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Brazos Electric Cooperative (BEC) – Cooke County Resiliency Project (26RPG007) – ERCOT Independent Review (EIR) Status Update

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Regional Planning Group (RPG) Meeting
June 22, 2026

Introduction

Brazos Electric Cooperative (BEC) submitted the Cooke County Resiliency Project (26RPG007) for Electric Reliability Council of Texas' (ERCOT) Regional Planning Group (RPG) review in February 2026

- This is a Tier 2 project with an estimated cost of approximately $147.13 million and will require a Certificate of Convenience and Necessity (CCN)
- Estimated in-service date (ISD) is Fall 2031
- Addresses post-contingency thermal overloads and voltage violations in Cooke County in the North Weather Zone, as well as meeting BEC's planning criteria

This project is currently under ERCOT Independent Review (EIR)

- BEC presented the project overview and ERCOT presented the EIR scope at the April 2026 RPG Meeting
- ERCOT provided an EIR status update at the May 2026 RPG Meeting

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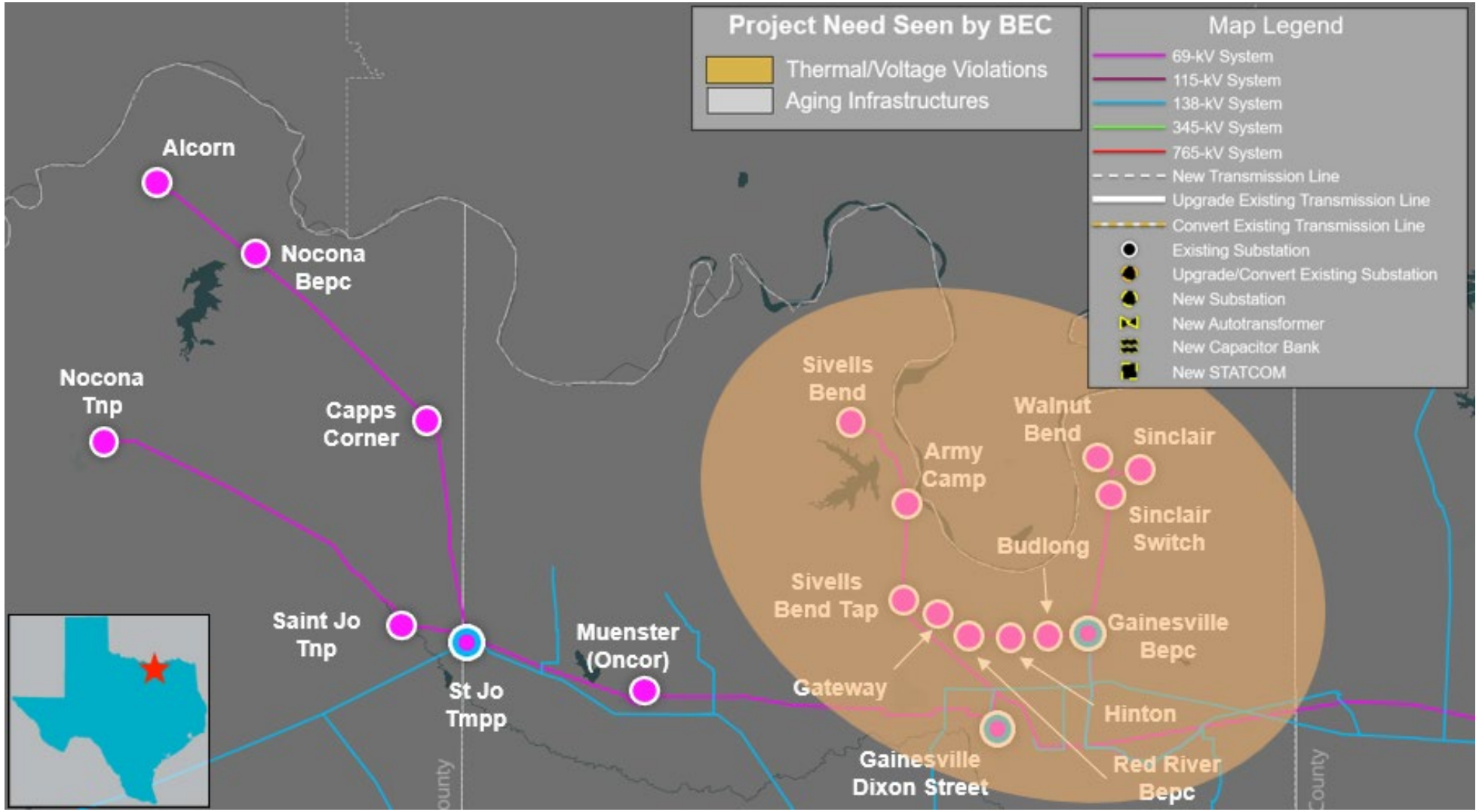
Recap: Study Area Map with Project Needs Seen by BEC



Recap: Study Assumptions

Study Region

- The project is located in the Cooke and Montague counties in the North Weather Zone and all the transmission elements in counties that are electrically close will be monitored

Steady-State Base Case

- Final 2025 Regional Transmission Planning (RTP) 2031 summer peak load case, published on Market Information System (MIS) on December 21, 2024, was updated to construct the study base case

Load Updates

- Approximately 99.7 MW of confirmed loads in study region was updated to create the study base case
- Large Loads in the study area that were reduced in the 2025 RTP 2031 summer peak case were increased to their non-reduced capability to construct the study base case

Reserve

- The reserve was kept consistent with the 2025 RTP

Recap: Study Assumptions (continued)

Transmission Updates

- New transmission projects (listed in Appendix A1), based on the February 2026 Transmission Project and Information Tracking (TPIT) report, were added to the base case
- Transmission projects (listed in Appendix A2) identified in the 2025 RTP in the study area that have not been approved by RPG were removed

Generation Updates

- No new generation that met ERCOT Planning Guide Section 6.9(1) condition with Commercial Operation Date (COD) before the October 2031 in the study area at the time of the study, but not already modeled in the RTP cases, were added to the case based on February 2026 Generator Interconnection Status (GIS) report published in MIS in March 2026
- All generation was dispatched consistent with the 2025 RTP methodology
- All recent retired/indefinitely mothballed units were reviewed and opened (turned off), if not already reflected in the 2025 RTP Final cases

Recap: Preliminary Results of Reliability Assessment – Base Case

ERCOT conducted steady-state load flow analysis for the study base case according to the NERC Reliability Standard TPL-001-5.1 and ERCOT Planning Criteria to identify the project need

Contingency Category	Thermal Overloads	Voltage Violations	Unsolved Power Flow
P0: N-0	4	None	None
P1, P2-1, P7: N-1	None	None	None
P2, P4, P5	None	None	None
P3: (G-1+N-1)*	2	17	None
P6-2: (X-1+N-1)*	None	None	None

* See Appendix B for the list of G-1 generators and X-1 transformers being tested

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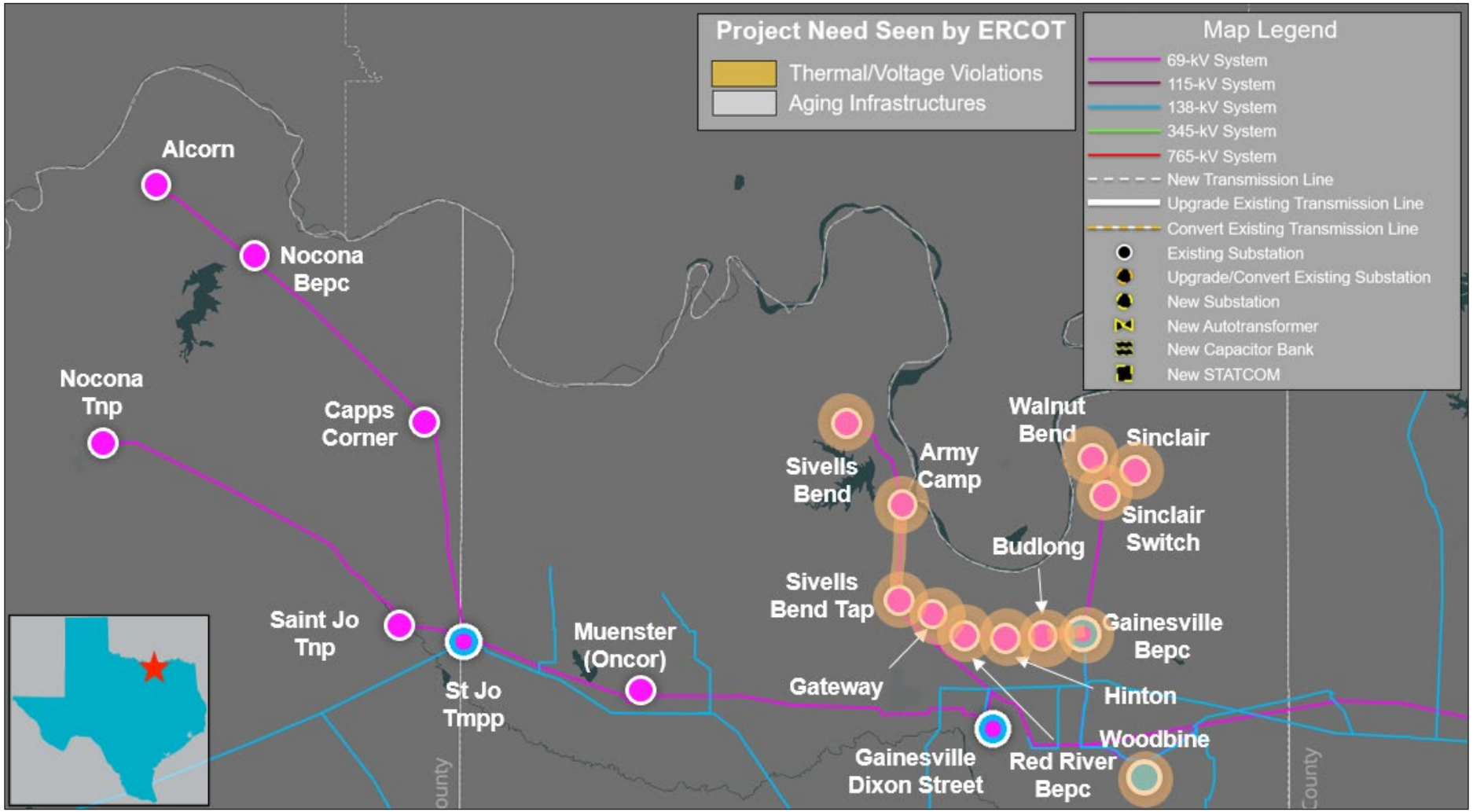
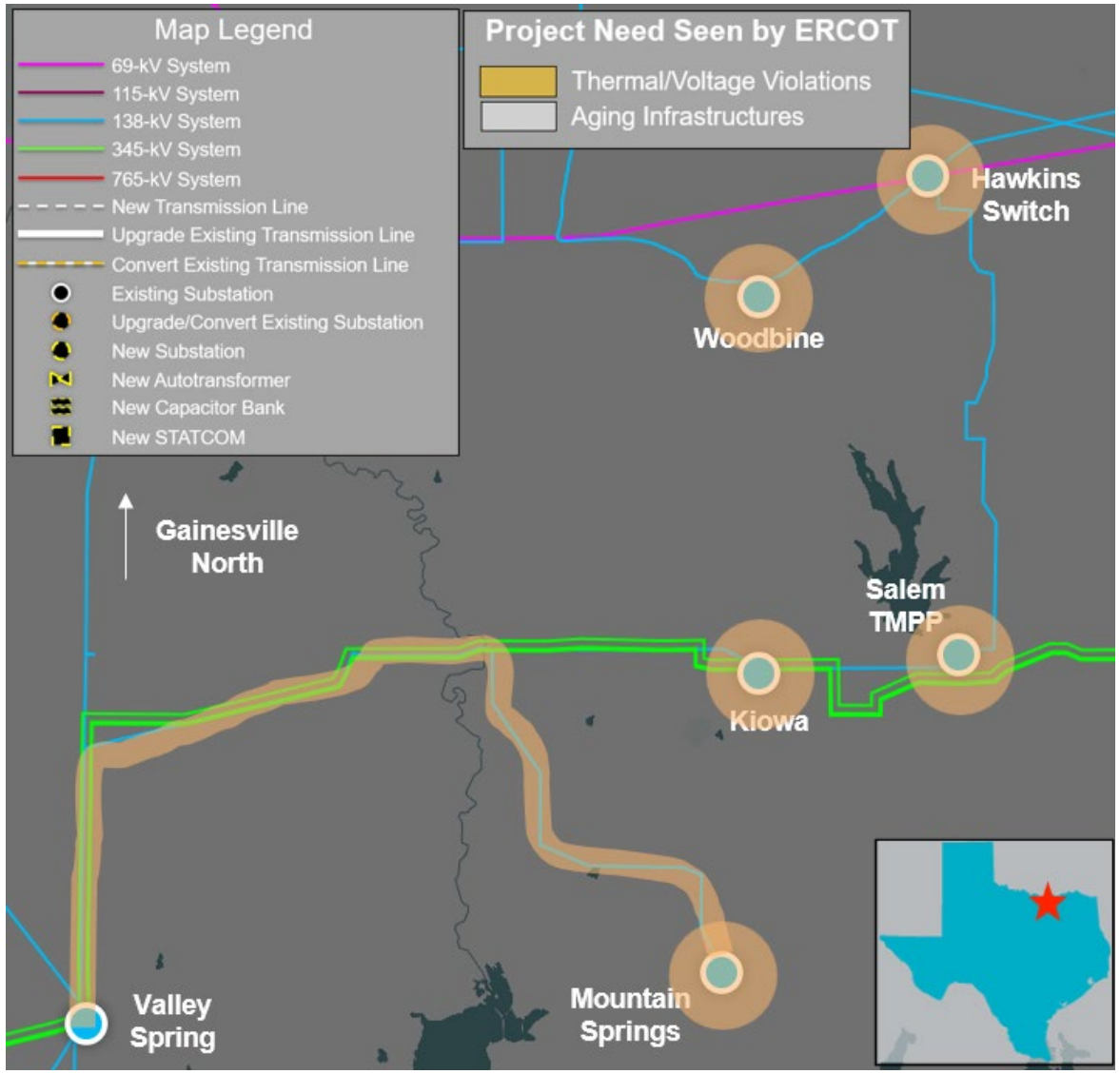
Recap: Study Area Map with Project Needs Seen by ERCOT



Recap: Study Area Map with Project Needs Seen by ERCOT (continued)



Status Update

Studies performed since the May RPG meeting

- Reliability Analysis N-1, (G-1+N-1), and (X-1+N-1) of Options

Preliminary List of Options Considered for Evaluation

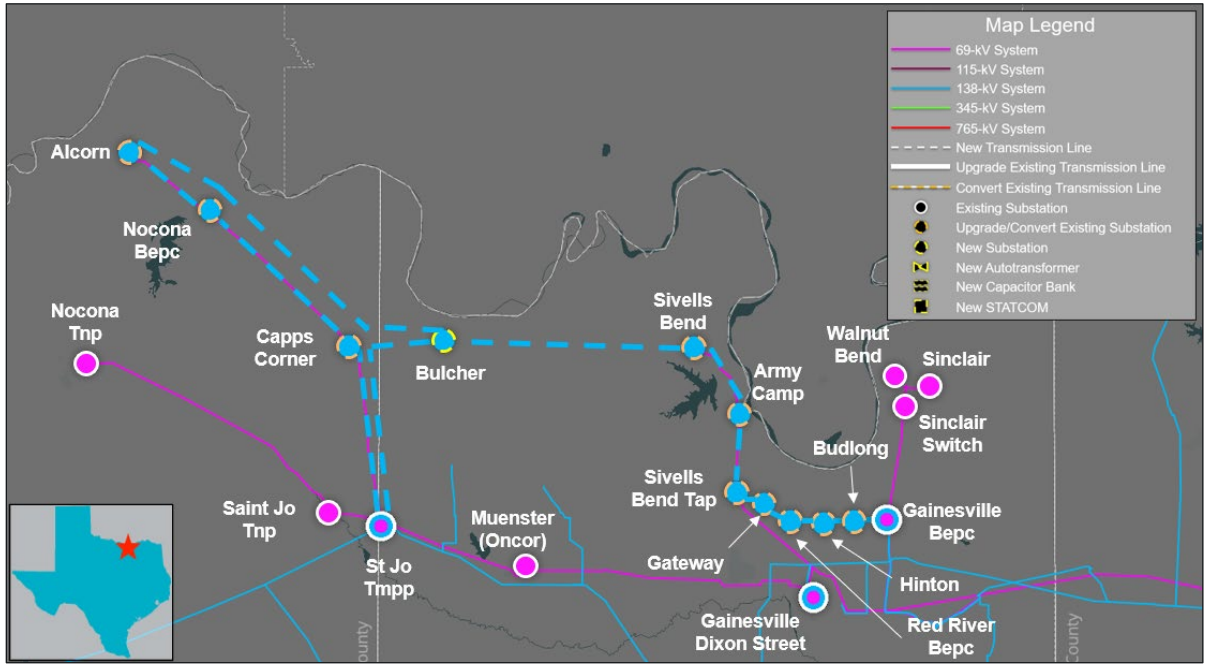
ERCOT evaluated the following options to resolve the reliability violation(s) seen in the study area by ERCOT:

- Option 1 – BEC Proposed Project
- Option 1A – ERCOT Alternative Option
- Option 2 – ERCOT Alternative Option
- Option 3 – ERCOT Alternative Option

Option 1 – BEC Proposed Project

Summary of Upgrades

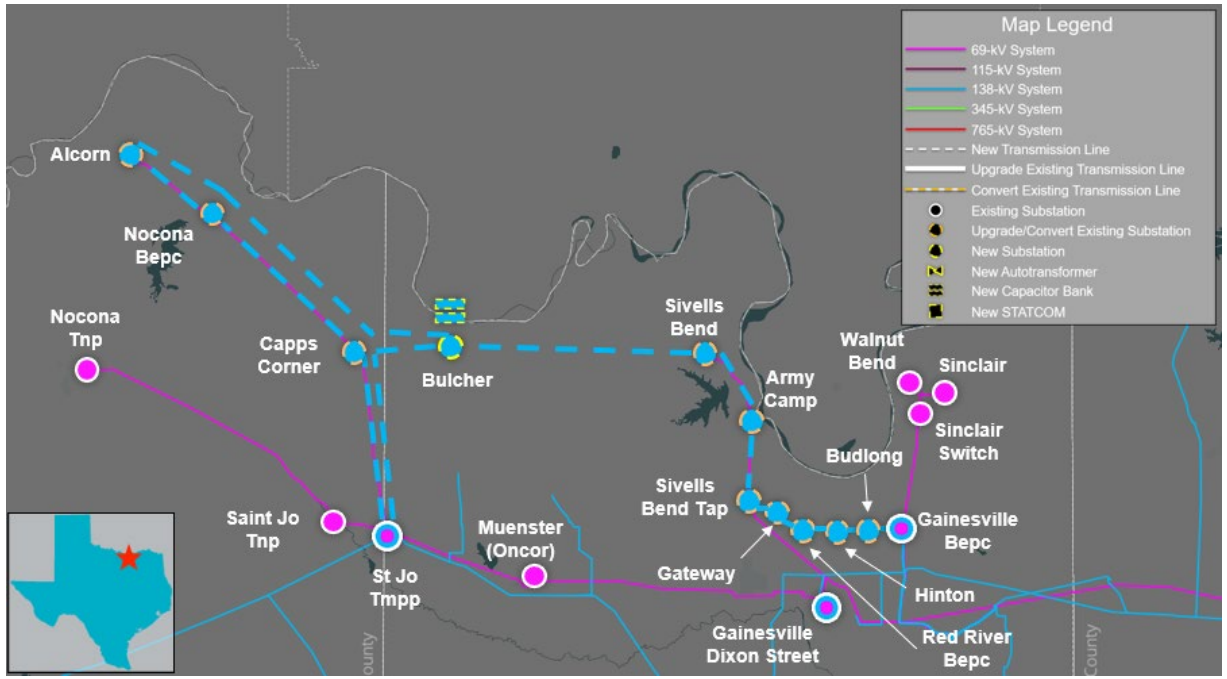
- Construct a new 138-kV substation
- Construct three (3) new 138-kV transmission lines, approximately 30.5 circuit-miles
- Rebuild four (4) 69-kV transmission lines to be 138-kV capable and operated at 138-kV, approximately 29.0 circuit-miles
- Convert all 69-kV stations between Gainesville Bepc to St Jo Tmpp to 138-kV operation
- Detailed list of upgrades are in Appendix C1



Option 1A – ERCOT Alternative Project

Summary of Upgrades

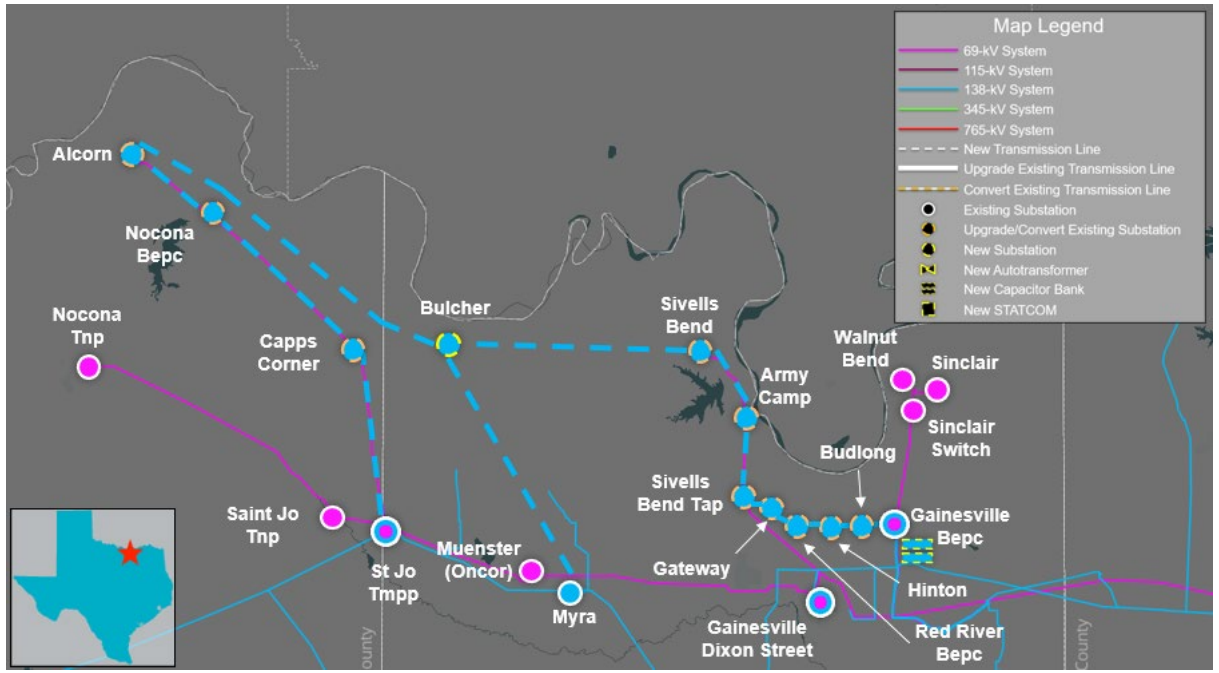
- Construct a new 138-kV substation
- Construct three (3) new 138-kV transmission lines, approximately 30.5 circuit-miles
- Rebuild four (4) 69-kV transmission lines to be 138-kV capable and operated at 138-kV, approximately 29.0 circuit-miles
- Convert all 69-kV stations between Gainesville Bepc to St Jo Tmpp to 138-kV operation
- Install one (1) 10 MVAr sized capacitor
- Detailed list of upgrades are in Appendix C2



Option 2 – ERCOT Alternative Project

Summary of Upgrades

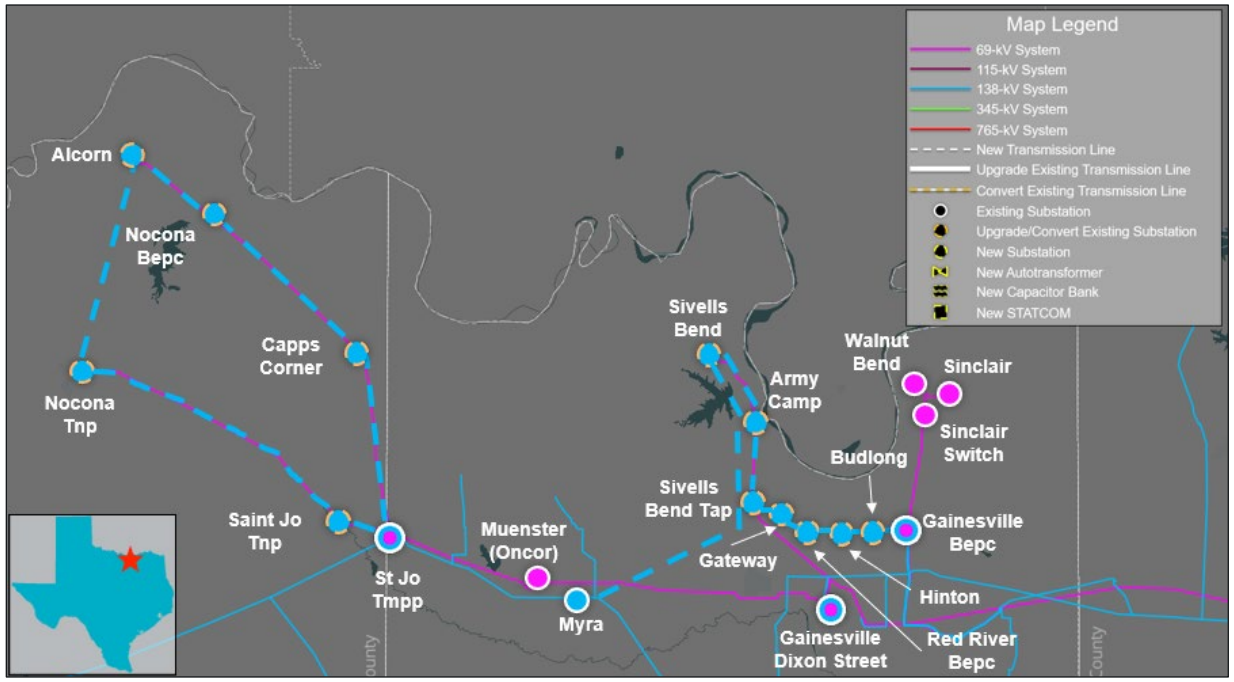
- Construct a new 138-kV substation
- Construct three (3) new 138-kV transmission lines, approximately 46.6 circuit-miles
- Rebuild four (4) 69-kV transmission lines to be 138-kV capable and operated at 138-kV, approximately 29.0 circuit-miles
- Convert all 69-kV stations between Gainesville Bepc to St Jo Tmpp to 138-kV operation
- Install one (1) 10 MVAr sized capacitor
- Detailed list of upgrades are in Appendix C3



Option 3 – ERCOT Alternative Project

Summary of Upgrades

- Construct two (2) new 138-kV transmission lines, approximately 25.8 circuit-miles
- Rebuild six (6) 69-kV transmission lines to be 138-kV capable and operated at 138-kV, approximately 45.4 circuit-miles
- Convert all 69-kV stations between Gainesville Bepc to Sivells Bend to 138-kV operation
- Convert all 69-kV stations between Alcorn to Nocona Tnp to 138-kV operation
- Detailed list of upgrades are in Appendix C4



Preliminary Results of Reliability Assessment – Options

ERCOT conducted steady-state load flow analysis for the all the option cases according to the NERC Reliability Standard TPL-001-5.1 and ERCOT Planning Criteria to evaluate the proposed project and alternatives options

Option	N-1		(G-1+N-1)*		(X-1+N-1)*		Unsolved Power Flow
	Thermal Violations	Voltage Violations	Thermal Violations	Voltage Violations	Thermal Violations	Voltage Violations	
1	None	None	None	1	None	None	None
1A	None	None	None	None	None	None	None
2	None	None	None	None	None	None	None
3	None	None	None	None	None	None	None

* See Appendix B for the list of generators and transformers being tested for (G-1+N-1) and (X-1+N-1) analyses, respectively

Key Takeaway: Option 1A, Option 2, and Option 3 observed no reliability violations and will be short-listed for further evaluation

Deliverables and Next Step

Tentative Timelines

- ERCOT will continue to evaluation proposed upgrades and the alternatives
  - ERCOT may also perform the following studies
    - Maintenance Outage Evaluation
    - Long-Term Load-Serving Capability Assessment
  - TSP(s) will provide Cost Estimates and Feasibility Assessment
- Provide status updates at the future RPG meetings
- ERCOT recommendation in Q3 2026

Key Takeaway: ERCOT recommendation in Q3 2026

Thank you!
Questions/Comments?

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Appendix

- Appendix A1: Transmission Projects Added
- Appendix A2: Transmission Backed Out
- Appendix B: G-1 Generators and X-1 Transformers List
- Appendix C1: Option 1 – BEC Proposed Project
- Appendix C2: Option 1A – ERCOT Alternative Project
- Appendix C3: Option 2 – ERCOT Alternative Project
- Appendix C4: Option 3 – ERCOT Alternative Project

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Appendix A1: Transmission Projects Added

TPIT	Project Name	Tier	Project ISD	County
90111	BEPC_TPIT90111_BUD_LONG	Tier 4	9/01/2027	Cooke
90330	BEPC_TPIT90330_HINTON	Tier 4	9/02/2031	Cooke
90476	BEPC_TPIT90476_ARMY_CAMP	Tier 4	3/01/2027	Cooke
91611	BEPC_TPIT91611_SPRING_RECTOR	Tier 4	9/01/2027	Cooke, Denton
99321	Oncor_MW_99321_Austin Ranch_138kV Capacitor Bank	Tier 4	5/15/2027	Denton

Appendix A2: Transmission Backed Out

RTP Project ID	Project Name	County
2024-NC61	Blue Horse (612) to Spring (684) 138-kV Line Upgrade	Cooke, Denton
2025-NC36	Carrollton Northwest (2363) to South TNP (37100) 138-kV Line Upgrade	Dallas, Denton
2025-NNC01	Gunter Switch (2236) to Collin Switch (2370) 138-kV Line Addition	Collin, Grayson
2025-NNC02	Haggerty Switch (12677) to Sherman South (1750) 138-kV Line Upgrades	Grayson

Appendix B: List of G-1 Generators and X-1 Transformers Tested

Generator	Transformer
DENTON ENERGY CENTER IC A	Valley SES 345/138-kV
PANDA SHERMAN POWER CTG 1, PANDA SHERMAN POWER CTG 2, PANDA SHERMAN POWER STG 1	St Jo Tmpp 138/69-kV
RIPPEY SOLAR	

Appendix C1: Option 1 – BEC Proposed Project

Upgrade Details

- Construct a new Bulcher 138-kV substation using two rung breaker and a half scheme with 6 breakers total
- Construct a new Alcorn to Bulcher 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, which will require a new right of way (ROW), approximately 14.5 miles/circuit
- Construct a new Capps Corner to Bulcher 138-kV transmission line, using double-circuit capable structures with one circuit in place with normal and emergency ratings of at least 524 MVA, which will require a new ROW, approximately 1.0 miles/circuit
- Construct a new Sivells Bend to Bulcher 138-kV transmission line, using double-circuit capable structures with one circuit in place with normal and emergency ratings of at least 524 MVA, which will require a new ROW, approximately 15.0 miles/circuit
- Rebuild the existing Sivells Bend Tap to Sivells Bend 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 7.5 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 15 MVA and 36 MVA, respectively

Appendix C1: Option 1 – BEC Proposed Project (Continued)

Upgrade Details

- Rebuild the existing St Jo Tmpp to Capps Corner 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with one circuit in place with normal and emergency ratings of at least 524 MVA, approximately 8.6 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 44 MVA
- Rebuild the existing Capps Corner to Nocona Bepc 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 9.3 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 14 MVA and 34 MVA, respectively
- Rebuild the existing Nocona Bepc to Alcorn 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 3.6 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 14 MVA and 34 MVA, respectively
- Convert the existing Gainesville Bepc, Red River Bepc, Sivells Bend, Capps Corner, Nocona Bepc, Alcorn, and St Jo Tmpp 69-kV substations to 138-kV operation
- Convert the planned Budlong, Hinton, Gateway, and Army Camp 69-kv substations to 138-kV operation

Appendix C2: Option 1A – ERCOT Alternative Project

Upgrade Details

- Construct a new Bulcher 138-kV substation using two rung breaker and a half scheme with 6 breakers total
- Construct a new Alcorn to Bulcher 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, which will require a new right of way (ROW), approximately 14.5 miles/circuit
- Construct a new Capps Corner to Bulcher 138-kV transmission line, using double-circuit capable structures with one circuit in place with normal and emergency ratings of at least 524 MVA, which will require a new ROW, approximately 1.0 miles/circuit
- Construct a new Sivells Bend to Bulcher 138-kV transmission line, using double-circuit capable structures with one circuit in place with normal and emergency ratings of at least 524 MVA, which will require a new ROW, approximately 15.0 miles/circuit
- Rebuild the existing Sivells Bend Tap to Sivells Bend 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 7.5 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 15 MVA and 36 MVA, respectively

Appendix C2: Option 1A – ERCOT Alternative Project (Continued)

Upgrade Details

- Rebuild the existing St Jo Tmpp to Capps Corner 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with one circuit in place with normal and emergency ratings of at least 524 MVA, approximately 8.6 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 44 MVA
- Rebuild the existing Capps Corner to Nocona Bepc 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 9.3 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 14 MVA and 34 MVA, respectively
- Rebuild the existing Nocona Bepc to Alcorn 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 3.6 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 14 MVA and 34 MVA, respectively
- Convert the existing Gainesville Bepc, Red River Bepc, Sivells Bend, Capps Corner, Nocona Bepc, Alcorn, and St Jo Tmpp 69-kV substations to 138-kV operation
- Convert the planned Budlong, Hinton, Gateway, and Army Camp 69-kv substations to 138-kV operation

Appendix C2: Option 1A – ERCOT Alternative Project (Continued)

Upgrade Details

- Install a 10 MVAr sized capacitor at the new Bulcher 138-kV substation

Appendix C3: Option 2 – ERCOT Alternative Project

Upgrade Details

- Construct a new Bulcher 138-kV substation using two rung breaker and a half scheme with 6 breakers total
- Construct a new Alcorn to Bulcher 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, which will require a new right of way (ROW), approximately 14.5 miles/circuit
- Construct a new Sivells Bend to Bulcher 138-kV transmission line, using double-circuit capable structures with one circuit in place with normal and emergency ratings of at least 524 MVA, which will require a new ROW, approximately 15.0 miles/circuit
- Construct a new Bulcher to Myra 138-kV transmission line, using single-circuit capable structures with one circuit in place with normal and emergency ratings of at least 524 MVA, which will require a new ROW, approximately 17.1 miles/circuit
- Rebuild the existing Sivells Bend Tap to Sivells Bend 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 7.5 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 15 MVA and 36 MVA, respectively

Appendix C3: Option 2 – ERCOT Alternative Project (Continued)

Upgrade Details

- Rebuild the existing St Jo Tmpp to Capps Corner 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with one circuit in place with normal and emergency ratings of at least 524 MVA, approximately 8.6 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 44 MVA
- Rebuild the existing Capps Corner to Nocona Bepc 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 9.3 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 14 MVA and 34 MVA, respectively
- Rebuild the existing Nocona Bepc to Alcorn 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 3.6 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 14 MVA and 34 MVA, respectively

Appendix C3: Option 2 – ERCOT Alternative Project (Continued)

Upgrade Details

- Convert the existing Gainesville Bepc, Red River Bepc, Sivells Bend, Capps Corner, Nocona Bepc, Alcorn, and St Jo Tmpp 69-kV substations to 138-kV operation
- Convert the planned Budlong, Hinton, Gateway, and Army Camp 69-kv substations to 138-kV operation
- Install a 10 MVAr sized capacitor at the existing Gainesville Bepc 138-kV substation

Appendix C4: Option 3 – ERCOT Alternative Project

Upgrade Details

- Construct a new Sivells Bend to Myra 138-kV transmission line, using single-circuit capable structures with one circuit in place with normal and emergency ratings of at least 524 MVA, which will require a new ROW, approximately 14.5 miles
- Construct a new Alcorn to Nocona Tnp 138-kV transmission line, using single-circuit capable structures with one circuit in place with normal and emergency ratings of at least 200 MVA, which will require a new ROW, approximately 11.3 miles
- Rebuild the existing Saint Jo Tnp to St Jo Tmpp 69-kV transmission line to a 138-kV transmission line, using single-circuit structures with one circuit in place with normal and emergency ratings of at least 200 MVA, approximately 2.6 miles
  - The existing infrastructure has current normal and emergency ratings of 27.2 MVA
- Rebuild the existing Saint Jo Tnp to Nocona Tnp 69-kV transmission line to a 138-kV transmission line, using single-circuit structures with one circuit in place with normal and emergency ratings of at least 200 MVA, approximately 13.8 miles
  - The existing infrastructure has current normal and emergency ratings of 43 MVA

Appendix C4: Option 3 – ERCOT Alternative Project (Continued)

Upgrade Details

- Rebuild the existing Sivells Bend Tap to Sivells Bend 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 7.5 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 15 MVA and 36 MVA, respectively
- Rebuild the existing St Jo Tmpp to Capps Corner 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with one circuit in place with normal and emergency ratings of at least 524 MVA, approximately 8.6 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 44 MVA
- Rebuild the existing Capps Corner to Nocona Bepc 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 9.3 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 14 MVA and 34 MVA, respectively
- Rebuild the existing Nocona Bepc to Alcorn 69-kV transmission line to a 138-kV transmission line, using double-circuit structures with two circuits in place with normal and emergency ratings of at least 524 MVA, approximately 3.6 miles/circuit
  - The existing infrastructure has current normal and emergency ratings of 14 MVA and 34 MVA, respectively

Appendix C4: Option 3 – ERCOT Alternative Project (Continued)

Upgrade Details

- Convert the existing Gainesville Bepc, Red River Bepc, Sivells Bend, Capps Corner, Nocona Bepc, Alcorn, St Jo Tmpp, Saint Jo Tnp, and Nocona Tnp 69-kV substations to 138-kV operation
- Convert the planned Budlong, Hinton, Gateway, and Army Camp 69-kv substations to 138-kV operation