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# *Public Utility Commission of Texas*

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## **Memorandum**

**TO:** Chairman Peter M. Lake  
Commissioner Will McAdams  
Commissioner Lori Cobos  
Commissioner Jimmy Glotfelty  
Commissioner Kathleen Jackson

**FROM:** Mariah Benson, Market Analysis Division  
Bill Abbott, Rate Regulation Division

**DATE:** March 16, 2023

**RE:** March 23, 2023 Open Meeting – Item No. 28  
Project No. 54224 – *Cost Recovery for Services to Distributed Energy Resources (DERs)*

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On October 24, 2022, Commission staff (Staff) filed questions for comment related to cost recovery for service to distributed energy resources (DERs). Eighteen comments were received from municipally owned utilities, electric cooperatives, transmission and distribution utilities, distributed energy storage resource (DESR) providers, consumer advocates, energy-related trade associations, generators, and the Electric Reliability Council of Texas (ERCOT). Staff reviewed each filed comment and produced this memo to facilitate discussion at the March 23, 2023 open meeting.

This memo includes Staff’s recommendations on policy options based on Staff’s understanding of policies under existing Commission rules and the filed comments. In addition to Staff’s recommendations, this memo includes potential next steps.

This memo is divided into the following sections:

- A. Defining the Problem – Are the current cost recovery mechanisms insufficient?
- B. Contribution in Aid of Construction (CIAC)
- C. Transmissions Service at Distribution Voltage Delivery Charges
- D. Wholesale Storage Load (WSL) Treatment

Throughout this memo, the term “DESR” is used to describe arguments made by DESR providers on behalf of DESRs, or when arguments are specific to DESRs. The term “DER” is used to identify arguments that are not specific to DESRs but more broadly apply to all DERs, which include DESRs. In instances where the term DER is used, any policy guidance provided by the Commission should specify whether the guidance applies to DESRs or applies to all DERs.

**(A) Defining the Problem – Are the current cost recovery mechanisms insufficient?**

DESR providers asserted that the current costs for interconnection and delivery service at distribution voltage are discriminatory when compared to the costs paid by resources interconnecting at transmission voltage. DESR providers have pointed out that resources interconnecting at transmission voltage do not pay a CIAC for interconnection. Further, DESR providers noted that an Energy Storage Resource (ESR) interconnecting at transmission voltage does not compensate a Transmission Service Provider (TSP) for the transmission service it receives. In contrast, a DESR is charged for interconnection and transmission delivery service at distribution voltage. The calculation of this charge varies and depends on the Distribution Service Provider's (DSP) tariff.

DESR providers commented that DESRs should receive the same cost treatment as resources interconnected at transmission voltage because they provide the same benefits to the grid. According to DESR providers, these benefits include:

1. DESRs have the potential to reduce transmission congestion, which mitigates the need for new transmission facilities.
2. DESRs provide additional capacity and support resource adequacy goals.
3. DESRs provide additional ancillary services, which increases the competitiveness of the ancillary service markets and lowers the prices for ancillary services.

Other commenters disagreed that DERs, including DESRs, provide the same benefits as resources interconnected at transmission voltage because:

1. DERs are not required to provide voltage support service, which is a requirement for resources interconnected at transmission voltage.
2. DERs are more likely than resources interconnected at transmission voltage to be unavailable during load shed events because they are located on the distribution system.
3. Planned outages scheduled by DERs are not subject to ERCOT approval, which is a significant variation from planned outages scheduled by resources connected at transmission voltage.
4. Most DERs are not subject to detailed interconnection studies, which are required for resources interconnecting at transmission voltage.
5. DERs are generally less than 10 MWs, which is significantly smaller than most resources interconnected at transmission voltage.
6. DESRs are limited duration resources that are allowed to only provide a fourth of their capacity into key ancillary service markets. Also, given that DESRs are typically less than 10 MWs, their ability to participate in ancillary service markets is limited compared to resources interconnected at transmission voltage that are not limited duration resources.
7. DESRs do not provide the same transmission congestion relief as resources interconnected at transmission voltage. Congestion relief provided by DESRs is limited to a DESR's duration of discharge, which is typically less than a transmission ESR.

In reviewing commenters' arguments, Staff also considered that the purpose of the distribution system is different than the transmission system. The distribution system provides service to end-use customers. Conversely, the transmission system transfers electricity from generators

to the distribution system for end-use consumption. The transmission system benefits all end-use customers in ERCOT and is paid for by all end-use customers, regardless of location.

Cost allocation and recovery methodologies are different between the transmission system and distribution system to account for the different purposes they serve. Consistent with statutory requirements, distribution delivery rates are unique to each DSP to account for the unique qualities of their systems and to ensure costs are recovered fairly.

***Staff recommendation:*** *The Commission should direct Staff to close Project No. 54224. The current cost recovery methodology appropriately assigns costs for DERs, including DESRs. DERs and DESRs are charged a fair amount with respect to the costs they cause, and are adequately compensated for the benefits they provide.*

## **(B) Contribution in Aid of Construction (CIAC)**

A DER is responsible for certain costs associated with upgrading a DSP's system to facilitate the DER's interconnection. All DSPs provide interconnecting DERs a fixed standard allowance to assist in paying for any cost associated with a DER's interconnection. The DSP recovers the standard allowance through its captive distribution ratepayers. DSPs require an interconnecting DER to provide a CIAC to cover all costs that the DSP will incur in excess of the standard allowance when making upgrades to its system that are necessary to facilitate the DER's interconnection. Resources interconnecting at transmission voltage do not currently have to pay for transmission facility upgrades. TSPs recover transmission facility upgrade costs through Transmission Cost of Service (TCOS) charges assessed to all end-use customers within the entire ERCOT system.

DESR providers commented that DESRs should not be required to pay for DSPs' upgrades that are required to interconnect the DESR for the reasons listed below:

1. Resources interconnecting at transmission voltage do not pay for a TSP's facility upgrade. According to the DESR providers, DESRs provide the same benefits as resources interconnected at transmission voltage. *See more on the argument above under (A) Defining the Problem.*
2. Public Utility Regulatory Act (PURA) § 35.004(b) requires non-discriminatory open access to wholesale transmission service. 16 Texas Administrative Code (TAC) § 25.5(139) defines transmission services as, "[s]ervice that allows a transmission service customer to use the transmission and distribution facilities of electric utilities, electric cooperatives and municipally owned utilities to efficiently and economically utilize generation resources to reliably serve its loads and to deliver power to another transmission service customer..." According to DESR providers, requiring a CIAC from an interconnecting DESR is therefore discriminatory, because resources interconnecting at transmission voltage are not required to pay a CIAC.

Other commenters asserted DESRs should be subject the same interconnection costs as other DERs and that DERs should have to pay for DSPs' system upgrades that are necessary to interconnect the DESR. Specifically, commenters:

1. Rejected the assertion that DERs provide the same benefit as resources interconnected at transmission voltage. *See more on the argument above under (A) Defining the Problem.*

2. Noted that interconnection costs for resources interconnecting at transmission voltage are greater than an interconnecting DER's interconnection costs because transmission step-up transformers are required for resources interconnecting at transmission voltage and are fully paid for at the time of interconnection. In contrast, an interconnecting DER typically uses the step-up transformer already installed at a distribution substation. A DER and other distribution customers will pay transmission service at distribution voltage delivery rates that account for the DSP's cost of installing and maintaining the transmission step-up transformer.
3. Rejected the assertion that DERs are discriminated against when seeking interconnection and are not afforded open access to DSPs' systems for interconnection, noting that 'open access' does not mean that a resource pays nothing to interconnect.
4. Noted that PURA § 35.004(c) requires utilities recover costs from the entities causing the costs. Therefore, a DSP should be permitted to recover all system upgrade costs from the DER that are necessary to facilitate the DER's interconnection.

***Staff recommendation: The Commission should take no action on these issues because the existing policy is reasonable and appropriate. Any resource interconnecting to the distribution system should pay for all of the upgrades to the DSP's systems above the standard allowance that are necessary for interconnecting and serving the distribution system.***

***If the Commission disagrees with Staff's recommendation, then Staff requests direction regarding whether and to what extent the interconnection costs should be assigned to the DSP's ratepayers or uplifted to all ERCOT ratepayers via TCOS rates. Staff notes that there is currently no process for uplifting via TCOS rates for a DSP that is not also a TSP.***

### **(C) Transmission Service at Distribution Voltage Delivery Charges**

Under 16 TAC § 25.191, a DESR provider must pay wholesale transmission service at distribution voltage delivery charges when drawing power from the grid and must do so in the manner prescribed by the DSP's Commission-approved tariffs. All wholesale transmission service at distribution voltage customers are subject to these tariffs and are charged based on the load they place on the grid. Most DSPs' tariffs provide that a customer will be charged based on some form of demand ratchet. A demand ratchet charge means the customer's monthly delivery charge is based on the higher of: (1) a percentage of the customer's peak demand from a previous time period, or (2) the customer's current monthly peak usage. Demand ratchets ensure each customer is paying its appropriate share of costs, because the distribution system is built to serve at the peak demand of each individual customer, even if that peak demand varies from month to month. Further, the Commission previously determined in the order adopting amendments to 16 TAC §§ 25.192 and 25.501 in Project No. 39917, *Rulemaking on Energy Storage Issues*, that "[w]holesale storage load would be subject to any applicable tariffs or charges if it connects and receives service at the distribution level. (Page 34)"

DESR providers commented that DESRs should be exempted from transmission service at distribution voltage delivery charges because,

1. This would compensate a DESR for the benefits that it provides. *See more on this argument above under (A) Defining the Problem.*

2. PURA § 35.004(b) requires non-discriminatory open access to wholesale transmission service. 16 TAC § 25.5(139) defines transmission services as, “[s]ervice that allows a transmission service customer to use the transmission and distribution facilities of electric utilities, electric cooperatives and municipally owned utilities to efficiently and economically utilize generation resources to reliably serve its loads and to deliver power to another transmission service customer...” According to DESR providers, requiring a DESR to pay transmission service at distribution voltage delivery charges and not requiring resources interconnected at transmission voltage to pay similar charges is therefore discriminatory.

Other commenters asserted DESRs should have to pay transmission service at distribution voltage delivery charges because,

1. It would be an unfair competitive advantage for DESRs versus other competitive resources that must pay for delivery of their fuel or energy sources. The wholesale transmission at distribution voltage charges associated with charging a DESR is analogous to fuel transportation costs that a generator is responsible for, therefore it is reasonable that a DESR should be responsible for such charges.
2. All resources, interconnected at transmission voltage or distribution voltage, are already adequately compensated through market prices for the benefits they provide. Therefore, exempting DESRs from these charges would be “double dipping” by compensating them for the benefits they are already paid for. Any potential uncompensated benefits a DESR provides does not outweigh the cost of uplifting such charges to other customers.
3. The policy is not discriminatory because neither DESRs nor resources interconnected at transmission voltage have to pay wholesale transmission service at transmission voltage charges. Additionally, resources interconnected at transmission voltage do not have to pay wholesale transmission at distribution voltage charges because resources interconnected at transmission voltage do not use a DSP’s distribution system. Specifically, resources interconnected at transmission voltage are responsible for all step-up transformation or other costs required to access the high voltage transmission system. DESRs are properly obligated to pay wholesale transmission service at distribution voltage charges because they use a portion of a DSP’s distribution system, and costs for building, operating, and maintaining the distribution system, including the step-up transformation that allows the DESR to access the high voltage transmission system, are recovered through these charges.
4. PURA § 35.004(c) requires utilities recover costs from the entities causing the costs. Therefore, a DSP should be permitted to recover all costs associated with operating and maintaining the distribution system from DESRs using the distribution system.

***Staff recommendation: The Commission should take no action on these issues because the existing policy is reasonable and appropriate. A DESR that is charging should be assessed a charge for wholesale transmission service at distribution voltage on the same basis as other wholesale distribution customers who import energy from the grid.***

***If the Commission disagrees with Staff’s recommendation, then Staff requests direction on whether and to what extent the costs that a DSP attributes to a DESR for delivery service should be assigned to the DSP’s ratepayers or uplifted to all ERCOT ratepayers via TCOS***

*rates. Staff notes that there is currently no process for uplifting via TCOS rates for a DSP that is not also a TSP.*

#### **(D) Wholesale Storage Load (WSL) Treatment**

16 TAC § 25.501(m) states that “[w]holesale storage is not subject to retail tariffs, rates, and charges or fees assessed in conjunction with the retail purchase of electricity. Wholesale storage shall not be subject to ERCOT charges and credits associated with ancillary service obligations, or other load ratio share or per megawatt-hour based charges and allocations.”

Wholesale storage load is not defined in Commission rules but has been defined at ERCOT to include the value of energy withdrawal associated with the ESR charging, but not the auxiliary load (load that contributes to maintaining the resource or serving additional load located with the resource). The auxiliary load does not receive the benefits described in 16 TAC § 25.501(m). Because wholesale storage load is excluded from costs provided in 16 TAC § 25.501(m), all other loads must pay wholesale storage loads’ share of the costs listed in 16 TAC § 25.501(m).

With the proliferation of ESRs, 16 TAC § 25.501(m) and ERCOT’s definition of WSL have increasingly been scrutinized. Since the Commission’s policy was implemented in 2012 and subsequently codified in the ERCOT Protocols, two protocol interpretation requests have sought clarity on this provision.

Commenters were split on whether 16 TAC § 25.501(m) should be revised.

- TDSPs, Office of Public Utility Council, Texas Industrial Energy Consumers, and Calpine supported revising 16 TAC § 25.501(m).
- Municipally Owned Utilities opposed revising 16 TAC § 25.501(m) unless the Legislature provided language.
- DESR providers generally opposed revising 16 TAC § 25.501(m).

***Staff recommendation:*** *The Commission should not revise 16 TAC § 25.501(m) at this time. However, if the Commission decides to pursue other issues in this memo, then Staff recommends the Commission to direct Staff to holistically review this policy and clarify which costs ESRs should pay.*