] Ameren Illinois agreed to "implement a timeline to allow the Company to work with manufacturers related to implementation of [MSAs] for use with DER interconnections." The utility and stakeholders will collaborate to implement a new process to make MSAs accessible to consumers.

IV. Meter Socket Adapters in Washington and Relevance to Washington Policy

Currently, the Revised Code of Washington does not have a standardized process for electric utilities to test and approve MSAs. This lack of standardization has led to differential access to this cost-saving technology based on which Washington utility service territory a customer lives in. MSAs are currently allowed for Washington consumers served by Pacific Power (Pacific Power refers to MSAs as "meter-mounted devices")[12], and one MSA model is approved by Tacoma Public Utilities.[13] Pacific Power's parent company PacifiCorp has approved MSAs throughout its service territory, including the three states served by Pacific Power and the three states served by Rocky Mountain Power. Avista Corp recently submitted an affiliate filing to the Commission to conduct a test of ConnectDER's Electric Vehicle (EV) MSA model as an affordable alternative to electric panel updates for EV adapters, citing the potential of MSAs to

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[9] Authorizes installation and operation of meter collar adapters on residential electric meters, under certain conditions, P.L. ch. 156, § 1 (2023). https://legiscan.com/NJ/text/S3092/id/2872441.

[10] An Act Promoting A Clean Energy Grid, Advancing Equity, and Protecting Ratepayers, Mass. Gen. Laws ch. 239, § 151 (2024). https://malegislature.gov/Laws/SessionLaws/Acts/2024/Chapter239.

[11] Illinois Commerce Commission. (2024, December 19). Order Requiring Ameren Illinois Company to file an Initial Multi-Year Integrated Grid Plan and Initiating Proceeding to Determine Whether the Plan is Reasonable and Complies with the Public Utilities Act. https://icc.illinois.gov/docket/P2022-0487/documents/359319/files/629463.pdf.

[12] See Section 3.5.7 Pacific Power 2022 Electric Service Requirements Manual, R1 (2024), https://www.pacificpower.net/content/dam/pcorp/documents/en/pp-rmp/electric-service-requirements/ESR_FULL.pdf.

[13] Tacoma Public Utilities has approved the Tesla Backup Switch only. See https://www.tesla.com/support/energy/powerwall/learn/tesla-backup-switch.

support faster adoption of Washington's Clean Vehicle Program.[14] Puget Sound Energy does not currently allow MSAs or have an established process for reviewing and approving devices.

Washington has set ambitious climate goals: House Bill 2311 sets statutory GHG reduction targets relative to 1990 levels of 45%, 70%, and 95% by 2030, 2040, and 2050, respectively.[15] The Clean Vehicles Program rule increases zero emission vehicle sales of passenger cars, light-duty trucks, and medium-duty vehicles to 100% by 2035.[16] Furthermore, House Bill 1126 enables electric utilities to prepare for the "distributed energy future" by incorporating distributed energy resource planning. Washington's utilities have also established programs to encourage electric vehicle adoption: Puget Sound Energy offers a baseline rebate of up to $300 for a qualifying electric vehicle home charger[17] and Avista offers a smart charging program for select electric vehicles.[18] Meter socket adapters would help to facilitate deployment of these DERs to help Washington and its utilities meet climate goals. Washington can follow a path that has been well-established in other jurisdictions, with the Commission establishing expectations for a timeline and process for approval of qualified MSA devices. These states have set basic product safety requirements for MSAs and a standard process for introducing new MSAs to the market.

V. Purpose of Petition

We recognize that there is not a standardized process for utilities to test and approve new MSA types and models in Washington. Avista has shown leadership in their work to advance energy equity and expanding electrification by submitting an affiliate filing to test one MSA model that facilitates EV charger deployment. However, any consequent device approval by Avista will not apply to the majority of Washington residents in other service territories, or those who wish to use meter socket adapters for deploying other DERs like rooftop solar and battery storage. This lack of state-level standardization creates inefficiencies and barriers to adoption by

[14] *Avista Filing UE - 250434. (2025, May 30). Redacted Affiliate interest agreement between Avista Corporation d/b/a Avista Utilities and ConnectDER [...]. https://www.utc.wa.gov/casedocket/2025/250434/docsets*
[15] *Washington State Legislature. (2020). House Bill 2311: Amending state greenhouse gas emission limits for consistency with the most recent assessment of climate change science. https://app.leg.wa.gov/billsummary?BillNumber=2311&Year=2020.*
[16] *Washington Administrative Code § 173-423 (2025). Clean vehicles program (Wash. Admin. Code § 173-423). Retrieved June 11, 2025, from https://app.leg.wa.gov/wac/default.aspx?cite=173-423&full=true.*
[17] *See https://www.pse.com/en/rebates/ev-home-charger.*
[18] *See https://www.myavista.com/energy-savings/electric-transportation/for-your-home.*

utilities statewide. By establishing clear guidelines for approving MSA models, the Commission can drive consistency across utilities and save utilities time associated with bespoke testing for device approval.

ConnectDER suggests the adoption of a MSA approval process that would create benefits for both MSA manufacturers and utilities. The policy would establish:

1. **Clear timelines:** The recommended policy below would set a 60-day timeline for utilities to test and approve new MSAs after the manufacturer submits a request for approval. This enables market certainty for the OEMs, installers, and residential customers who benefit from MSA technologies. It also gives utilities a reasonable timeline to assess MSA models. Establishing a clear timeline for MSA approval has proven effective and feasible in other states and allows other parties to adequately plan for new product availability.

2. **Clear and consistent minimum safety standards to be considered for approval:** Before introducing new MSA models to the utilities, the devices must first meet certain national standards and pass all applicable tests through a Nationally Recognized Testing Laboratory (NRTL).[19] These laboratories conduct rigorous safety and reliability testing in order to certify MSAs to the same standards to which utility equipment often must be certified, meaning that any product introduced in Ohio will follow the same basic set of standards.

3. **Defined roles and responsibilities for MSA manufacturers and utilities:** The recommended policy establishes that MSA manufacturers must first meet minimum safety standards and the utilities serve as the party to test and give approval or disapproval. Having a clear pathway from product introduction to market entry enables efficient use of resources and time.

[19] *The UL standard for Meter Sockets, UL 414, contains two supplements - Supplement SA that covers meter socket adapters and Supplement SB, that covers meter socket adapters with provisions for connection of distributed generation equipment, that may contain overcurrent protection. Presently, these two supplements are the foundation of any MSA certification, with other standards layered in depending on the end use application. Requirements for compliance with additional standards is at the discretion of the NRTL during the evaluation process.*

This petition for a rule creating a process for MSA covers topics that are encouraged to be addressed in RCW 34.05.330:

- A rule creating a process for MSA approval is **authorized by Section 3 of RCW 80.01.040**, which grants the Commission authority to regulate the "services, facilities, and practices" of electric utilities in Washington.[20]
- **This rule is needed to establish** clear safety standards and approval timelines that are consistent across utilities, and to **create a level playing field for businesses** across utility service territories.
- This rule **does not conflict with or duplicate any federal, state, or local laws.** There are no federal laws on this matter. Washington statute WAC 296-46B-230 mandates that meter and meter equipment installations meet the relevant utility's requirements, which is **consistent with our recommendation for utilities to manage equipment testing and approval**. To the best of our knowledge, we have not identified any municipalities with explicit prohibitions on meter socket adapters.
- There are **no alternatives to this rule that will serve the same purpose at less cost**; in the absence of UTC guidance, utilities have allocated staff time to establishing different approval processes that have in some cases created barriers to cost-saving technology.
- This rule is **applicable and uniform** across all utilities regulated by the Commission, namely private, investor-owned electric utilities.
- This rule will **serve the purposes for which it is proposed,** to facilitate utility review and approval of safe and effective meter socket adapter models for consumer adoption.Similar language has effectively done so in other states such as Maryland, New Jersey, and Massachusetts.
- This rule **does not pose unreasonable costs** on entities within Washington State.
- This rule is **clearly and simply stated,** with the guidance and minimum standards that utilities need to review these technologies.
- This rule is **different from federal law** insofar as no federal laws are directly applicable to the installation of meter socket adapters.

[20] *Washington State Legislature. (n.d.). RCW 80.01.040: General powers and duties of commission. Revised Code of Washington. Retrieved May 7, 2025, from https://app.leg.wa.gov/rcw/default.aspx?cite=80.01.040.*

- This rule can be **adopted according to all applicable provisions of law**, given UTC's statutory authority to regulate Washington utilities, the proposed notice and comment period, and compliance with administrative procedures.

IV. Proposal for MSA Approval Process

To the best of our knowledge, we have not identified any state-level regulations in the Washington Administrative Code or otherwise that should prevent the adoption of MSAs that meet standards set by a recognized testing laboratory. The recommended language for consideration, below, is adapted from language adopted in other states. This language creates a defined process for MSA approvals that incorporates minimum safety standards, sets timelines for utilities to follow, and identifies the parties involved in the approval process.

Going forward, we believe that the Commission's rule could be incorporated into existing interconnection statute in WAC 480–108-040, and that would be preferable to a standalone rule.[21]

Suggested language is as follows:

As used in this section:

"Meter socket adapter" means an electrical device that is installed between a residential electric meter and the meter socket, for the purpose of facilitating the deployment of customer-owned or customer-leased technology.

Authorizes installation and operation of meter socket adapters on residential electric meters, under certain conditions.

a. An electric utility shall authorize the installation and operation of a meter socket adapter, whether owned by a residential customer or by a third-party, provided the meter socket adapter meets the following criteria:

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

[21] *Washington Utilities and Transportation Commission. (n.d.). WAC 480-108-040: General terms and conditions of interconnection. Washington State Legislature. https://app.leg.wa.gov/WAC/default.aspx?cite=480-108-040.*

b. A manufacturer of a meter socket adapter, a third-party, or a residential customer shall all be allowed to install, maintain, or service a meter socket adapter or associated equipment. Only qualified personnel shall physically access the meter socket.

c. An electric utility shall modify its electric service requirements as necessary to implement the provisions of this section immediately after the effective date of this section.

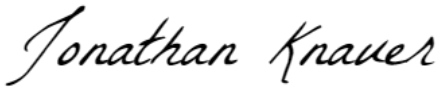
d. Electric utilities shall establish and publicly publish a point of contact to which device manufacturers will submit formal requests for approval.

e. An electric utility shall approve or disapprove a meter socket adapter for installation in its service area no later than 60 days after a manufacturer or third-party submits a request for approval of specific models of the meter socket adapter. An electric utility shall provide public notice of all decisions approving or disapproving a meter socket adapter, including by posting the information on the utility's website.

Conclusion

We respectfully ask the Washington Utilities and Transportation Commission to approve this petition and open a rulemaking to develop a process for meter socket adapter model approval. Setting consistent guidelines for utilities and establishing a process for MSA approval that includes clear timelines and expectations will enable more widespread and timely use of this rapidly-growing technology that streamlines interconnection, reduces costs to consumers, and helps Washington to meet its climate goals.

We appreciate the opportunity to submit a petition on this matter.



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