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PUC DOCKET NO. 58264

APPLICATION OF AEP TEXAS INC. TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE ARANSAS PASS-TO-GREGORY 138-KV TRANSMISSION LINE IN SAN PATRICIO COUNTY	**§ § § § § §**	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

DIRECT TESTIMONY

OF

JACK C. GARVIN

ON BEHALF OF

AEP TEXAS INC.

JULY 2, 2025

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Jack C. Garvin. My business address is 212 East Sixth Street, Tulsa, Oklahoma, 74119.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by American Electric Power Service Company (AEPSC), a wholly-owned subsidiary of American Electric Power Company, Inc., as a Transmission Line Engineering Manager in the Transmission Line Engineering Department for the Electric Reliability Council of Texas (ERCOT) region. As relevant to my testimony, AEPSC provides transmission engineering design, construction and project management services to AEP Texas Inc. (AEP Texas).

Q. PLEASE DESCRIBE YOUR JOB RESPONSIBILITIES, PARTICULARLY AS THEY RELATE TO YOUR TESTIMONY IN THIS PROCEEDING.

A. The engineering group that I lead provides engineering services and manages outsourced engineering consultants for numerous projects located within the ERCOT region for AEP Texas.

Q. ARE YOU RESPONSIBLE FOR THE ENGINEERING AND DESIGN OF THE PROJECT INVOLVED IN THIS PROCEEDING?

A. Yes, I am responsible for the engineers assigned to the Project.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL QUALIFICATIONS, BUSINESS EXPERIENCE AND PREVIOUS TESTIMONY BEFORE THIS COMMISSION.

A. I acquired a Bachelor of Science in Civil and Environmental Engineering from Virginia Military Institute in 2016. I am an EIT in the State of Oklahoma. I began my career in the electric utility industry with AEP in 2017, working as an Associate Transmission Line Engineer. My duties include the design of transmission lines, preparation of construction documents, and coordinating with right-of-way (ROW) personnel. I have been and still am involved in numerous projects regarding the design and/or analysis of new and existing 69-kV, 138-kV and 345-kV transmission lines.

I have been with AEP for over seven years as an engineer at various levels in the Tulsa, Oklahoma office.

Q. HAVE YOU PRESENTED TESTIMONY TO THE PUBLIC UTILITY COMMISSION OF TEXAS?

A. Yes, I have filed testimony in Docket No. 55397, *Application of AEP Texas Inc. to Amend It's Certificate of Convenience and Necessity for the Cruce-to-Reforzar Double-Circuit 345-kV Transmission Line in Brooks, Duval, Jim Hogg, Jim Wells, and Kleberg Counties,* Docket No. 55573, *Application of AEP Texas Inc. and Electric Transmission Texas, LLC to Amend Their Certificates of Convenience and Necessity for the Ajo-to-Reforzar Double-Circuit 345-kV Transmission Line in Brooks, Kenedy, and Kleberg Counties*, Docket No. 56414, *Application of AEP Texas Inc. to Amend Its Certificate of Convenience and Necessity for the Joslin-to-Carbide 138-kV Cut-in to*

Cangrejo Substation Double-Circuit Transmission Line in Calhoun County, nand Docket No. 57245, *Application of AEP Texas Inc. to Amend Their Certificates of Convenience and Necessity for the Medio Creek-to-Lon Hill 138-kV Cut-In to Portilla Substation Double-Circuit Transmission Line in San Patricio County.*

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to discuss the proposed 138-kV double-circuit transmission line to be constructed by AEP Texas, through parts of San Patricio County, Texas, that will involve replacing the existing 69-kV transmission line beginning from the existing Aransas Pass 69/138-kV Substation located south of the intersection of Highway 35 and West Wheeler Ave just west of the City of Aransas Pass in San Patricio County, Texas and extending to the existing Gregory 69/138-kV Substation located at the northwest intersection of County Road (CR) 2986 and County Road (CR) 1910 just west of the city of Gregory in San Patricio County, Texas.

Specifically, I will address:

- AEP Texas' selection of the conductor;
- AEP Texas' proposed use of the steel monopole transmission structures; and
- AEP Texas' cost estimates for its alternative proposed transmission line routes.

Q. WHAT PORTIONS OF THE APPLICATION IN THIS DOCKET DO YOU SPONSOR?

A. I am sponsoring in whole or in part the responses to Application Questions No. 5 and 13, and Attachment 3. In addition, I sponsor information supplied to POWER Engineers, Inc. (POWER) for Figures 1-2 through 1-4, and cosponsoring information for Sections 1.3.1 and 1.3.2 of the Aransas Pass-to-Gregory *138-kV Transmission Line Environmental Assessment and Alternative Route Analysis in San Patricio County, Texas* (EA), which is included as Attachment 1 to the *Application of AEP Texas Inc. to Amend Its Certificate of Convenience and Necessity for the Aransas Pass-to-Gregory138-kV Transmission Line in San Patricio County* (Application).

III. CONDUCTOR SELECTION

Q. WHAT CONDUCTOR IS AEP TEXAS PROPOSING TO INSTALL ON THE PROJECT?

A. The Project will use three 795 kcmil 26/7 Aluminum Conductor Steel-Supported (ACSS) conductors with one (1) optical ground wire in the overhead ground wire position.

Q. PLEASE DESCRIBE THE TRANSMISSION STRUCTURE AEP TEXAS PLANS TO USE ON THIS PROJECT.

A. AEP Texas plans to use concrete monopole structures with braced post insulators and galvanized steel monopole structures.. Diagrams of this structure are included in Figures 1-2 through 1-4 of the EA (Attachment 1 of the Application).

Q. WHAT FACTORS LED TO AEP TEXAS' DECISION TO USE A MONOPOLE STRUCTURE DESIGN?

A. The area for the construction for this project is mixed between urban and rural, with nearby access to paved roadways throughout the majority of the line. Due to proximity to the coast and nearby industrial facilities, corrosion is a significant issue to consider long-term. Because of these parameters, AEP Texas determined that concrete monopole structures were the most cost competitive solution and easiest to construct for this Project. Galvanized steel may need to be used in certain situations (i.e., dead-end structures), but would be limited the extent practical.

IV. ESTIMATED PROJECT COST AND ENGINEERING DESIGN OF THE TRANSMISSION LINE

Q. PLEASE DESCRIBE THE ESTIMATED COST OF THE TRANSMISSION LINE ALTERNATIVE ROUTES PROPOSED FOR THIS PROJECT.

A. The estimated transmission line cost includes the costs of engineering, acquiring right-of-way, procurement of materials and supplies, construction labor and transportation, and administration. The transmission line cost estimates are provided for each submitted alternative route in Attachment 3 of the Application.

I sponsor the estimated costs included in Attachment 3 for AEP Texas. The estimated costs of the transmission line cost estimates range from approximately $7.61 million (Alternative Route A) to $10.33 million (Alternative Route D).

Q. DO THE ESTIMATED COSTS PROVIDED IN THE APPLICATION REFLECT THE ACTUAL TRANSMISSION PROJECT COSTS FOR THE ALTERNATIVE ROUTES TO BE CONSTRUCTED?

A. No. The costs for AEP Texas are only estimates as of the time of the filing of the Application. Once the final route has been approved by the PUC, AEP Texas will survey the approved line route and final engineering design will be performed. After the final engineering design is completed, costs to construct the approved route will then be re-estimated based on bids for material and construction. At that time, the re-estimated Project costs will be updated in AEP Texas' Monthly Construction Progress Report that is filed with the PUC for the approved route. Actual final respective costs will be updated to the PUC once the transmission line construction activities associated with this Project have been completed. Until that time, the costs reflected in the Application and in my testimony are only estimates.

Q. DO YOU BELIEVE THE ESTIMATED COSTS DISCUSSED ABOVE AND PROVIDED BY AEP TEXAS IN ATTACHMENT 3 TO THE APPLICATION ARE REASONABLE?

A. Yes. I believe that AEP Texas' estimated costs provided in Attachment 3 to the Application are reasonable based on my experience with projects that require similar construction activities.

Q. DOES THE PROPOSED TRANSMISSION PROJECT ADEQUATELY CONSIDER ELECTRICAL EFFICIENCY AND RELIABILITY?

A. Yes. A transmission line constructed on any of the alternative routes will be engineered so that the line itself will be as electrically efficient and reliable as possible taking into consideration a number of factors.

Obviously, various factors, such as line length and number of angle structures, will make lines located on some alternative routes less cost-efficient than others. However, any of the alternative routes can be engineered so that electrical efficiency and reliability will be adequate for that route.

Q. DOES THE TRANSMISSION LINE DESIGN MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL SAFETY CODE?

A. Yes. Design for the Project meets or exceeds the requirements for construction as defined in the National Electrical Safety Code (NESC). However, the NESC is a safety code and not a design guide, so additional design criteria will be used, including the American National Standards Institute standards, AEP Texas and AEPSC standard practices, and such practices as required by federal, state, and local governments and agencies.

V. SUMMARY AND CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. AEP Texas' decision to use single 795 kcmil 26/7 ACSS conductors and concrete monopole structures for this project is reasonable for the reasons discussed above. In addition, AEP Texas has provided reasonable estimates of the cost of the proposed

transmission line for this Project, based on the information available at this time. AEP Texas will construct the proposed transmission line in a safe and efficient manner, and the line and terminations will be designed with criteria that meet or exceed the NESC.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.