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PROJECT NO. 55000

PERFORMANCE CREDIT MECHANISM (PCM)	§	**PUBLIC UTILITY COMMISSION**
	§	
	§	**OF TEXAS**

COMMENTS OF TEXAS ELECTRIC COOPERATIVES, INC.

Texas Electric Cooperatives, Inc. (TEC) respectfully submits these comments in response to certain questions posed by the Public Utility Commission of Texas (Commission) Staff's (Staff) questions for comment regarding the PCM.[1] TEC is the statewide association of electric cooperatives operating in Texas, representing its members except as their interests may be separately represented.[2] The Staff memorandum directs comments to be filed by June 20, 2024. These comments are timely filed.

TEC's comments are neither endorsing nor opposing the adoption of PCM. These comments are intended solely to respond to the questions posed by Commission Staff.

1. **Answer the following questions on PCM Design Parameters #1-2, which are related to the PCM Seasons.**
   a. **What should the value be for the number of seasons?**

TEC recommends the Commission and ERCOT consider between 2 and 4 seasons with a clear understanding of the tradeoffs presented by incorporating greater or fewer seasons into the analysis and ultimate design. TEC posits that a greater number of seasons may result in periods where generators could miss capturing Performance Credit (PC) revenue because they are typically conducting maintenance consistent with good utility practice to better ensure availability during the historic tightest summer and winter seasons. However, fewer seasons could result in PCs being awarded during hours outside the best use of the generator, as tight conditions during peak net load, driven by solar down ramp in the evening, may occur in any season, but PCs may not be assigned to those hours because they have been exhausted during longer duration scarcity conditions. As load serving entities, cooperatives may also be subject to differing collateral requirements based on the number of seasons ultimately incorporated into the design. For these reasons and given the significant influence of this fundamental parameter

[1] Staff's Questions for Comment and Summary of PCM Design Parameters (May 16, 2024).

[2] TEC's 76 members include distribution cooperatives that provide retail electric utility service to approximately 5,000,000 consumers in statutorily authorized service areas that encompass more than half of the total area of the state. TEC's G&T members generally acquire generation resources and power supply for their member distribution cooperatives and deliver electricity to them at wholesale.

on long-term expectations, TEC would appreciate seeing sensitivity analysis on the economic impact of varying the number of seasons in the analysis.

b. Which months should be included in each of those seasons?

At this time, TEC has no decisive opinion on this matter but notes that seasons do not necessarily have to be equally weighted. Rather, the purpose of a seasonal grouping should be to group together periods of time with similar risk profiles. Therefore, some seasons may have 4 months with similar risks, while others may only have 2 months. For example, the risk present in winter is very different from summer, and typically only exists for a few months during the year most years compared to summer risks that can last for a much greater duration.

c. What specific sensitivities around the PCM seasons should be included in the analysis?

Consistent with answer 1.a. above, TEC recommends a 2 – 4 season sensitivity analysis.

2. Answer the following questions on PCM Design Parameters #3-4, which are related to the Performance Credit (PC) hours.

a. What should the number of PC hours per season be?

TEC believes that the hours of highest net peak load should be considered as PC hours in order to truly incent dispatchable generation during the periods of greatest need and given our evolving system. The number of hours should be flexible and should include enough hours to provide adequate opportunities for generators while not oversaturating the PC market and harming the incentive value of PC hours.

If the Commission wishes to provide some data support to a certain number of hours per season, it may be useful to review the current work on the ERCOT reliability standard along with the historical level of reserves used to determine the Operating Reserve Demand Curve (ORDC) price adder. A review of the historical ORDC contributions to system lambda and the impact on system dynamics could provide valuable information on a potential number of PC hours per season and the correct number of seasons to be considered. The Commission can see where reserves were lowest and when the system responded appropriately and how often. While historical data is no guarantee of future performance, this could at least act as a starting point for the Commission's determination regarding the correct number of seasons and PC hours per season.

b. How wide of a range on the number of PC hours should be considered for the sensitivity analysis (i.e., the minimum/maximum number of hours per season)?

TEC believes the appropriate number of hours should be flexible but coincide with peak net load or EEA hours.

c. Should all EEA hours automatically be included as PC hours, even if the number of EEA hours exceeds the chosen number of PC hours in a given season?

Yes, TEC believes EEA hours should automatically be considered as PC hours. The number of PC hours should be flexible to incorporate any amount of time spent in EEA. The forthcoming economic analysis should include sensitivities around the range of potential PC hours.

3. **The base case for PCM Design Parameter #5, which relates to the metric used to determine PC generation by resource, is set to 'Sum of available generating capacity by resource.' How should 'availability' be defined for the purpose of this design parameter?**

TEC recommends the use of the average of available capacity during 15-minute intervals during PC hours, including capacity that is provided from an offline state that provides value to the ERCOT system by qualifying to provide quick start services or offline Ancillary Services. Rather than a simple sum during all hours, an average during 15-minute intervals of the PC hours will better account for fluctuations in a generator's available capacity. TEC believes that an average of available capacity during 15-minute intervals will more accurately capture the capabilities of the generators attempting to generate PC Credits, which will better match capabilities with performance. In addition, many ancillary services and ERCOT functions track along 15-minute intervals, so the time frames would already be a familiar component for ERCOT and market participants.

4. **Under the base case for PCM Design Parameter #6, the PCs that duration-limited generators could earn would be capped during consecutive PC hours by the duration of the generation facility (e.g., a four-hour energy storage resource would only be able to receive PCs for up to four consecutive hours).**

a. Should the number of PCs these resources can receive during consecutive PC hours be capped by the duration of the facility? Why or why not?

TEC does not have a precise recommendation on the exact amount of hours that would be appropriate for a duration-limited resource to earn PCs consecutively. As TEC understands, some duration limited resources have the ability to limit their output in order to extend their duration of output. However, under this scenario the resource may be able to produce for a longer period of time but not at the maximum level of output that is expected. In such a scenario

it may be appropriate to limit PC recovery to the resource's duration limitation at maximum output. At a minimum, a duration limited resource should be able provide significant portions of its available capacity over an extended period of time.

It should also be noted, in particular for battery resources, that they act as both a load and a resource for the system, so any hours or time awarded to a battery in excess of its operational capabilities will not only result in a non-producing resource but potentially an additional load on the system. These unexpected fluctuations in the system during a period of low reserves or high stress could be problematic for system planning purposes and may necessitate some sort of limitation on the number of hours that may be awarded. Additionally, recognizing the battery status as a load, if a battery charges during PC hours, the battery should be subject to additional PC load charges on par with every other load on the system, and the battery resource should not be eligible to capture PC credits during an hour in which it was charging. This will incentivize battery operators to charge their resources with care during times of high system stress where charging may do more harm to the system. TEC is not advocating for discriminatory treatment of battery resources. Non-discriminatory treatment of resources has been paramount to the ERCOT system for decades and this fundamental aspect of the market should not change. However, if a resource is a net load during a PC hour, it should be treated as a load.

5. **PCM Design Parameters #11 (ERCOT-wide PC Requirement Determination Framework), #12 (Net-CONE determination), and #14 (Demand Curve – Seasonal Value Allocation) all currently have optionality where these parameters can be determined on an ex-ante or ex-post basis.**
    a. **For each of these design parameters, should the base case be set to ex-ante or ex-post? Why?**

As a general matter, TEC believes that certain elements of the PCM will be determined on an ex-post basis and others will necessarily be determined on an ex-ante basis. A purely backward-looking ex-post framework, while based on actual data, fails to account for changing market dynamics that can be factored into a forward-looking ex-ante framework. However, an over-reliance on predictions and forecasts ignores the existing data in favor of often-flawed analysis. The ideal market framework will consist of a hybrid of forward and backward-looking elements that best blend the available useful data and forecasts that eliminate as much potential error as possible.

Regarding the specific parameters mentioned, Parameter 11, the ERCOT-wide PC Requirement Determination could be done on either an ex-post or ex-ante basis. Because there

are substantial tradeoffs, TEC asks that ERCOT and its consultant conduct a sensitivity analysis on this parameter.

Parameter 12, the Net-CONE Determination, should be determined ex-post. There are elements of net-CONE that cannot be determined on a forward-looking basis. Net-CONE should be settled for the prior year on an ex-post basis to accurately incorporate all of the needed data to determine what revenue was generated in a prior year relative to CONE.

Parameter 14, the seasonal demand curve, will need to be determined on an ex-ante or forward-looking basis. The demand curves are needed in order to determine the Operating Reserve Demand Curve floors that assist in sending pricing signals to generators. While the demand curve may be adjusted on an ex-post basis to account for fluctuations in net-CONE, the basic formulation of the demand curve should be known in advance.

8. **PCM Design Parameter #31 relates to the timing of the seasonal PC market settlement. The current base case settles the PC market for all seasons simultaneously at the end of the year. Is the current base case appropriate, or should the PC market be settled at the end of the season for each season? Why?**

A seasonal settlement is likely in the best interests of all parties. For the generators a seasonal settlement results in faster and more efficient payments, a better time value of money, and additional capital to reinvest if needed. Load Serving Entities also benefit from a seasonal settlement approach, lessening the required collateral carrying time. Many TEC members expressed concerns with the potential requirements to hold collateral for up to a year. The need to hold collateral for an extended period, especially in an amount needed to cover an annual settlement, limits the use of capital in a way that could harm reinvestment. For the benefit of both generators and LSEs, TEC recommends the PCM include a seasonal settlement process rather than annual.

9. **Regarding the collateral requirements and timelines (PCM Design Parameters #32-36), what modifications can be made to the other design parameters to effectively reduce the collateral requirement on the Load Serving Entities (LSE)?[2]**

TEC reiterates its response to question 8 and recommends a seasonal versus annual settlement process. This will greatly reduce the amount of collateral that needs to be carried at any given point.

10. **Provide any additional feedback on the PCM design parameters that the Commission needs to consider?**

The economic analysis and subsequent design of the PCM will require substantial input from market participants, the Commission, and likely the Legislature. It may be of benefit to the ERCOT market for the Commission to make clear whether it still intends to implement PCM before significant resources are allocated to the development of the construct. Additionally, more clarity is needed on future market design items that would likely impact PCM parameters. TEC recommends the PCM advancement consider the following:

- **Dispatchable Reliability Reserve Service** – DRRS is an additional reliability reserve service mandated by the Legislature. Until the cost and the effects of DRRS can be determined, it would be premature to push forward with the PCM.
- **New Ancillary Service products** – In addition to DRRS, the market is still processing the adoption and effects of the ERCOT Contingency Reserve Service (ECRS), which took effect just one year ago.
- **Value Of Lost Load (VOLL)** – An essential element of the determination of a reliability standard and reserve margin will be the determination of the VOLL, the cost of lost load to various market segments. The VOLL is the first step in determining the reliability standard for the ERCOT system, which then will determine the necessary reserve margin, which will all impact the PCM.
- **Reliability Standard** – The ongoing VOLL study will directly impact the reliability standard, also currently under Commission consideration. The determination of the reliability standard will set the goals of the PCM. Until those initial goals can be determined, the PCM cannot be fully constructed.
- **Operating Reserve Demand Curve (ORDC) Bridge Solution** – The Commission and ERCOT recently adopted the ORDC bridge solution, which is specifically designed to produce on average revenue expectations associated with a particular modeling of the PCM. The ORDC bridge solution involves the adoption of two price floors along the ORDC to send minimum price signals when system reserves drop to certain levels. Because these changes to the ORDC were designed to mimic the PCM price signals, TEC suggests that it may be beneficial to closely monitor and collect data on these changes before moving ahead with the PCM. The ORDC changes may highlight potential issues with the PCM pricing signals, or, if the ORDC changes are effective in practice, may obviate the need for the PCM and its more complicated nuances.
- **Texas Energy Fund (TEF)** – The TEF is a revolving loan and grant fund designed to

subsidize the market entry costs for generators looking to construct new dispatchable generation facilities. The in-ERCOT fund has already generated considerable interest. The Commission may consider PCM development after assessing the impact of the new generation incentivized by the TEF.

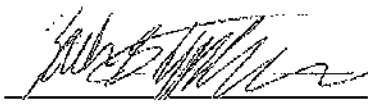
- **Holistic Cost Evaluation** – The concept of the PCM is designed to create a new revenue stream incentive for generation to locate in ERCOT. A revenue stream necessarily entails costs. In addition, the ERCOT market has already adopted numerous policies since Winter Storm Uri that layer on additional costs like DRRS (not yet adopted but will come with additional costs), the ECRS that is already estimated by the Independent Market Monitor to have potentially added up to $12 billion in costs[3], and an overall posture of conservative operations for the past three years are all adding to the cost of energy for consumers in ERCOT. TEC recommends ERCOT conduct a holistic cost evaluation of energy in the ERCOT market with PCM in combination with DRRS and ECRS in order to determine the full combined impacts of these policies.

Conclusion

TEC appreciates the opportunity to provide comment in response to Staff's questions and looks forward to working with Staff and the other stakeholders in this project.

Dated: June 20, 2024

Respectfully submitted,



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[3] Project No. 34677 - Reports of The Independent Market Monitor for the ERCOT Region, *2023 State of the Market Report* at 25 (May 30, 2024).

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EXECUTIVE SUMMARY

- TEC recommends that advancement of the PCM consider all relevant inputs debated by stakeholders and determined by the Commission and ERCOT.

- If PCM proceeds, TEC recommends the following:
    - 2-4 Seasons that group periods of similar risk;
    - All EEA hours should be PC hours along with hours of peak pet load;
    - "Available Capacity" should be determined as the average available capacity of a generator over 15-minute intervals within the PC hours, including offline capacity that brings value to the system;
    - Duration limited resources should have a cap placed on the number of consecutive PC hours they can earn, and batteries that charge during PC hours should pay PC load charges and be ineligible for PCs during those hours;
    - A properly constructed market design will need a combination of ex-post and ex-ante analyses;
        - The ERCOT-wide PC Requirement Determination could be done ex-post or ex-ante;
        - Net-Cone should be determined ex-post;
        - Seasonal demand curves should be determined ex-ante;
    - Collateral settlements should take place on a seasonal basis to reduce both the amount of collateral necessary and the relevant carrying costs.