



# **AEPSC – Port Lavaca Area Improvement Project – ERCOT Independent Review Scope**

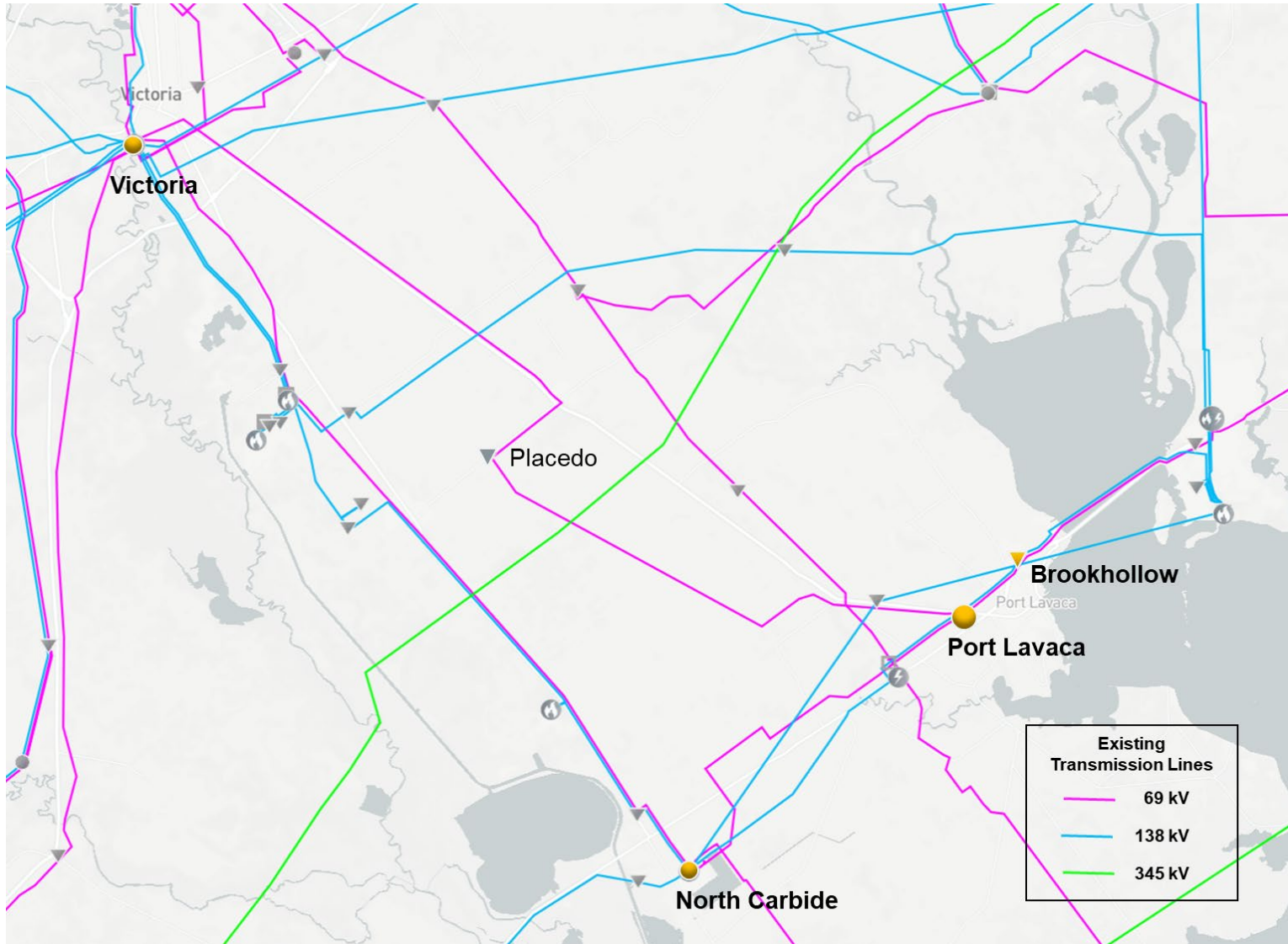
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RPG Meeting  
April 6, 2021

# Introduction

- American Electric Power Services Corporation (AEPSC) submitted the Port Lavaca Area Improvement Project for Regional Planning Group (RPG) review in February 2021
- The project was submitted to address the following issues
  - Reliability need (e.g. thermal overload) in the Port Lavaca area
  - Aging transmission infrastructure
- This Tier 2 project is estimated at \$97.8 million and will require a Certificate of Convenience and Necessity (CCN). Estimated completion dates: May 2023 (reliability upgrades) and December of 2024 (upgrades for aging infrastructure)
- This project is currently under ERCOT Independent Review

# Study Area



# Study Assumptions

- Study Region
  - Coast and South Weather Zones (WZ) electrically close to the Port Lavaca area
- Steady-State Base Case
  - Final 2020 Regional Transmission Planning (RTP) 2025 summer peak case for East/Coast (EC) WZ will be updated to construct the study base case
    - 2020RTP\_2025\_SUM\_EC\_12232020 case posted in Market Information System (MIS) on December 2020  
(<https://mis.ercot.com/misdownload/servlets/mirDownload?doclookupId=749944652>)

# Study Assumptions

- Generation Updates
  - Generation that met Planning Guide Section 6.9(1) requirements with Commercial Operation Date (COD) before the study year in the study region at the time of the study will be added to the case based on Generator Interconnection Status (GIS) report published in MIS on March 2021. See Appendix for the list of new generation added to the study region  
[\(<http://mis.ercot.com/misapp/GetReports.do?reportTypeId=15933&reportTitle=GIS%20Report&showHTMLView=&mimicKey>\)](http://mis.ercot.com/misapp/GetReports.do?reportTypeId=15933&reportTitle=GIS%20Report&showHTMLView=&mimicKey)
  - New renewable generation will be dispatched consistent with the 2020 RTP methodology
  - All recent retired or indefinitely mothballed units will be reviewed and turned off, if not already reflected in the 2020 RTP starting case

# Study Assumptions

- Transmission Updates

- Based on the Transmission Project and Information Tracking (TPIT) published on MIS in March 2021, Tier 4 projects within the study region will be added to the study base case if not already modeled in the case. See Appendix for the list of the Tier 4 projects
- All approved Tier 1, 2 and 3 projects are already included in the study case
- Transmission projects identified in the 2020 RTP as placeholders for AEPSC's Port Lavaca Area Improvement project will be removed to develop the study base case

# Study Assumptions

- Load Updates
  - Load level in the South weather zone will be updated to develop the South-Coast summer peak load case. The peak load level will be consistent with 2020 RTP case
- Reserve
  - If necessary, load outside the study weather zone will be adjusted to make up for the reserve to be consistent with the 2020 RTP

# Contingencies & Criteria

- Contingencies for Study Region
  - NERC TPL-001-4 and ERCOT Planning Criteria (<http://www.ercot.com/mktrules/guides/planning/current>)
    - Normal system condition (P0)
    - N-1 conditions (P1, P2-1, P7)
    - P2, P4, and P5 (EHV only)
    - X-1 + N-1 (X-1 represents transformer outage)
    - G-1 + N-1 (G-1 represents generator outage)
- Criteria
  - Monitor all 60 kV and above busses, transmission lines, and transformers in the study region (excluding generator step-up transformers)
  - Thermal
    - Use Rate A for normal conditions
    - Use Rate B for emergency conditions
  - Voltage
    - Voltages exceeding their pre-contingency and post-contingency limits
    - Voltage deviations exceeding 8% on non-radial load buses



# Congestion Analysis

- Congestion analysis may be performed based on the recommended transmission upgrades to ensure that the identified transmission upgrades do not result in new congestion within the study area

# Deliverables

- Tentative Timelines
  - Status updates at the future RPG meetings
  - Final recommendation: July 2021

# Thank You!



Stakeholder comments also welcomed through:

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# Appendix: New Generation added to the Study Region based on Planning Guide 6.9(1)

GINR	Project Name	Fuel	Project COD	Capacity (MW)	County
18INR0060	Brightside Solar	SOL	07/30/2021	50	Bee
19INR0014	Formosa Increase	GAS	03/31/2021	240	Calhoun
19INR0057	Old Bloomington Road	GAS	07/15/2021	100	Victoria
19INR0112	Cranell Wind	WIN	12/18/2020	220	Refugio
20INR0266	Tres Bahias Solar	SOL	12/30/2021	195	Calhoun
22INR0352	Sparta Solar	SOL	04/01/2022	256	Bee

# Appendix: Tier 4 Projects

TPIT No	Project Name	TSP	Expected ISD	County From Sub
50342	Rebuild Shropshire to Saltdome	STEC	Feb-21	Matagorda
50344	Rebuild MarkhamTap to Shropshire	STEC	Mar-21	Matagorda
49548	Esperanza: Construct New 138 kV Station	AEP	Mar-21	Matagorda
44395	Dupont SW: Connect 138 kV Gen Tie Line	AEP	Mar-21	Victoria
50340	Rebuild Markham Tap to Van Vleck Sw	STEC	Apr-21	Matagorda
51645	Sand Crab: Add New Distribution Station	AEP	Apr-21	Calhoun
50338	Rebuild Van Vleck Sw to Bay City	STEC	May-21	Matagorda
57904	Brightside Temporary Connection	AEP	Jun-21	Bee
52066	Blessing to Bay City Pumps: Rebuild 69 kV Line	AEP	Oct-21	Matagorda
51996	Rebuild Markham Tap to AEP Markham Tap	STEC	Nov-21	Matagorda
59117	Tres Bahias Solar Interconnection	AEP	Jan-22	Calhoun
57161	Rebuild Vanderbilt to VanHumble	STEC	Feb-22	Jackson
48776	Tidehaven: Construct New Distribution Station	AEP	Apr-22	Matagorda
59763	Construct three terminal 138 kV capable switching station	STEC	May-22	Matagorda
57163	Rebuild VanHumble to Olivia Switch	STEC	May-22	Jackson
6685	Van Vleck substation loop	STEC	Dec-22	Matagorda
57890	Brightside Permanent Connection	AEP	Dec-22	Bee
13TPIT0124	Airport 69 kV Substation	STEC	Jun-23	Victoria
19TPIT0000	Weser Substation	GVEC	Dec-24	Goliad