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PROJECT NO. 55566

GENERATION INTERCONNECTION ALLOWANCE	§ § §	**PUBLIC UTILITY COMMISSION OF TEXAS**

TEXAS PUBLIC POLICY FOUNDATION'S COMMENTS ON PROPOSAL FOR PUBLICATION OF AMENDMENTS TO 16 TAC §25.195

TO THE HONORABLE PUBLIC UTILITY COMMISSION OF TEXAS:

The Texas Public Policy Foundation (TPPF or the Foundation), through its Life:Powered initiative, respectfully submits the following comments in response to the proposal for publication of amendments to 16 TAC §25.195, concerning the new interconnection allowance for generators, on November 30, 2023.[1] As the PUC finalizes this rule, TPPF urges the Commission to adhere to the following principles.

- Design the allowance to optimize the right balance of cost and reliability to ratepayers, recognizing that disparate impacts to market participants may be necessary to meet the highest goal of providing the best outcome for ratepayers.
- Start from the premise that the ideal interconnection allowance is zero, which provides maximum cost savings to ratepayers, and work up from there, recognizing the near-term need to develop more reliable generation in ERCOT.
- Simplicity in the final rule will likely produce the best outcomes for market participants and for ratepayers, and both the statutory language and legislative intent governing this rulemaking indicate that a single allowance is strongly preferred.

Keeping these principles in mind, TPPF recommends a single allowance of $16 million per project that can be uplifted to ratepayers. This allowance will cut the uplifted costs of the highest 20% of projects while not impacting the vast majority of dispatchable generation and energy storage projects that are needed for reliability. Furthermore, the PUC should actively monitor the development of new projects after the allowance goes into effect and consider lowering the allowance in future years. Below is a more detailed explanation of the Foundation's reasoning.

The transmission cost of service (TCOS) has more than doubled over the past decade and is placing an increasing burden on Texas ratepayers.

As documented by the Electric Reliability Council of Texas (ERCOT) in its annual *Report on Existing and Potential Electric System Constraints and Needs*,[2,3] TCOS rose from $1.7 billion in 2011 to $4.5 billion in

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[1] Public Utility Commission of Texas, "Proposal for Publication of Amendments to 16 TAC §25.195," November 30, 2023, https://interchange.puc.texas.gov/Documents/55566_48_1349598.PDF.

[2] Electric Reliability Council of Texas, *Report on Existing and Potential Electric System Constraints and Needs*, December 23, 2020, p. 8, https://www.ercot.com/files/docs/2020/12/23/2020_Report_on_Existing_and_Potential_Electric_System_Constraints_and_Needs.pdf.

[3] Electric Reliability Council of Texas, *Report on Existing and Potential Electric System Constraints and Needs*, December 22, 2023, p. 8, https://www.ercot.com/files/docs/2023/12/22/2023-Report-on-Existing-and-Potential-Electric-System-Constraints-and-Needs.pdf.

2022. While demand growth and the needs of a growing population are one driver of that increase, TCOS as a function of total electricity consumed in ERCOT doubled from $5.00/MWh in 2011 to $10.50/MWH in 2022. Even after accounting for inflation,[4] TCOS per MWh still rose 72% over that time.

Most of those costs are related to ongoing transmission maintenance and system improvements, bulk transmission upgrades, and the ongoing financing costs of the Competitive Renewable Energy Zones (CREZ), the latter of which is still adding hundreds of millions to TCOS annually. Still, interconnection costs are not negligible. Data provided by the PUC in this docket[5] indicates that total interconnection costs from 2020 to 2022 (the three complete years provided in the data set) averaged nearly $400 million a year, or about 10% of TCOS. Given that the vast majority of generation resources added to the ERCOT grid in recent years have been wind and solar, it is no surprise that those resources have accounted for 90% of interconnection costs uplifted to TCOS since 2019.

As with all electric market policies, it is imperative that this allowance be designed to optimize the right balance of cost and reliability benefits to ratepayers. That concern must take priority over concerns regarding disparate impacts to market participants. The PUC should strive to set the allowance as low as possible while not impacting the development of reliable generation that the ERCOT grid badly needs.

As noted in House Bill 1500 Section 9, one of the main goals of this policy is to "reduce the costs to consumers of generation interconnection."[6] In an ideal world where the ERCOT wholesale market was incentivizing sufficient generation capacity to meet demand growth and interconnection costs were low enough to affect siting decisions but not necessarily development decisions, the ideal interconnection allowance would be zero. In that scenario, the interconnection costs would be borne entirely by the developers, incentivizing them to locate their power plants in a way that maximally balanced interconnection costs with other siting characteristics. This is why, in many other markets, generation interconnection costs are paid entirely by the project developers.[7]

However, Texas policy has historically dictated that, in the absence of capacity payments to ensure the development of new generation, the need for incentivizing additional generation that improves the reliability of the ERCOT grid is paramount enough that interconnection costs should be uplifted entirely to TCOS and passed onto ratepayers. As Gov. Abbott noted in his July 2021 letter to the commissioners, one of the policy goals of the commission should be to "accelerate the development of transmission projects that increase connectivity between new or existing dispatchable generation plants and areas of need."[8] Given the continued dire need for additional dispatchable generation in ERCOT, as evidenced by

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[4] U.S. Bureau of Economic Analysis, "Real private fixed investment: Nonresidential: Structures: Power and communication (chain-type price index) [W003RG3A086NBEA]," retrieved from Federal Reserve Bank of St. Louis on December 20, 2023, https://fred.stlouisfed.org/series/W003RG3A086NBEA.

[5] Public Utility Commission of Texas, "Corrected Memo on TSP Data" [Excel file], November 2, 2023, https://interchange.puc.texas.gov/search/documents/?controlNumber=55566&itemNumber=44.

[6] HB 1500, 88th Texas Legislature, 8 (2023), https://capitol.texas.gov/tlodocs/88R/billtext/pdf/HB01500F.pdf.

[7] Fink et al., *A Survey of Transmission Cost Allocation Methodologies for Regional Transmission Organizations*, National Renewable Energy Laboratory, February 2011, p. 3-5, https://www.nrel.gov/docs/fy11osti/49880.pdf.

[8] Greg Abbott, "Letter to the Commissioners of the Public Utility Commission of Texas," Office of the Governor of Texas, July 7, 2021, https://gov.texas.gov/uploads/files/press/SCAN_20210706130409.pdf.

the new net load record set on September 6, 2023,[9] the allowance should be designed such that it does not stunt the development of new dispatchable generation.

For intermittent wind and solar generation that brings little capacity value to the system, the calculus needs to be different. In those cases, there should be closer scrutiny of the reduction in energy costs brought on by additional generation in the system versus the additional transmission costs to bring that energy to the market. Wind and solar also have more siting flexibility than thermal power plants because they do not need access to fresh water, so there might be more room to optimize siting decisions for those resources. Hence why TPPF views the statutory changes to the Public Utility Regulatory Act (PURA) §35.004(d) enacted by House Bill 1500,[10] and consequently these amendments, as a necessary evolution of the policies regarding interconnection costs.

Based on the historical data provided by the PUC, as well as the statutory language in PURA §35.004(d) and the legislative intent of HB 1500 Section 9, TPPF believes a single allowance is the most prudent approach and does not support an allowance based on interconnection voltage as contemplated in the proposed language.

The proposed language designating a higher allowance for 345 kV connections than for 138 kV connections directly contradicts the principles outlined above and may not comply with the statutory requirements of HB 1500 Section 9. All the new natural gas power plants over the past several years were connected at 138 kV,[11] so setting a lower allowance for those units disadvantages them relative to wind and solar that are primarily connected to newer 345 kV lines far from load centers. TPPF believes the intent of HB 1500 Section 9 was to create the exact opposite set of incentives. Units that connect on older 138 kV lines are generally closer to load centers and, if anything, should be given a higher allowance because they usually don't create as much need for more transmission upgrades. However, for the reasons given below, TPPF believes that a single dollar amount allowance is the best option.

Other methods of delineating the allowance, such as basing it on effective load carrying capability (ELCC) or generation output during peak demand hours, also do not appear to be superior to using a single allowance. For example, the historical data shows that a 100 MW gas combustion turbine near Houston had an interconnection cost of $15.2 million, which is $190/ELCC kW assuming a 80% ELCC, while a 200 MW solar facility in West Texas that cost $15.6 million to connect was $156/ELCC kW, assuming a 50% ELCC. The gas unit is sited much closer to a major load center and will provide more benefits to consumers, but delineating the interconnection cost by ELCC doesn't bear that out. The Foundation also believes that fixing the allowance as a percentage of the cost, instead of a single dollar amount, doesn't sufficiently delineate between the high-cost outliers that the legislation seeks to rein in and projects that are as efficiently sited as possible.

Some commenters during the October comment period correctly noted that a single allowance is the best means to avoid unduly complicating the decision-making process for new generation and to avoid

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[9] Brent Bennett, "Tight Grid Conditions This Summer Highlight the Investment Problem Plaguing the Texas Grid," September 6, 2023, https://lifepowered.org/tight-grid-conditions-this-summer-highlight-the-investment-problem-plaguing-the-texas-grid/.

[10] HB 1500, p. 8.

[11] PUC, "Corrected Memo on TSP Data."

perverse incentives.[12] Other commenters also noted that the statutory language in PURA §35.004(d) strongly suggests the use of a single allowance.[13] All these factors lead the Foundation to conclude that the PUC should pursue a simple dollar amount allowance that balances reducing costs to consumers with the need to continue interconnecting as much reliable generation as possible to the system.

For the final rule, TPPF recommends a flat allowance of $16 million per project that can uplifted to TCOS. The PUC should seek to reduce the allowance in the future if it observes that doing so would not impact the addition of new reliable generation to the ERCOT grid.

Building on the principle that the allowance should be set to avoid penalizing dispatchable generation that sites close to load, a natural break point in the past four years of data appears at about $16 million. Only the top 20% of projects in this data set would have incurred extra costs under that allowance, and the allowance would have saved ratepayers about $205 million, or an average of $50 million annually, over the past four years. Only one gas generator had interconnection costs above that allowance, at $16.4 million, and no energy storage units had interconnection costs near that level. Three gas generators had interconnection costs in the $13-16 million range, so reducing the allowance below $16 million would start to significantly impact some of those generators.

Another natural break point occurs at the 50th percentile mark of $7.5 million, as a large majority of gas generators and energy storage units still fall below that line. That allowance would have reduced uplift to TCOS by $667 million over the past 4 years, providing more than three times the savings for ratepayers as a $16 million allowance. Again, recognizing that the policy goal is to minimize costs to consumers and that some jurisdictions require generators to pay all interconnection costs, the PUC should strive to set the allowance as close to zero as possible without stunting the development of generators that improve the reliability of the ERCOT grid. Therefore, TPPF recommends that the PUC set the allowance at the higher mark of $16 million right now but that it also seek first to *reduce*, not increase, the allowance in future years.

Sincerely,

/s/ Brent Bennett
Brent Bennett, Ph.D.
Policy Director, Life:Powered
Texas Public Policy Foundation

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[12] Cyrus Reed, "Response of Sierra Club, Lone Star Chapter to Commission Staff Questions," Sierra Club Lone Star Chapter, October 13, 2023, p. 1, https://interchange.puc.texas.gov/Documents/55566_22_1337745.PDF.
[13] Emily Jolly, "LCRA Transmission Services Corporation's Response to Questions for Comment," Lower Colorado River Authority, October 13, 2023, p. 1, https://interchange.puc.texas.gov/Documents/55566_23_1337805.PDF.

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COMMENTS OF THE TEXAS PUBLIC POLICY FOUNDATION: EXECUTIVE SUMMARY

- The transmission cost of service (TCOS) has more than doubled over the past decade and is placing an increasing burden on Texas ratepayers. Even after accounting for demand growth and inflation, ratepayers paid 72% more in TCOS in 2022 than in 2011. About 10% of the TCOS over the past few years is attributable to interconnection costs.

- As with all electric market policies, it is imperative that this allowance be designed to optimize the right balance of cost and reliability benefits to ratepayers. That concern must take priority over concerns regarding disparate impacts to market participants. The PUC should strive to set the allowance as low as possible while not impacting the development of reliable generation that the ERCOT grid badly needs.

- Based on the historical data provided by the PUC, as well as the statutory language in PURA §35.004(d) and the legislative intent of HB 1500 Section 9, TPPF believes a single allowance is the most prudent approach and does not support an allowance based on interconnection voltage as contemplated in the proposed language.

- For the final rule, TPPF recommends a flat allowance of $16 million per project that can be uplifted to TCOS. If implemented over the past 4 years, this allowance would have reduced uplift to ratepayers by an average of about $50 million annually ($205 million over the 4 years of data provided),[14] enabled all but one thermal generator to recover 100% of their interconnection costs. The PUC should seek to reduce the allowance in the future if it observes that doing so would not impact the addition of new reliable generation to the ERCOT grid.

[14] PUC, "Corrected Memo on TSP Data."