

August 12, 2026

The Honorable Charlie Geren
Texas State House of Representatives
P.O. Box 12910
Austin, TX 78711

Re: Permian Basin Reliability Plan and 765 kV Transmission Facilities

Dear Representative Geren:

Thank you for your letter to Electric Reliability Council of Texas, Inc. (ERCOT) dated August 10, 2026, requesting additional information regarding ERCOT's reliability analyses and the development of the Permian Basin Reliability Plan (PBRP). ERCOT appreciates the opportunity to engage with members of the Texas Legislature on issues related to the ERCOT System, and we appreciate your leadership as author of House Bill 5066.

ERCOT's transmission planning process is designed to identify the facilities needed to reliably serve load across the ERCOT region, both today and over the long-term planning horizon. That process relies on engineering studies of existing and projected load, existing generation, and known future generation, and it evaluates a range of infrastructure alternatives before ERCOT recommends a plan to the Public Utility Commission of Texas (PUC). Our responses to your specific questions are provided below.

1. You testified that ERCOT builds its engineering models using metrics that include existing load, projected load, existing generation, and known future generation to identify reliability needs now over the next ten years. Please summarize the studies and analyses ERCOT performed to develop the reliability plans prescribed by House Bill 5066, and how ERCOT's assessment of the state's transmission needs has evolved since House Bill 5066 was implemented.

ERCOT Response: ERCOT has conducted three relevant studies to date that considered 765-kV transmission. First, the Permian Basin Reliability Plan (PBRP), published in July 2024, met the requirements of HB 5066 and focused on West Texas. In addition to studying a 345-kV option, the PBRP evaluated the benefits of using an additional voltage level (500-kV or 765-kV) and concluded that adding 765-kV facilities to the system provided the optimal engineering solution for meeting reliability needs. Second, the 2024 Regional Transmission Plan (RTP), an annual five-year plan published in December 2024, built on the PBRP and recommended 765-kV transmission across the remainder of the system through the Strategic Transmission Expansion Plan (STEP). Third, the 2025 Regional Transmission Plan (RTP), published in December 2025, included the STEP and added one additional 765-kV path between Houston and Central Texas.

The results of all three studies demonstrated, based on NERC reliability standards, the need for 765-kV additions to the system beginning in 2030. The evolution in ERCOT's

assessment of transmission need has primarily been driven by the effect of HB 5066 on the load forecast.

2. You testified that ERCOT evaluated multiple load assumptions, including higher load growth based on information collected under House Bill 5066 (around 150 gigawatts) and a lower sensitivity analysis (around 120 gigawatts). According to your testimony, each scenario indicated a reliability need for the 765-kV transmission facilities by 2030. Please describe in greater detail the load data that ERCOT evaluated, including whether the need for 765-kV transmission lines depends upon projected data center development.

ERCOT Response: The PBRP study, which focused on transmission needs in the Permian Basin portion of ERCOT, used load levels of 23,659 MW in 2030 and 26,400 MW in 2038 for that region, consistent with HB 5066 requirements. The 2024 RTP focused on the entire system, incorporated recommendations from the PBRP study, and increased the 2030 load assumption to approximately 150 GW based on HB 5066 requirements. The 2025 RTP used a reduced summer peak load forecast that reached approximately 159 GW in 2031. In the 2024 RTP, ERCOT also performed a lower-load sensitivity analysis at approximately 125 GW for 2030. The analysis showed that the entire 765-kV STEP plan was needed by 2030 at both load levels. ERCOT's most recent econometric load forecast shows that base load plus mid-size loads will result in approximately 110 GW of load in 2032. That 110 GW figure does not include any large loads currently in the Batch process. Those load amounts would need to be added to the approximately 110 GW forecast to achieve a total ERCOT forecast. ERCOT currently expects to have a final forecast that includes the Batch loads by the end of this year.

3. You testified that ERCOT evaluated various transmission infrastructure options, including upgrades to existing 345-kV facilities, before recommending 765-kV transmission lines as the "optimal engineering option" for the Permian Basin Reliability Plan and the broader statewide Strategic Transmission Expansion Plan. Please describe the alternatives ERCOT evaluated and explain why ERCOT concluded that incremental upgrades to the existing transmission system would not be sufficient. In particular, please elaborate on your testimony that upgrading facilities would require taking existing transmission lines out of service, and explain the associated operational and reliability challenges.

ERCOT Response: As noted above, ERCOT considered adding 500-kV and 765-kV transmission as alternatives to relying exclusively on 345-kV facilities. Each option included rebuilding and reusing existing infrastructure. The plan that used 345-kV as the exclusive voltage relied heavily on upgrades or rebuilds and would require a large number of outages on existing equipment. Rebuild times for existing lines vary greatly. Although line length and terrain are important factors, the most significant consideration is scheduling and obtaining approval for outages. All transmission-line maintenance requiring an outage must be closely coordinated with ERCOT, which manages more than 200,000 outages per year. When a transmission line can be taken out of service for one long, continuous outage, the work can be completed much more quickly. However, the current transmission system, particularly in West Texas, has reached the point where ERCOT can no longer approve long, continuous outages because maintaining system reliability requires those lines to remain in service to serve existing load. As a result, needed construction outages must be taken on a daily basis or else the work must be performed

while the lines remain energized. These factors further complicate construction for TSPs, making the exclusive 345-kV option less feasible.

4. Please explain further your comments that the addition of thermal generation alone would not eliminate the need for the 765-kV transmission facilities.

ERCOT Response: Generation additions would not eliminate the need for 765-kV facilities for several reasons. First, ERCOT already includes known future generation in planning studies. For example, in the 2025 RTP, which looks six years ahead, ERCOT included 17 future Texas Energy Fund gas-powered units at six separate sites in the West Load Zone, which includes the Permian Basin. Second, many large loads are rapidly developing in the Permian Basin, which is projected to grow to an electrical size equivalent to other large load areas in the ERCOT grid (e.g., Dallas-Fort Worth, Houston, and the Gulf Coast). Even with substantial amounts of native generation, these large load areas require transmission infrastructure to provide electrical stability and preserve overall system reliability. Additional new generation in the Permian Basin, beyond what is already expected to be built, would likely change some aspects of transmission planning, but it would not eliminate the need for the transmission additions outlined in the Permian Basin Reliability Plan. To understand the full impacts of any new generation additions, ERCOT would need to perform a new study that included that generation.

5. During your testimony, you briefly discussed transmission constraints in West Texas and other areas of the ERCOT system. You indicated that if load continues to grow in West Texas in particular, there may be periods in the near future when load there cannot be reliably served because the existing transmission infrastructure cannot import power into the region. Please explain the transmission constraints ERCOT has identified and the reliability impacts ERCOT anticipates.

ERCOT Response: On February 23, 2026, ERCOT issued a Market Notice titled “M-A022326-01 Large Load Interconnection Studies update for Far West Texas region,” which stated: “*ERCOT has identified an emerging reliability risk in Far West Texas of local load shed potentially being needed in the area during low wind conditions at night, especially during transmission and thermal resource outages. This risk is expected to increase as additional loads are interconnected in this area.*” The primary time of concern will be high-load, low-wind nights, when the entire Far West region would depend on the limited thermal generation in the area together with the limited import capability of the existing transmission infrastructure. During those conditions, the amount of power imported into the Permian Basin could result in damage to existing infrastructure if ERCOT does not order temporary load shed.

6. Finally, if one or more of the 765-kV transmission applications pending before the Public Utility Commission were denied or delayed, what effect would that have on ERCOT’s long-term transmission planning and its ability to serve forecasted load, including the projects advancing through ERCOT’s Batch Zero interconnection process?

ERCOT Response: A denial of one of the 765-kV applications would require a new reliability study and the addition of new and different transmission solutions to meet NERC reliability requirements. A delay in the current schedule would require operational mitigation

plans that would make regional load shed more likely, as described in the February 23, 2026 Market Notice mentioned above.

The current Batch process is contingent on a number of TSP studies that identify transmission system needs associated with individual Large Loads. These studies included the PBRP and STEP 765-kV additions in their scope. Therefore, all supporting studies provided by TSPs (more than 600 individual studies) would be invalidated if any of the STEP 765-kV additions were delayed or denied. The Batch 0 process would need to be substantially modified or delayed if the 765-kV additions were delayed or denied.

In addition, since the ERCOT Board of Director's endorsement of STEP and the PUCT's approval of the PBRP, ERCOT has completed its review of fifty-eight (58) Regional Planning Group (RPG) transmission projects that incorporated the PBRP and STEP 765-kV additions. A delay or denial of the 765-kV PBRP or STEP plans would invalidate these studies. These RPG studies represent a large percentage of future transmission planning for the ERCOT grid over the next six years.

In summary, ERCOT's recommendation of 765-kV transmission facilities reflects extensive engineering analysis of multiple load scenarios, each of which identified a reliability need for those facilities. ERCOT evaluated alternatives, including incremental upgrades to existing 345-kV facilities, and concluded that 765-kV facilities are the optimal engineering option to reliably serve the load growth Texas is experiencing.

If ERCOT can be of any further assistance to you or your staff, please let us know.

Respectfully,

/s/ D. Woody Rickerson

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Officer

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