

Filing Receipt

Filing Date - 2024-09-30 02:46:48 PM

Control Number - 54224

Item Number - 46

PROJECT NO. 54224

COST RECOVERY FOR SERVICE TO DISTRIBUTED ENERGY RESOURCES

PUBLIC UTILITY COMMISSION OF TEXAS

TEXAS INDUSTRIAL ENERGY CONSUMERS' COMMENTS

I. INTRODUCTION

Distributed Energy Resources (DERs) create additional system costs compared to transmission-level generators by choosing to interconnect at distribution voltage, and this is appropriately reflected in their current rate treatment. DERs are currently responsible for their direct distribution-level interconnection costs and the ongoing costs of using the local distribution system. Specifically, distribution service providers (DSPs) require DERs to pay Contributions in Aid of Construction (CIACs) for their interconnection and ongoing monthly charges when DERs directly use utility distribution assets—just like all other distribution-voltage customers. By comparison, transmission-connected resources own, operate, and maintain the facilities necessary to export their power to the wholesale grid at transmission voltage, meaning that they—and not other utility customers—directly bear those costs. Under current law, both distribution- and transmission-voltage wholesale storage loads (WSLs) associated with distributed energy storage resources (DESRs) are also exempt from all wholesale transmission charges. This places DESRs on equal footing with transmission-connected generation resources, who are exempt from the same charges. For these reasons, as Staff previously determined, the current cost recovery methodology appropriately assigns costs for DERs, and DERs are charged fairly for the costs they cause on the distribution system.1

While Texas Industrial Energy Consumers (TIEC) does not believe that claims of "disparate treatment" or "discrimination" require additional subsidies for DERs, TIEC recognizes that DERs may have a significant role in future generation development in ERCOT, and TIEC is open to considering other rate approaches to make DER interconnections more economic and predictable. This could potentially include an interconnection allowance as contemplated by Staff's questions. As with transmission-level interconnections, any DER interconnection costs that will be "spread" to other utility customers should be subject to a cost cap by rule. At

¹ Project No. 54224, Staff Memo Responding to Comments at 3 (March 17, 2023).

transmission-voltage, the Commission developed interconnection allowances of up to \$14 million for resources interconnecting at 138 kV or less and up to \$20 million for resources interconnecting at transmission voltage higher than 138 kV.² If the Commission is inclined to create a mechanism where consumers fund some portion of DER interconnection costs, it would be similarly appropriate to develop a DER interconnection allowance to control the scope of these costs.

TIEC strongly opposes uplifting the entirety of any DER interconnection allowance to transmission rates through either the existing transmission cost of service (TCOS) mechanism or any similar mechanism. If an interconnection allowance is to be provided for DERs, the Commission should evaluate what specific benefits flow to the transmission system versus the distribution system, recognizing that these interconnection costs are fundamentally distributionlevel investments. It may be appropriate to require DERs to pay for their transformation costs in order to receive any interconnection allowance through transmission rates. The Commission should also be mindful that allocating any DER interconnection costs to TCOS would breach what has otherwise been a clear demarcation between transmission and distribution investment. This may exacerbate the challenges associated with policing inappropriate uplift TCOS rates, which has already been an issue in other contexts. Uplifting all DER interconnection costs to TCOS would inappropriately shift distribution service charges from the interconnecting DERs onto transmission customers without any analytical or legal basis. As noted in prior comments on this issue, TIEC would potentially be open to allowing a studied, pre-defined amount of DER interconnection costs to be included in transmission rates based on an evaluation of the benefits DERs provide to the transmission system directly, but it should not be all of the costs of any allowance.

TIEC also notes that socializing DER costs through a distribution equivalent to TCOS raises a host of policy and legal issues that must be carefully considered. For example, the Commission only has jurisdiction over wholesale transmission rates, not distribution rates, for non-opt-in entities (NOIEs).³ Requiring DSPs to pay for distribution-level investment incurred by other DSPs through a "postage stamp" approach without explicit statutory authorization may create legal challenges. However, if the interconnection costs are not spread ERCOT-wide or if

³ PURA §§ 32.002, 41.004.

certain utility service areas experience greater DER interconnections than others, this may create unjust rate disparities among distribution-voltage customers in different service areas. While perhaps not insurmountable, these issues may make a distribution-level allowance challenging to implement.

II. COMMENTS

1. Can the Commission implement the proposed standard distribution resource interconnection allowance without explicit statutory language authorizing such an allowance?

PURA does not specifically authorize uplifting distribution-voltage interconnection costs for DERs to other utility customers. PURA § 35.004(d) gives the Commission broad authority to "ensure that an electric utility or transmission or distribution utility provides nondiscriminatory access to wholesale transmission service" for power generation companies and exempt wholesale generators. Additionally, PURA §35.037 specifies that NOIEs must "provide wholesale transmission service to the distributed generation facility owner in the same manner as to other power generation companies for the sale of power from the distributed generation facility at wholesale." Together, these provisions could be read to give the Commission authority to create a distribution-level interconnection allowance to ensure that DERs can interconnect on a non-discriminatory basis, regardless of their location.

However, there are statutory limitations on how such an allowance would be recovered from other utility customers. Importantly, the Commission does not have authority to regulate or supervise a rate or service of a municipally owned utility, and the Commission cannot establish the rates for access to *distribution* facilities for electric cooperatives. Accordingly, the Commission would likely need explicit statutory language if it intends to reallocate the allowance (or any portion of the allowance) to distribution customers in NOIE areas through any kind of distribution equivalent to TCOS. It is also not clear that socializing DER interconnection costs through TCOS would avoid this problem, as there are arguments that these distribution costs are not legally eligible for inclusion in wholesale "transmission" costs under PURA § 35.004. TIEC

^{4 16} TAC § 25.191(d) further explains that TSPs have an obligation to provide comparable transmission service, even if the transmission customer is connected through distribution, rather than transmission facilities.

⁵ PURA § 32.002.

⁶ PURA § 41.004.

is not advocating for any particular change in law at this time, but observes that specific statutory guidance on this issue would certainly provide a clearer path forward.

2. What are the advantages and disadvantages of the proposed standard distribution resource interconnection allowance? Is a standard distribution resource interconnection allowance a viable option to move forward? If not, why?

One of the biggest challenges associated with creating a distribution interconnection allowance is determining how such an allowance would be recovered. As noted above, a distribution-level equivalent to TCOS, where these costs are socialized throughout ERCOT, may have statutory/legal challenges. On the other hand, uplifting these distribution costs through TCOS would breach the clear divide between transmission and distribution investment, would not reflect cost causation, and is also likely to have legal challenges under current law. Currently, customers are only responsible for transmission-level interconnection costs. They are not obligated to directly pay for any costs associated with the interconnection of distribution-level resources. Notably, the purpose of the distribution system is different from the transmission system. The highly interconnected transmission system benefits all end-use customers in ERCOT and is paid for by all end-use customers, regardless of location. On the other hand, the distribution system is built for and provides service to local end-use customers, and distribution delivery rates are unique to each DSP to account for the unique qualities of their system. The cost allocation and recovery methodologies are different to account for the different purposes and cost drivers of each system. As such, there has been a clear divide between transmission and distribution investments that makes a distribution-voltage interconnection allowance challenging.

DERs, and DESRs in particular, create additional system costs as compared to transmission voltage resources. For instance, compared to transmission-voltage batteries, DESRs avoid costs associated with building their own transmission-level step-up facilities. Instead, DESRs interconnect to distribution feeders and use utilities' substations to transform energy whenever they charge or discharge. Just as a transmission connected battery owns (and pays for the maintenance of) its facilities, DESRs should be responsible for the costs of building and maintaining at least some portions of the distribution facilities that DESRs use. Uplifting all of an interconnection allowance in TCOS would inherently include distribution-related interconnection costs. It would also arguably lead to unduly preferential treatment for distribution resources relative to transmission-connected generators.

Compared to the *status quo*, a DER interconnection allowance would theoretically incentivize additional DER development and provide a clear, uniform treatment for the amount of interconnection costs consumers may have to bear for DERs. DERs arguably provide both local and system-wide benefits by increasing the overall available generation in ERCOT. However, because the distribution system is not as interconnected as the transmission system, the benefits of interconnecting DERs flow most directly to other nearby customers on the distribution system. The benefits to the transmission system mainly come from displacing additional transmission or larger-scale generation that would otherwise be needed, which may be difficult to quantify. Additionally, the potential benefits of DERs will vary based on many factors, such as siting and technology. DERs interconnected directly to a utility substation will be more likely to have direct impacts on the transmission system. Conversely, the benefits of DERs located behind a retail customer or near the end of a distribution feeder will primarily flow to local customers, rather than the transmission system.

At a minimum, if the Commission seeks to incentivize the development of DERs by requiring consumers to subsidize the interconnection of distribution-level resources, a properly structured allowance would need to protect consumers against excessive costs. Prior to the implementation of PURA § 35.004(d-1)-(d-3), transmission-level generators had an open-ended "blank check" to cover even the most inefficient very high costs to interconnect remotely sited transmission-level generation facilities. Similarly, if customers are subsidizing the interconnection of DERs, the Commission must establish a standard allowance to encourage DER developers to exercise discretion when selecting their sites and to limit potential cost exposure for ERCOT consumers.

3. At what amount should a standard distribution resource interconnection allowance be set? Should the applicability or amount of the allowance vary based on the size of the resource?

TIEC is not in a position today to recommend specific dollar amounts or to determine whether the allowance should vary based on the size or location of the resource. Rather than adopting a flat \$1.5 million allowance at this time, the Commission should collect information from DSPs to understand the average costs of DER interconnections and provide this for public analysis and comment, similar to what was done for the transmission-level interconnection allowance. The Commission should also evaluate what benefits from DERs accrue to the

transmission system versus the distribution system to inform allocation, as discussed below. TIEC has previously suggested a potential framework where a DER could be eligible to have some interconnection costs funded through transmission rates if the DER pays to transform its voltage up to transmission. This should be one of the cost elements that is considered.

4. How should the interconnection costs covered by such an allowance be reallocated? What effects would this have on other customers?

TIEC does not take a position on how a distribution equivalent to TCOS would be allocated among distribution customers. Unlike transmission, most distribution investment today is allocated based on customers' non-coincident peaks (NCPs). This reflects that the distribution system must be sized to serve the peak demands of individual end-use customers who take service directly from the distribution facilities. This is very different from the transmission system, which is heavily interconnected and is built to serve *overall* coincident system demand. As such, an NCP allocation would track traditional distribution-level cost allocation, but it may not be appropriate for allocating distribution-voltage interconnection costs that are not incurred to serve the demand of specific distribution-voltage customers. Unlike transmission-voltage generators, DERs do not benefit all distribution voltage customers in a similar manner but will have differential local impacts depending on where they are connected. These impacts are also not directly driven by customer needs but by the preferences of the interconnecting generator. Since these generators are not sited or owned by the DSPs, the DER capacity and interconnection costs may not directly correlate to customers' local NCP demands. This is different from transmission-connected generators, who are able to serve a much broader base of customers throughout ERCOT based on system-wide demands through the interconnected transmission system.

As noted above, any portion of the interconnection allowance that will be included in transmission rates should be based on direct benefits to the transmission system. This could potentially include a requirement for DERs to pay transformation costs to step-up their voltage, to ensure that their interconnection actually provides benefits to the transmission system. DERs can theoretically provide some incidental benefits to the transmission system, but their interconnection costs are fundamentally distribution investment and these benefits do not justify uplifting all of the costs of serving those facilities into TCOS. To determine whether any portion of an interconnection allowance could be allocated to TCOS, TIEC recommends the Commission or

ERCOT conduct an analysis to determine the average benefit DERs provide to the transmission system and any specific characteristics that increase or decrease these benefits, such as directly funding transformation costs. This would help to inform whether it is appropriate to include any portion of an interconnection allowance for DERs in TCOS rates. If eligible, these costs should be recovered in the same manner as other TCOS charges.

- 5. Should a standard distribution resource interconnection allowance also apply in areas served by municipally owned utilities and electric cooperatives?
- 6. If a standard distribution resource interconnection allowance should apply in areas served by municipally owned utilities and electric cooperatives, does the Commission need to develop a wholesale cost recovery mechanism to address the costs associated with this allowance? What factors should the Commission consider in developing such a mechanism?

PURA specifically contemplates a methodology for the Commission to price wholesale transmission services based on the postage stamp method. This allows the Commission to spread transmission costs statewide. However, there is no explicit statutory authorization for the Commission to develop a similar method to spread distribution-related costs statewide. Further, it is not clear that the Commission has authority to require NOIEs to participate in a distribution-voltage TCOS equivalent that would cover DER interconnection costs. Under PURA, NOIEs' distribution rates are not regulated by the Commission. PURA § 41.004 limits the Commission's jurisdiction over cooperatives and PURA § 32.002 limits the Commission's jurisdiction over municipalities. Specifically, for electric cooperatives, the Commission has the authority to regulate the terms and conditions, but not rates for open access to distribution facilities, and for municipalities, PURA explicitly prohibits the Commission from regulating or supervising a rate or service for municipally owned utilities. Accordingly, the Commission must consider the extent

⁷ PURA § 35.004(d) ("The commission shall price wholesale transmission services within ERCOT based on the postage stamp method of pricing under which a transmission-owning utility's rate is based on the ERCOT utilities' combined annual costs of transmission, other than costs described by Subsections (d-2 and (d-3, divided by the total demand placed on the combined transmission systems of all such transmission-owning utilities within a power region. An electric utility subject to the freeze period imposed by Section 39.052 may treat transmission costs in excess of transmission revenues during the freeze period as an expense for purposes of determining annual costs in the annual report filed under Section 39.257. Notwithstanding Section 36.201, the commission may approve wholesale rates that may be periodically adjusted to ensure timely recovery of transmission investment. Notwithstanding Section 36.054(a), if the commission determines that conditions warrant the action, the commission may authorize the inclusion of construction work in progress in the rate base for transmission investment required by the commission under Section 39.203(e).").

⁸ PURA § 41.004(4).

⁹ PURA § 32.002.

of its statutory authority over NOIE rates when developing a wholesale cost recovery mechanism for a DER allowance. A related concern is that the Commission may not have authority to review and regulate the NOIE interconnection costs that would potentially be included in such a postage-stamp mechanism. Without oversight of these charges, the Commission should not include any costs of NOIE DER interconnections in any mechanism that is spread to customers served by investor-owned utilities.

Similarly, if the Commission determines that any portion of a DER interconnection allowance will be eligible for inclusion in TCOS rates, this may be subject to legal challenges by NOIEs in particular, as it would involve including other utilities' distribution costs in wholesale *transmission* rates that will be charged to the NOIEs without specific statutory authority. Including distribution investment in TCOS is also generally subject to a potential legal challenge, as noted elsewhere, since these are not transmission facilities.

7. What disparities exist between distributed generation and energy storage resources interconnecting at transmission and distribution voltages?

8. What, if any, action should the Commission take to address these disparities in a uniform fashion?

Currently, there is no disparity between transmission and distribution connected entities with respect to interconnection costs. DERs are not required to pay any transmission costs to interconnect. However, DERs are subject to CIACs and ongoing monthly charges because DERs directly use utility distribution assets, including step-up transformers, which are necessary to transform the DERs' energy up to transmission voltage. As Staff explained in this Project, "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." Previously, other stakeholders have suggested that DERs should be exempt from paying CIACs and monthly expenses because it is not required of their transmission-interconnected competitors. However, unlike transmission-connected resources, energy that flows to or from DERs must be transformed from transmission to distribution voltage or vice versa. As such, interconnecting DERs adds to the cost of building and maintaining distribution substations, and some portion of those costs should be borne by the DER

¹⁰ Project No. 54224, Staff Memo Responding to Comments at 3 (March 17, 2023).

that chose to site on the distribution system. DERs avoid the cost of building their own facilities to transform power to and from transmission voltage by interconnecting at the distribution level and relying on their DSP's transformation capabilities. A rate structure that fails to recognize this important distinction will create undue preferential treatment for distribution-level resources as compared to transmission-connected generators.

Similarly, DESRs are treated fairly as compared to transmission-connected storage resources. While DESRs are exempt from transmission charges just like transmission-connected batteries, ¹¹ there is no inherent right or Commission policy that exempts battery resources from *all* utility charges, so DESRs should be required to bear their share of the costs that their DSPs incur to serve them. First, DESRs should pay distribution charges to compensate their DSPs for the costs incurred to support the DESRs' charging needs, because when DESRs take power from the grid to charge, they are indistinguishable from any other distribution system load. Additionally, DESRs should pay distribution charges to offset any transformation costs required to deliver the DESRs' discharged power to the transmission system, as well as any incremental operations and maintenance costs associated with utility-owned assets that are used to serve DESRs. Accordingly, DESRs are not analogous to transmission-voltage batteries and should not be exempted from DSP charges they incur due to using the distribution system like a load.

Setting aside the cost issues, the interconnection process for DERs is less transparent and uniform than for transmission-level generators. For decades there has been a well-established, transparent process for interconnecting transmission-voltage resources, but the distribution level interconnection process has not evolved to keep pace with DER development. Similar to the transmission-level process, TIEC believes it would benefit resource developers, utilities, and customers alike to have a clear set interconnection standards and expectations around DERs.

The Commission should develop a pro-forma wholesale distribution tariff, including the equivalent of a Standard Distributed Generation Interconnection Agreement (SDGIA) between DERs and utilities. Recognizing that much of the study and interconnection burden for DERs rests with the utilities, and not necessarily with ERCOT, a pro forma wholesale distribution tariff and interconnection policy in a Commission rule could complement existing provisions in the ERCOT

Note that generation resources do pay transmission costs if they take power (station or auxiliary) across the 4CP intervals, which is consistent with how all loads are treated.

planning process for these smaller resources. Specifically, the pro forma tariff should address items such as: (a) specific studies that will be required, the information needed from a DER in order to complete the studies, and the associated timelines; (b) the security/credit or financial contributions that will be required of the DER, when these amounts will be due, and how they will be calculated; (c) any specific applications or forms the DER will be required to complete; and (d) any specific technical requirements for interconnecting and operating DERs in general, which may include tailored requirements for subcategories of DERs if needed for reliability. While the tariff would only apply to IOUs, NOIEs frequently adopt tariffs modeled after those approved for IOUs. As such, this approach would help provide clarity around technical specifications for interconnecting DER facilities, the study process and timelines, the various agreements and financial commitments that are required of developers, and how the costs will be assigned.

III. CONCLUSION

TIEC appreciates the opportunity to respond to Commission questions and looks forward to continuing to work with Commission Staff and other stakeholders as this project moves forward.

Respectfully submitted,

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ATTORNEYS FOR TEXAS INDUSTRIAL ENERGY CONSUMERS

PROJECT NO. 54224

COST RECOVERY FOR SERVICE TO § PUBLIC UTILITY COMMISSION DISTRIBUTED ENERGY RESOURCES § OF TEXAS

TEXAS INDUSTRIAL ENERGY CONSUMERS' EXECUTIVE SUMMARY

- Distributed Energy Resources (DERs) create additional system costs compared to transmission-level generators by choosing to interconnect at distribution voltage, and this is reflected in their current rate treatment. Importantly, transmission-connected resources own, operate, and maintain the facilities necessary to export their power to the wholesale grid at transmission voltage, meaning that they—and not other utility customers—directly bear those costs.
- While TIEC does not believe that claims of "disparate treatment" require subsidies for DERs, TIEC recognizes that DERs may have a role in future generation development in ERCOT, and TIEC is open to considering other rate approaches to make DER interconnections more economic and predictable.
- As with transmission-level interconnections, any DER interconnection costs that will be "spread" to other utility customers should be subject to a cost cap by rule.
- If an interconnection allowance is to be provided for DERs, the Commission should evaluate what specific benefits flow to the transmission system versus the distribution system, recognizing that these interconnection costs are fundamentally distribution-level investments. Accordingly, it may be appropriate to require DERs to pay for their transformation costs in order to receive any interconnection allowance through transmission rates.
- TIEC is not in a position today to recommend specific dollar amounts or to determine whether
 the allowance should vary based on the size or location of the resource. The Commission
 should collect information from DSPs to understand the average costs of DER interconnections
 and provide this for public analysis and comment, similar to what was done for the
 transmission-level interconnection allowance. Additionally, TIEC does not take a position on
 how a distribution equivalent to TCOS would be allocated among distribution customers.
- TIEC strongly opposes uplifting the entirety of any DER interconnection allowance to transmission rates through the existing TCOS mechanism. However, TIEC would potentially be open to allowing a studied, pre-defined amount of DER interconnection costs to be included in transmission rates based on an evaluation of the benefits DERs provide to the transmission system directly. Notably, uplifting these distribution costs through TCOS would breach the clear divide between transmission and distribution investment, would not reflect cost causation, and is also likely to have legal challenges under current law
- Setting aside the cost issues, the interconnection process for DERs is less transparent and
 uniform than for transmission-level generators. TIEC believes it would benefit resource
 developers, utilities, and customers to have clear set interconnection standards and
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 wholesale distribution tariff, including the equivalent of a Standard Distributed Generation
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