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PROJECT NO. 55718

**RELIABILITY PLAN FOR THE § PUBLIC UTILITY COMMISSION
PERMIAN BASIN REGION UNDER §
PURA § 39.167 § OF TEXAS**

**TEXAS-NEW MEXICO POWER COMPANY'S RESPONSE TO COMMISSION
STAFF'S QUESTIONS FOR STAKEHOLDER COMMENT RELATED TO PUCT'S
DETERMINATION OF EXTRA HIGH VOLTAGE (EHV) IN THE ERCOT REGION**

TO THE HONORABLE PUBLIC UTILITY COMMISSION OF TEXAS:

Texas-New Mexico Power Company ("TNMP") submits these comments in response to the Commission Staff's Questions for Stakeholder Comment filed in Project No. 55718. Commission Staff's Memorandum provides that responses to the questions are due by February 14, 2025. TNMP's comments are therefore timely filed.

I. COMMENTS

TNMP appreciates the opportunity to submit these comments. TNMP has reviewed the questions provided by Commission Staff ("Staff") and has prepared the following responses, which are provided below:

- 1. In ERCOT's 345 kV-765 kV comparison document, the total capital cost estimates for each voltage's 2024 Regional Transmission Plan are comparatively close.**
 - a. What other ongoing cost impacts should be given significant weight in this decision?**

TNMP believes that several additional cost impacts weigh significantly on the choice between 345 kV and 765 kV projects. TNMP does not oppose the consideration of a new 765 kV voltage class in Texas, whether now or in the future. However, TNMP believes that all cost impacts, including those below, should be fully vetted. Consequently, those costs ought to be weighed against the incremental benefits and disadvantage of 765 kV compared to 345 kV projects.

First, the addition of 765 kV would require utilities to acquire sufficient and comprehensive inventory as well as spares for an entirely new voltage class of equipment, adding an additional ongoing layer of cost. In contrast, given the extensive pre-existing 345-kV infrastructure in ERCOT, the expansion of 345 kV could largely rely on the existing inventory and sparing programs used by Transmission Service Providers (TSPs). It is not clear that ERCOT's Comparison considered this disparity in sparing costs.

Second, given that 765 kV would be a new voltage class within the ERCOT region, it is unclear whether adequate planning, engineering, construction, and operational skillsets already exist within TSPs in the ERCOT region to implement the 765 kV projects quickly and efficiently. Both training existing personnel, and/or retaining knowledgeable contractors represent likely additional costs if the 765 kV option is selected. In contrast, most ERCOT TSPs possess adequate institutional knowledge and personnel to quickly and efficiently implement 345 kV projects. Again, it is unclear that ERCOT's Comparison adequately accounts for these cost disparities.

Third, while the ERCOT Comparison accounts for the cost of live reconductoring, it is not clear that it further accounts for potential savings from the reduction of line loss due to the reductoring of 345 kV lines with ACCC. For example, CTC Global highlights that their ACCC conductors can reduce line losses by approximately 30%, which translates to estimated savings of around \$1,451,220 annually at \$100/MWh, resulting in a total of \$43,536,572 over 30 years. Similarly, TS Conductor claims that their technology can reduce line losses by 10-50%, potentially saving consumers \$2.2 billion annually through loss reduction alone. These potential savings through the reduction in line loss have the potential to make the 345 kV projects more economical in the long run.

b. What economic and reliability benefits in the report should be given significant weight?

In addition to the comparative costs of the two plans, the long-term effects should also be accounted for to accurately weigh each plan. The 765 kV plan does not address directly connecting load or generation. In order to connect load or generation, new lines in addition to the 765 kV line(s) will need to be constructed. If the 345 kV plan is used, those grid-wide backbone lines would be usable and could lower the overall cost of widescale load and generation addition and lower the cost of additional ROW in comparison to the 765 kV plan. Therefore, from a reliability perspective, 765 kV adds another layer of complexity driving additional investments in multiple voltages over time as NERC Planning Criteria are applied. The Commission may want to consider whether this complexity could slow, rather than accelerate, the next layer of needed expansion or enhancement.

Further, TNMP believes that in addition to system-wide transfer capability, a goal of any plan should be access to load and generation service. The 345 kV option provides system-wide transfer capability allowing greater access to load and generation service. To provide the greatest access to transmission for load and generation, a solution that delivers more lines across a broader geography may make more sense.

2. On September 18, 2024, ERCOT hosted a 765 kV Vendor Workshop which provided information on many aspects of design, construction, and equipment sourcing of 765 kV infrastructure.

a. Regarding supply chain delays or disruptions, are there any impacts specific to either 765 kV or 345 kV, or are both impacted equally?

TNMP expects any delays or disruptions in 765 kV equipment and supplies to be at least equivalent to the delays and disruptions in 345 kV equipment and supplies. However, the Commission may consider whether, given the lack of 765 kV infrastructure within ERCOT (and the relative rarity of large-scale 765 kV projects across the country), adopting the 765 kV plan

could entail unknown supply chain logistics bringing the potential for unforeseen disruptions and delays.

b. Are there any critical 765 kV considerations that were not addressed during that workshop?

While TNMP believes that a full EHV network can provide ample capacity to meet substantial long-term load growth, including in the Permian Basin and statewide for decades, TNMP is concerned about the realistic timeframe required to implement the 765 kV plan in an electric grid that currently lacks EHV infrastructure. EHV solutions can and should be considered moving forward, but each of the 345 kV import paths identified in the Permian Basin Plan (“Plan”) for implementation by 2030 should move forward without waiting on additional study and consideration into EHV import paths. Any delay in implementation of the 345 kV import paths already identified in the Plan would necessarily delay the remaining projects required to interconnect new load.

Additionally, if 765 kV is chosen as a new voltage class for ERCOT, the Commission may consider whether use of a mix of voltages is beneficial. Specifically, the Plan currently compares 345 kV and 765 kV import paths as mutually exclusive options in the proposed 2038 plan, but does not evaluate hybrid solutions that include a mix of 345 kV and 765 kV import paths from the East and South. A hybrid solution that considers a mix of 345 kV and EHV options potentially increases the probability of serving 2030 load in a timely manner while also allowing time to properly study the 2038 implementation of EHV infrastructure.

3. Regarding the already-approved Permian Basin import paths, please compare the timing of construction buildout-to-energization for the 345 kV and 765 kV imports. Will one take significantly longer than the other? Please explain why.

While TNMP does not oppose EHV projects within ERCOT, TNMP believes that under present conditions the 765 kV import paths are likely to take longer than the 345 kV import paths.

As previously mentioned in response to question 1(a), existing inventory and spurring infrastructure and institutional knowledge is stronger with respect to 345 kV lines. For example, station designs and overall project execution are known and do not require additional development post-approval to proceed with the engineering procurement and construction. Therefore, with respect to 345 kV import paths, TSPs are able to initiate route studies and CCNs without delay. In contrast, TSPs that are selected to build 765 kV projects may not have execution-ready solutions unless they own substantial EHV infrastructure outside of Texas.

4. Given that there are uncertainties in long-term load forecasts as well as load and generation types and sitting, which plan would provide the most flexibility for ERCOT region?

TNMP is concerned that the 765 kV plan may be significantly less flexible to accommodate load shifts or fluctuations in demand projections. While this question could potentially be resolved through planning cases, the 345 kV plan appears to better accommodate load shifts or fluctuations in demand projections for a number of reasons. Fundamentally, the presence of more lines across a broader geography means that, if load projections were to decline, partial and/or gradual implementation of the 345 kV projects would likely be far more practical. Further, even if load projections were to increase, implementation of the 345 kV plan does not preclude future implementation of EHV projects to meet increased statewide demand.

5. What are the pros and cons of deciding to utilize 765 kV infrastructure in the ERCOT region now versus waiting to implement it in the future?

As previously mentioned, under present conditions, the 345 kV option is more likely to be completed in a timely and efficient manner, meaning that the 345 kV option is better-positioned to meet short-to-medium term increases in load. Because long-term load projections are uncertain, implementation of the 345 kV project does not preclude later consideration and implementation of

EHV projects to meet future load increases. Indeed, the long-term load picture will be more clear by 2030.

6. Are there any other benefits or drawbacks that have not been brought up and addressed which are critically important for Commission to consider? Please describe in detail.

TNMP is concerned about possible disparities in the cost estimates relied upon by ERCOT for the 345 kV and 765 kV plans, respectively. ERCOT relied on the MISO Transmission Cost Estimation Guide (“MISO Guide”) in preparing its 765 kV cost estimates. According to the May 1, 2024 MISO Guide, its “exploratory” cost estimates carry an expected accuracy range allowing for a high-end cost variance of between 30% and 100% above estimated cost. For example, applying this cost variance to ERCOT’s estimate of \$8.09 billion for new lines, substations, and transformers for the 765 kV plan could see that number go up to anywhere from \$10.52 billion to \$16.18 billion. In contrast to the high-end variance, MISO’s exploratory cost-estimate category only accounts for a low-end cost variance of 20% - 50% below estimated cost. The presence of a high-end variance of 30% - 100%, and a low-end variance of only 20% - 50%, suggests that MISO may view it as significantly more likely that actual costs will exceed exploratory cost estimates.

In contrast, in estimating costs for the 345 kV projects, ERCOT relied on cost estimates that each TSP submitted to ERCOT. In fact, according to Section 2.4 of the Permian Basin Reliability Plan Study, ERCOT then uses the highest cost estimates among the TSPs to calculate total project cost estimates.

As a result, TNMP is concerned at the possibility that ERCOT’s projections may significantly underestimate the actual costs associated with the 765 kV projects, while at the same time overstate the actual costs associated with the 365 kV projects.

Respectfully submitted,

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**§ PUBLIC UTILITY COMMISSION
§
§ OF TEXAS**

TEXAS-NEW MEXICO POWER COMPANY'S EXECUTIVE SUMMARY

Texas-New Mexico Power Company ("TNMP") respectfully submits this executive summary of its comments to the Public Utility Commission of Texas ("Commission") in response to the Commission Staff's questions for comment.

TNMP makes the following substantive recommendations with respect to each specific question posed by Commission Staff:

1. The following additional cost impacts should be given significant weight: (1) additional sparring and inventory costs necessary to support a new 765 kV voltage class; (2) costs associated with building the skills and knowledge base necessary to support a new 765 kV voltage class; and (3) possible cost savings associated with the reconductoring of 345 kV lines with ACCC. Further, the Commission should consider long-term reliability benefits associated with the 345 kV plan in the form of greater access to load and generation.
2. The 345 kV import paths identified in the Permian Basin Plan for implementation by 2030 should move forward without delay. TNMP is concerned about the realistic timeframe required to implement the 765 kV plan in an electric grid lacking existing EHV infrastructure. Further, the Commission should evaluate hybrid solutions including a mix of 345 kV and 765 kV import paths.
3. TNMP believes that 345 kV import paths can be completed significantly more quickly and efficiently than 765 kV import paths.
4. TNMP believes that the 765 kV plan is significantly less flexible to accommodate partial implementation. Allowing for partial implementation may be desirable given possible fluctuations in long-term load forecasts.
5. Because the 345 kV plan is more likely to be completed in a timely and efficient manner, it is better-positioned to meet short-to-medium term increases in load. Therefore, one benefit of waiting to implement EHV infrastructure is the ability to consider EHV implementation at a later time when long-term load demand is more clear.
6. Given disparities in the methodologies used for estimating costs, TNMP is concerned that ERCOT's cost comparison may underestimate the actual costs associated with the 765 kV plan, while overstating the actual costs associated with the 345 kV plan.