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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	**§ § § § § §**	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

DIRECT TESTIMONY

OF

JOHN SOLIS

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 John Solis. My business address is 539 N Carancahua, Corpus Christi, TX 78401.

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

A. I am a Planning Engineer in AEP ERCOT Transmission Planning for American Electric Power Service Corporation (AEPSC), a wholly-owned subsidiary of American Electric Power Company, Inc. (AEP).

Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES IN THIS POSITION, PARTICULARLY AS THEY RELATE TO THIS PROJECT.

A. In my capacity as Planning Engineer for AEPSC, I oversee and assist in formulating transmission plans for the AEP transmission network within the Electric Reliability Council of Texas (ERCOT), which consists of the transmission systems for AEP Texas Inc. (AEP Texas). I also provide transmission planning services to AEP Texas affiliate Electric Transmission Texas, LLC (ETT) under ETT's service agreement with AEPSC. Through my participation in the ERCOT Regional Planning Group (RPG) and other ERCOT committees and working groups and through coordination with ERCOT system planning personnel, I am directly involved in the alternative evaluations and ultimately the determination of the purpose and need for projects that are within or that connect to the AEP Texas and ETT transmission systems footprint. As part of this responsibility, I also contribute to information included in Certificate of Convenience

and Necessity (CCN) filings before the Public Utility Commission of Texas (PUC or Commission).

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL QUALIFICATIONS AND BUSINESS EXPERIENCE.

A. I received a Bachelor of Science in Electrical Engineering in 2013 from Texas A&M University at Kingsville I have worked in the electric utility industry for 11 years. Below is an outline of my specific employment history:

- 2013 – 2018 Transmission Operations Engineer – American Electric Power
- 2018 – 2022 Transmission Operations Reliability Coordinator – American Electric Power
- 2022 – 2024 Transmission Planning Engineer - American Electric Power
- 2024 – Present Transmission Planning Supervisor - American Electric Power

Q. WHAT PORTIONS OF THE APPLICATION DO YOU SPONSOR?

A. I am sponsoring in whole or in part the responses to this *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) for Question Nos. 14 through 16; and in whole or in part Application Attachments 1 (Section 1.2) and 4.

Q. DO YOU HAVE SPECIAL BACKGROUND KNOWLEDGE OF AND EXPERIENCE WITH THE PROPOSED TRANSMISSION PROJECT THAT QUALIFY YOU TO TESTIFY ABOUT ITS PURPOSE AND NEED?

A. Yes. As I indicated above, my present job responsibilities include the support of the transmission planning for AEPSC within ERCOT.

Q. WAS YOUR TESTIMONY AND THE INFORMATION YOU SPONSOR PREPARED BY YOU OR BY KNOWLEDGEABLE PERSONS UPON WHOSE EXPERTISE, JUDGMENT AND OPINIONS YOU RELY IN PERFORMING YOUR DUTIES?

A. Yes.

Q. HAVE YOU PREVIOUSLY PERFORMED WORK RELATED TO TRANSMISSION LINE REGULATORY PROCEEDINGS?

A. Yes. I have analyzed or participated in the analysis of the purpose and need for other transmission projects that have been filed at the Public Utility Commission of Texas (PUC).

Q. HAVE YOU PRESENTED TESTIMONY TO THE COMMISSION BEFORE?

A. Yes, I have filed testimony in Docket No. 57245, *Application of AEP Texas Inc. to Amend its Certificate of Convenience and Necessity for the Medio Creek-to-Lon Hill Road 138-kV Cut-in to Portilla Substation in Double-Circuit Transmission Line in San Patricio County.*

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony will address the need for the proposed 138-kV 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-to-Gregory 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, my testimony addresses:

(a) the adequacy of existing service, and
(b) the need for additional service.

Q. IS THE INFORMATION CONTAINED IN YOUR TESTIMONY AND THAT YOU ARE SPONSORING TRUE AND CORRECT TO THE BEST OF YOUR KNOWLEDGE AND BELIEF?

A. Yes.

III. NEED FOR ADDITIONAL SERVICE AND OPTIONS CONSIDERED

Q. PLEASE DESCRIBE THE NEED FOR THE PROJECT.

A. AEP Texas' annual transmission planning assessment carried out in 2021 identified thermal overloads on AEP's Aransas Pass – Gregory 69 kV & Gregory – Rincon 69 kV line under certain contingency scenarios. N-G-1 and N-1-1 contingency events

showed potential for violation of thermal ratings on the line in the 2026 summer peak case build. Recent analysis performed in 2024 utilizing Steady State Working Group (SSWG) power-flow cases release in October 2023 identified potential overload condition of the Aransas Pass – Gregory 69 kV line still exists for specific N-1-1 (maintenance outage) contingency event. Per ERCOT planning guide section 4, TSPs must consider maintenance outage criteria in consideration of potential transmission system upgrades. Analysis carried out indicate that unavailability of Dupont Switch Ingleside to Ingleside City 138 kV transmission circuit followed by loss of Rockport – Rincon 138 kV transmission circuit would overload Aransas Pass – Gregory 69 kV to 115% of its emergency rating. Gregory – Rincon 69 kV line mileage is approximately 7.5 miles. The majority of the line was rebuilt to 138 kV standards previously due to maintenance and rehab needs. Approximately 0.03 miles of line will need to be rebuilt to achieve ratings increase. The existing line has a 98 MVA emergency rating. Aransas Pass – Gregory 69 kV line mileage is approximately 8.5 miles. Currently the entire line contains 336 ACSR conductor and will need to be rebuilt. Existing line has a 63 MVA emergency rating. To address thermal loading issues AEPSC recommends rebuilding the Aransas Pass – Gregory and Gregory – Rincon 69 kV circuits to 2000 Amp capability including necessary station terminal upgrades. The line will be built to 138 kV design standards and operated at 69 kV.

Q. WHAT AMPERAGE IS REQUIRED FOR THE PROJECT?

A. The Continuous Summer Static Current Rating for both circuits on the Project will need to be 2033 Amps. The conductor selected as a result of these amperage requirements will be discussed in AEP Texas witness Mr. Garvin's testimony.

Q. WAS AN ERCOT REVIEW OF THE TRANSMISSION NETWORK IMPACT ASSOCIATED WITH THE PROPOSED PROJECT REQUIRED?

A. Yes, an ERCOT review of the transmission network impact of the project was required. Per ERCOT Nodal Protocol 3.11.3.4(b) the project is classified as a Tier 2 project. Per ERCOT Nodal Protocol 3.11.4.6, ERCOT is required to conduct independent review of Tier 2 projects.

Q. DID ERCOT REVIEW THE PROPOSED PROJECT?

A. Yes. On May 16, 2025, ERCOT endorsed the AEPSC Aransas Pass to Rincon 69-kV Line Rebuild Project as a Tier 2 transmission project in accordance with ERCOT Protocol Section 3.11.4. This endorsement recommended the following work:

- Rebuild the existing Aransas Pass to Gregory 69-kV transmission line,to 138-kV capable, but operational at 69-kV, with normal and emergency ratings of at least 239 MVA, approximately 8.5-miles, and approximately 1-mile of new right of way (ROW). The existing Aransas Pass and Gregory 69-kV substations are currently owned by AEP Texas.
- Rebuild the existing Gregory to Rincon 69-kV transmission line to 138-kV capable, but operational at 69-kV, with normal and emergency ratings of at least 239 MVA, approximately 0.03-mile. The existing Gregory and Rincon 69-kV substations are currently owned by AEP Texas.
- Upgrade the existing Gregory 69-kV substation to at least 2,000 A capable station. Replace the bus-tie switch at Gregory with a bus-tie breaker. The existing Gregory 69-kV substation is currently owned by AEP Texas.
- Upgrade the existing Gregory 69-kV transmission line terminal at Aransas Pass to at least 2,000 A capability. The existing Aransas Pass and Gregory 69-kV substations are currently owned by AEP Texas; and
- Upgrade Gregory 69-kV transmission line terminal at Rincon to at least 2,000 A capability. The existing Gregory and Rincon 69-kV substations are currently owned by AEP Texas.

Copies of the ERCOT Independent Review of the Aransas Pass to Rincon 69-kV Line Rebuild Project (published on May 16, 2025) and ERCOT Letter of Endorsement

(submitted on May 29, 2025) are included in the Application as Attachment 4a and 4b respectively.

Q. DOES THE PROJECT SUPPORT THE RELIABILITY AND ADEQUACY OF THE INTERCONNECTED TRANSMISSION SYSTEM?

A. Yes. The Project will improve the reliability and adequacy of the transmission system in the project area to serve the existing electrical loads. It will also address the potential for violation of thermal ratings on the line in the 2026 summer peak case build.

Q. IS DISTRIBUTED GENERATION AN ALTERNATIVE TO THE PROJECT?

A. No. Distributed generation is not an option since AEP Texas is not a bundled utility.

IV. SUMMARY AND CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. This testimony addresses my concurrence with ERCOT that the proposed 138-kV transmission line is the best solution to address the need for replacing the existing 69-kV transmission line and addressing the potential for violation of thermal ratings on the line in the 2026 summer peak case build. In addition, I discuss the amperage required for the proposed 138-kV transmission line that resulted in the conductor selection addressed by AEP Texas witness Mr. Garvin.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.