



**Date:** November 10, 2009  
**To:** Board of Directors  
**From:** Dan Woodfin, Director of System Planning  
**Subject:** Regional Planning Group Project Review of AEPSC Corpus Christi Area Improvements Project

**Issue for the ERCOT Board of Directors**

**ERCOT Board of Director Meeting Date:** November 17, 2009

**Agenda Item No.:** 08d

**Issue:**

Whether the ERCOT Board of Directors (Board) should endorse the American Electric Power Services Corporation (AEPSC) Corpus Christi Area Improvements Project (Project).

**Background/History:**

AEPSC submitted the Project for Regional Planning Group (RPG) review in March 2009. The need for individual components within this project were driven by one or more of the following issues:

1. Two new generation interconnection agreements signed in Corpus Christi area:
  - a. Barney Davis repower increase of 360 MW;
  - b. Nueces Bay repower increase of 360 MW;
2. Improvements needed to reliably serve load;
3. AEPSC-reported difficulty in scheduling maintenance outages.

ERCOT began its Independent Review in May 2009. This review is attached as Attachment A.

Industrial customers in Corpus Christi area expressed concern that the portion of the project proposed by AEPSC to provide a robust solution to the maintenance scheduling issue would require them to replace a significant number of customer-owned breakers in their facilities, requiring extended outages. ERCOT worked with AEPSC, generation entities in the area and the Industrial customers to determine a compromise solution that allows reliability criteria to be met, but that does not require Industrial facility upgrades. This solution requires the redispatch of generation in the area, including industrial-owned generation, during off-peak period maintenance outages of autotransformers in the area.

The set of projects recommended as a result of the ERCOT Review:

1. Build new Gila substation to interconnect the new Nueces Bay Generation. This new station would be electrically separated from the existing Nueces Bay switchyard for fault current restrictions and would require three lines currently connected to Nueces Bay to be relocated to Gila for thermal and stability reasons:
  1. Koch Upriver – Nueces Bay 138 kV;



2. Highway 9 – Nueces Bay 138 kV double-circuit;
3. Whitepoint – Nueces Bay 138 kV line #2.
2. The following three projects were determined to be needed to maintain reliability during maintenance outages on one of several 138/69 kV autotransformers in the area at off-peak load levels:
  1. Rebuild/ reconductor Valero East – Highway 9 69 kV line;
  2. Reconductor Lon Hill – Hearn Road 69 kV line;
  3. Build 138 kV line Barney Davis – Laguna and install new 138/69 kV autotransformer at Laguna.
3. The following project was recommended for summer peak load reliability issues without maintenance outages:
  1. Upgrade both Lon Hill 138/69 kV autotransformers.
4. The following two projects were determined to meet the economic criteria in the RPG Charter:
  1. Rebuild Barney Davis – Alazan – Nelson Sharpe 138 kV line;
  2. Upgrade Westside – Cabaniss 138 kV line terminal equipment.

**Key Factors Influencing Issue:**

1. Reliability projects needed to serve load during peak conditions and off-peak conditions with maintenance outages;
2. Industrial Customers concerns about high fault currents that would require them to undertake expensive upgrades to their switchyards and curtail output due to increased fault currents in the original AEPSC proposal; and
3. Generation Interconnection additions of 720 MW in Corpus Christi area.

**Alternatives:**

1. Endorse the need for the Project as recommended by ERCOT staff and supported by the RPG; or
2. Remand to ERCOT staff with instructions.

**Conclusion/Recommendation:**

ERCOT staff respectfully recommends that the Board endorse the need for the Project recommended in ERCOT's Independent Review.



**ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.**  
**BOARD OF DIRECTORS RESOLUTION**

WHEREAS, the American Electric Power Services Corporation (AEPSC) Corpus Christi Area Improvements Project (Project) is required for both reliability and economic reasons;

WHEREAS, the Regional Planning Group supports the Project and Electric Reliability Council of Texas, Inc. (ERCOT) staff recommends that the ERCOT Board of Directors (Board) endorse the need for the Project; and

WHEREAS, after due consideration of the alternatives, the ERCOT Board deems it desirable and in the best interest of ERCOT to endorse the need for the Project;

THEREFORE, BE IT RESOLVED, that the ERCOT Board hereby endorses the need for the Project.

**CORPORATE SECRETARY'S CERTIFICATE**

I, Michael G. Grable, Corporate Secretary of ERCOT, do hereby certify that, at its November 17, 2009 meeting, the ERCOT Board of Directors passed a motion approving the above Resolution by \_\_\_\_\_.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 2009.

\_\_\_\_\_  
Michael G. Grable  
Corporate Secretary