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PROJECT NO. 54233

TECHNICAL REQUIREMENTS AND INTERCONNECTION PROCESSES FOR DISTRIBUTED ENERGY RESOURCES (DERS)	**§ § § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

COMMENTS OF CONNECTDER ON STAFF DISCUSSION DRAFT

ConnectDER appreciates the opportunity to respond to Commission Staff's discussion draft of new sections and proposed amendments to 16 Texas Administrative Code ("TAC"), including §25.210, §25.211 and §25.212, filed on May 14, 2025.

ConnectDER is a manufacturer of meter socket adapters ("MSAs") that enable safe, rapid, and standardized DER interconnections at residential properties. 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 Texas and nationwide. They enable consumer adoption of technologies such as rooftop solar, battery storage, and electric vehicle chargers. However, due to a lack of clear statewide rules, consumer access to meter socket adapters is limited throughout much of the state, curtailing consumer choice and grid resiliency.

We applaud the Commission's effort to propose a discussion draft that clearly and effectively outlines rule changes pertaining to interconnection for small Distributed Energy Resources ("DERs"). At a time when realities of load growth and resilience challenges are becoming more pressing, establishing clear and uniform interconnection standards for DERs will provide a significant positive impact on Texas's grid, customers, and distribution service providers ("DSPs").

Our comments specifically respond to staff questions pertaining to factors and risks to consider when weighing technological innovations against the need for standardized DER technical requirements. The comments also include proposed revisions to the discussion draft that would

create a process in line with ConnectDER's previously filed comments in Project No. 54233 on March 4, 2024, which outlined how the development of a MSA approval process could be included in interconnection rule updates.

BACKGROUND ON CONNECTDER AND METER SOCKET ADAPTERS IN THE UNITED STATES AND TEXAS

ConnectDER is one of many companies that manufacture meter socket adapters. MSAs simplify the process to facilitate the use of distributed energy resources benefiting consumers and the grid. They can enhance consumer choice of energy options, and provide benefits such as lowered consumer costs, accelerated installations, and standardized interconnection. MSAs have been in use to support DER installation 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 Austin Energy service territory in Texas.

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. This new generation of products is owned, installed, and operated by a customer, 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 offer a number of key benefits to households, contractors, and DSPs:

- **Reduced installation costs**. MSAs reduce costs by removing the need for main panel replacements and utility service upgrades. About half of existing residential service panels cannot accommodate additional DERs due to capacity constraints.[1] MSAs enable consumers to avoid main panel upgrades by safely bypassing the panel entirely for interconnection. Installing a new service panel can cost a consumer $2,500 to $5,000 per premise, and can create a burden on DSPs due to the significant amount of planning involved. Furthermore, MSAs with

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

load-control capabilities can reduce the need for utility service upgrades. This benefit directly supports draft interconnection guidance in Section 211 (l) seeking to reduce time and expense burdens associated with service upgrades: "The company must employ best reasonable efforts to complete such system upgrades in the shortest time reasonably practical."

- **Accelerated installations**. MSAs can allow for faster installation of DERs, with interconnection of DERs in under 30 minutes. This allows for more systems to be deployed in a shorter time frame.
- **Standardized interconnections**. MSAs 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.

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 investor-owned 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[2], Maryland[3], and Connecticut,[4] 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 utilities to evaluate MSA models. Two examples include New Jersey[5]

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[2] *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.*

[3] *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.*

[4] *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.*

[5] *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.*

(where a standalone bill approved in September 2023) and Massachusetts[6] (where MSA provisions were included in a November 2024 omnibus law). MSA rules were also included in a number of bills introduced in the 89th Texas Legislative Session, including HB 3407[7] and HB 3346.[8] While these bills did not become law, legislation establishing analogous processes did: SB1202 provided that authorized third-party personnel could review features of home backup power installations.[9] Across the United States and Texas, statewide guidelines have benefitted consumers, contractors, and utilities by providing clarity and consistency.

Utilities – including municipal utilities in Texas – have also collaborated with MSA manufacturers to encourage adoption. Austin Energy approved ConnectDER's meter socket adapters for use across their service territory in February 2025.[10] Additionally, 16 TAC § 25.498 includes provisions that permit distribution utilities to install equipment, including meter socket adapters, to facilitate prepayment of electricity services.[11]

CONNECTDER RESPONSES TO STAFF QUESTIONS

1. **What factors and risks should the commission consider when weighing technological innovations against the need for standardized DER technical requirements, including how such standardized requirements may relate to the safety of utility personnel?**

ConnectDER provides two recommendations to the Commission pertaining to this feedback: first, the Commission should leverage national certification standards when approving new interconnection technologies; second, the commission should direct utilities to establish a

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[6] *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.*
[7] *House Bill 3407, 89th Reg. Sess. (Tex. 2025). Retrieved June 24, 2025, from https://capitol.texas.gov/tlodocs/89R/billtext/html/HB03407I.htm.*
[8] *House Bill 3346, 89th Reg. Sess. (Tex. 2025). Retrieved June 24, 2025, from https://capitol.texas.gov/tlodocs/89R/billtext/html/HB03346I.htm.*
[9] *Senate Bill 1202, 87th Reg. Sess. (Tex. 2021). Retrieved June 24, 2025, from https://capitol.texas.gov/tlodocs/87R/billtext/html/SB01202F.htm.*
[10] *Austin Energy. Customer-Owned Power Production Facilities: Socket-Mounted Transfer Switch Devices. Retrieved June 18, 2025, https://austinenergy.com/contractors/construction-renovation/documents-forms/customer-power-production.*
[11] *Public Utility Commission of Texas. (2022, January 6). 16 Texas Administrative Code § 25.498, Prepaid Service. Retrieved from https://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.498/Default.aspx*

standardized approval process for product models, rather than approving devices at each install.

a. Leverage national certification standards to reduce the need for utility testing requirements for new technologies

Interconnection devices used in DER systems—such as inverters, controllers, and meter socket adapters—are typically evaluated against safety standards set by nationally recognized testing laboratories ((NRTLs") to ensure they operate reliably and do not pose risks to utility personnel or grid infrastructure. Foundational safety standards like those established by UL and IEEE collectively form the technical basis for utility interconnection requirements and provide a pathway for the safe deployment of innovative technologies like meter socket adapters.

Other states have recognized the value of deferring to national safety standards bodies to improve the efficiency of equipment approval without compromising safety. MSA legislation and regulations in states including Maryland and Connecticut require that electric utilities approve MSA models for installation provided that it is approved or listed by a "nationally recognized testing laboratory," and is compatible with the National Electric Code. The laws and regulations make additional provisions to ensure that only qualified personnel conduct installations and that meter socket adapter models are compatible with equipment. States that have adopted this language also include requirements to approve or disapprove meter socket adapter models within a fixed timeline – usually 60 days – that can easily be facilitated by a reliance on national standards.

The discussion draft notes in §25.211 (j): "A DER unit that is certified to be in compliance by an NRTL must be installed on a company's distribution system in accordance with an approved interconnection control and protection scheme without further review of their design by the company." ConnectDER commends the commission for including this passage as a starting point for efficiently ensuring safety of utility personnel while pursuing innovative methods for interconnection.

b. Create approval processes for a product model, rather than on an install-by-intall basis

Creating approval standards for a class of technologies—like meter socket adapters—offers key efficiency gains by reducing redundant reviews of devices at each installation. It enables utilities to approve new, compliant models without revising rules or statutes, streamlining adoption while maintaining high safety standards. This approach supports innovation and scalability by aligning with existing national standards and providing a predictable path to market for these devices.

In states that have created an approval process for meter socket adapters, regulatory commissions have traditionally drafted rules that refer to meter socket adapters as a class of technologies. This has led to more efficient adoption of these technologies over time: since states began establishing standardized approval processes in the mid-2010s, meter socket adapter models have expanded in capabilities to include facilitating electric vehicle charger installation, battery energy storage installation, and load control functionality. The Commission can adopt a similar approach regarding meter socket adapters and other relevant technologies, creating broad guidelines that can be easily applied to new iterations of these technologies to ensure expediency and preserve Commission and utility staff capacity.

CONNECTDER'S PROPOSED MODIFICATIONS TO STAFF'S DISCUSSION DRAFT OF NEW INTERCONNECTION TECHNICAL REQUIREMENTS

To the best of our knowledge, ConnectDER has not identified any existing or proposed state-level regulations in the Texas Administrative Code or otherwise that should prevent the adoption of MSAs that meet standards set by a recognized testing laboratory. As such, ConnectDER recommends that Commission staff include language adapted by regulatory commissions in other states that would create a defined process for MSA approvals and incorporate minimum safety standards, timelines for utilities to follow, and clear identification of the parties involved in the approval process.

We believe that the text should be incorporated as a new subsection of §25.211 or §25.212. ConnectDER proposes the following language:

"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 distribution service provider 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;

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. A distribution service provider shall modify its electric service requirements as necessary to implement the provisions of this section immediately after the effective date of this section.

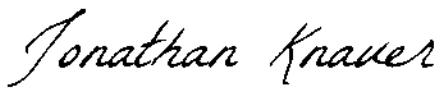
d. Distribution service providers shall establish and publicly publish a point of contact to which device manufacturers will submit formal requests for approval.

e. A distribution service provider 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. A distribution service provider 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

ConnectDER appreciates the opportunity to provide input on technical requirements and interconnection processes for distributed energy resources. We look forward to further collaboration with the Commission on these topics.



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SUMMARY OF CONNECTDER'S RECOMMENDATIONS TO THE COMMISSION REGARDING PROJECT NO. 54233 AND PROPOSED INTERCONNECTION RULES

ConnectDER's comments outline the following recommendations to the Commission:

- The Commission should accommodate the use of meter socket adapters for the interconnection of distributed energy resources. The Commission can do this by adapting language used by other public utility commissions that creates a transparent, standardized, and time-bound process for distribution service providers to approve specific device models for use across a service territory.

- The Commission, when weighing technological innovations against the need for standardized DER technical requirements, should consider two recommendations:
    - Leverage national certification standards to reduce the need for utility testing requirements for new technologies
    - Create approval processes for a product model, rather than on an install-by-intall basis