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Oncor Electric Delivery Company LLC (Oncor) – Combined Set 1 North Central & South Central Texas Reliability Project (25RPG041) & Oncor Set 2 North Central & South Central Texas Reliability Project (25RPG043) – ERCOT Independent Review (EIR) – Status Update

Tanzila Ahmed

Regional Planning Group (RPG) Meeting
April 13, 2026

Introduction

Oncor Electric Delivery Company LLC (Oncor) submitted the Set 1 North Central and South Central Texas Reliability Project (25RPG041) for Electric Reliability Council of Texas' (ERCOT) Regional Planning Group (RPG) Regional Planning Group (RPG) review in November 2025

- This is a Tier 1 project with an estimated cost of approximately $943.92 million and will require a Certificate of Convenience and Necessity (CCN)
- Estimated in-service dates (ISDs) planned in phases between 2028 and 2034
- Addresses the thermal overloads and voltage violations in the Bell, Falls, Henderson, Hill, Limestone, McLennan, Milam, and Navarro counties in the North Central, South Central, and East Weather Zones
- This project was identified and included in the both 2024 and 2025 Regional Transmission Plan (RTP)
- This project aligns with the transmission upgrades proposed in the 2024 RTP 765-kV Strategic Transmission Expansion Plan (STEP) Core Plan

Introduction (continued)

Oncor submitted the Set 2 North Central and South Central Texas Reliability Project (25RPG043) for ERCOT's RPG review in November 2025

- This is a Tier 1 project with an estimated cost of approximately $440.79 million and will require a CCN
- Estimated ISDs planned in phases between 2028 and 2034
- Addresses the thermal overloads and voltage violations in the Hill, McLennan, Navarro, and Smith counties in the North Central and East Weather Zones
- This project was identified and included in the 2024 RTP
- Portion of this project was identified and included in the 2025 RTP
- This project aligns with the transmission upgrades proposed in the 2024 RTP 765-kV STEP Core Plan

Introduction (continued)

This project is currently under a single ERCOT Independent Review (EIR) by combining these two projects (25RPG041 and 25RPG043) and ERCOT is presenting its status update

- Oncor presented a project overview for these two projects at the January 2026 RPG Meeting
- ERCOT presented the EIR scope at the February 2026 RPG Meeting
- ERCOT presented the EIR scope updates at the March 2026 RPG Meeting

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Recap: Highlights of the Set 1 North Central and South Central Project

Oncor Project Description	RTP Project Number	Counties
Construct a new Tower 345-kV Switch (SW); Terminate the existing Salado SW to Knob Creek SW 345-kV Line into the new Tower 345-kV SW; Construct a new Tower SW to Knob Creek 345-kV Line on separate structures, ~1.2-mile; Rebuild the Salado SW to Tower SW 345-kV Line, ~12.4-mile;	2024-NC12	Bell
Rebuild the existing Temple Pecan Creek SW to Bellfalls/STR26/4C 345-kV Double-Circuit Line, ~2.6-mile; Rebuild the existing Possum Trot SW to Bellfalls/STR26/4C 345-kV Double-Circuit Line, ~26.1-mile; Rebuild the existing Temple SW to Temple Pecan Creek SW 345-kV Double-Circuit Line, ~4.5-mile;	2024-NC32	Bell, Falls, and McLennan
Rebuild the existing Sam SW to Four Brothers SW 345-kV Line, ~2.3-mile;	2024-NC69	Hill, and McLennan
Rebuild the existing Possum Trot SW to St John SW to Bale SW to Stranger SW 345-kV Line, ~18.4-mile;	2024-NC23	McLennan, Falls, and Limestone
Rebuild the existing Revolution SW to Hubbard 138-kV Line, ~27.3-mile;	2024-NC27	Hill and Navarro
Rebuild the existing Mankin SW to Seven Points 138-kV Line, ~11.2-mile;	2024-NC44	Henderson
Rebuild the existing Trinidad SW to Mankin SW 138-kV Line, ~4.1-mile;	2024-NC34	Henderson
Rebuild the existing Bell County East SW to Gibson SW 345-kV Double-Circuit Line, ~23.4-mile;	2024-NC60 and 2024-NC91	Bell and Milam
Rebuild the existing Bell County East SW to Voss Lake SW 345-kV Double-Circuit Line, ~29.6-mile; Rebuild the existing Minerva SW to Cannon 138-kV Line, ~9.9-mile;	2024-SC28	Bell and Milam

Key Takeaway: Projects highlighted in yellow are currently being evaluated in the ongoing EIR for the Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV Project (25RPG009)

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Recap: Highlights of the Set 2 North Central and South Central Project

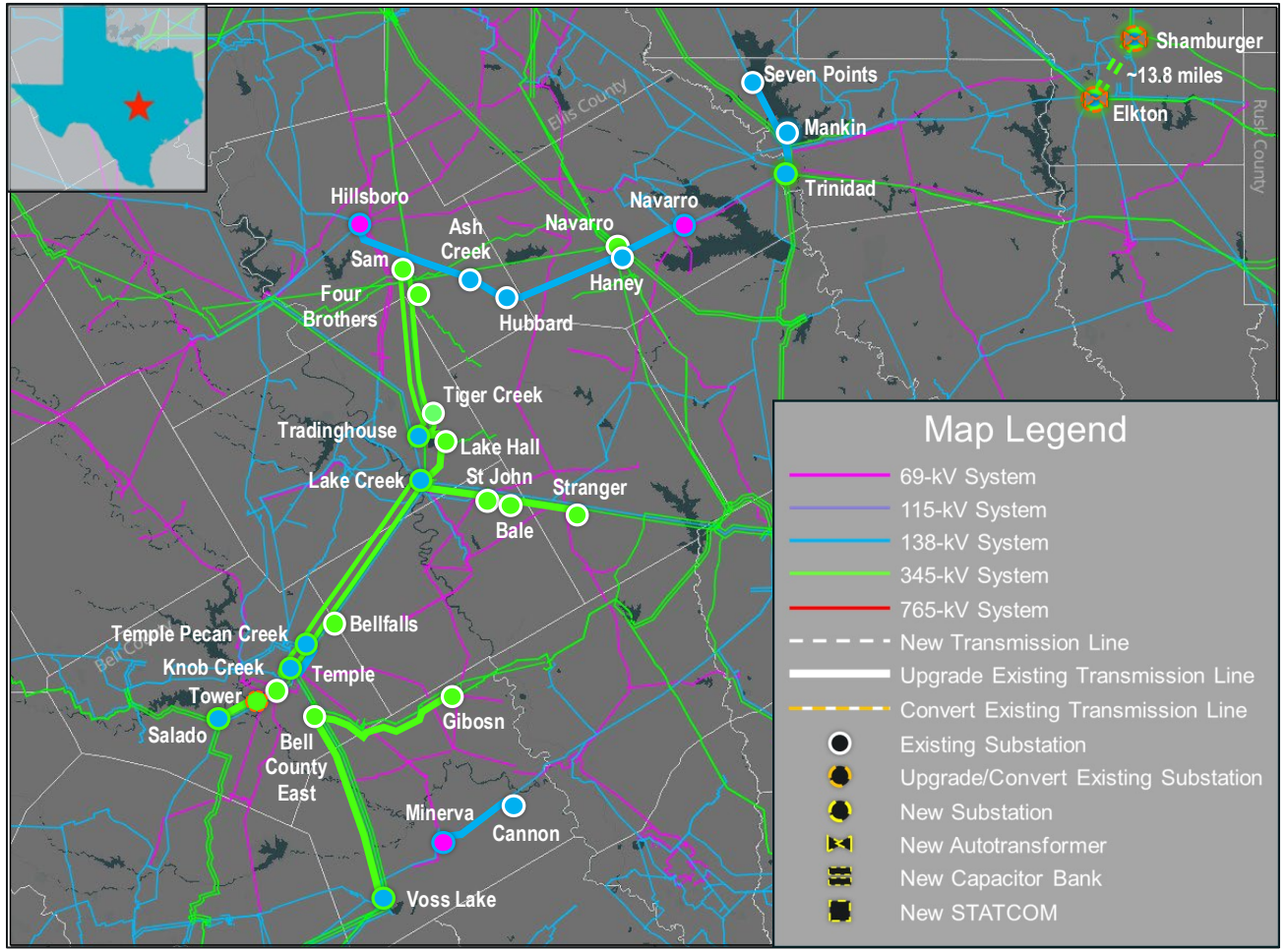
Oncor Project Description	RTP Project Number	Counties
Rebuild the Tradinghouse Switch to Four Brothers Switch 345-kV Line, ~20.6-mile; Rebuild the Tiger Creek Switch to Sam Switch (Lone Star) 345-kV Line, ~21.2-mile; and Rebuild the Possum Trot Switch to Lake Hall Switch to Tradinghouse Switch 345-kV Double-Circuit Line, ~9.6-mile.	2024-NC32	Hill, and McLennan
Rebuild the Hillsboro Switch to Ash Creek Switch 138-kV Line, ~19.30-mile	2024-NC04	Hill
Rebuild the Ash Creek Switch to Hubbard 138-kV Line, ~5.1-mile	2024-NC27	Hill, and Navarro
Rebuild the existing Elkton 345/138-kV Switch; Install one new 345/138-kV autotransformer at Elkton Switch; Construct a new Elkton Switch to Shamburger Switch 345-kV Double-Circuit Line, ~13.8-mile; Rebuild the existing Shamburger 345/138 kV Switch; and Install one new 345/138-kV autotransformer at Shamburger	2024-E2	Smith

Recap: Summary of the Two Projects Proposed by Oncor

Summary of Upgrades

- Construct one (1) new 345-kV substation
- Rebuild two (2) existing 345/138-kV substations
  - Add one new 345/138-kV transformer at each substation
- Construct three (2) new 345-kV transmission lines
  - Two (2) 345-kV single-circuit transmission line, approximately 2.4 circuit miles
  - One (1) 345-kV double-circuit transmission line, approximately 27.6 circuit miles
- Upgrade of existing 345-kV and 138-kV lines
  - 345-kV transmission line, approximately 266.9 circuit miles
  - 138-kV transmission line, approximately 76.9 circuit miles

Total combined estimated cost is approximately $1.385 billion



Recap: Load Evaluation

With the current method of including full Officer Letter Loads in the EIR review, the study area will have over 19 GW of large loads than the 2025 RTP load level (over 18 GW than the 2024 RTP load level)

Weather Zone	Study Load Level (MW)	2025 RTP 2031 Load (MW)	2024 RTP 2030 Load (MW)
East	3,599	3,269	3,756
North Central	55,410	39,606	46,424
South Central	30,872	27,969	21,181
Total	89,880	70,844	71,361

Key Takeaway:

- **This indicates the reliability need still exists for all the transmission projects proposed in the Oncor Set 1 and Set 2 North Central and South Central Texas Reliability Projects**
- **In addition to the proposed Set 1 and Set 2 projects, substantial amounts of new transmission upgrades would also be needed to serve these additional loads which is beyond the study scope of this EIR**

Recap: Study Evaluation

Group 1

- ERCOT has evaluated and included the overlapping upgrades (highlighted on slide 5) as part of the ongoing EIR for the Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV Project (25RPG009), and these upgrades will not be evaluated as part of this EIR evaluation

Group 2

- ERCOT proposes to confirm and approve the remaining transmission upgrades proposed in the Oncor Set 1 and Set 2 North Central and South Central Texas Reliability Project based on the reliability need identified in the 2024 and 2025 RTP evaluations to expedite the RPG review process except for the ones which Transmission Service Providers (TSPs) commented for alternative

Group 3

- ERCOT is conducting an independent review for the upgrades that TSPs commented for alternative

Status Update

Studes performed since March RPG meeting

- Generation addition sensitivity analysis for Group 2 upgrades
- Load scaling sensitivity analysis for Group 2 upgrades
- Detailed scope and alternatives options developed for Group 3 upgrades

Ongoing Assessments

- Subsynchronous Oscillations (SSO) Assessment for Group 2 upgrades
- Continue evaluating proposed upgrades and alternative options for Group 3 upgrades

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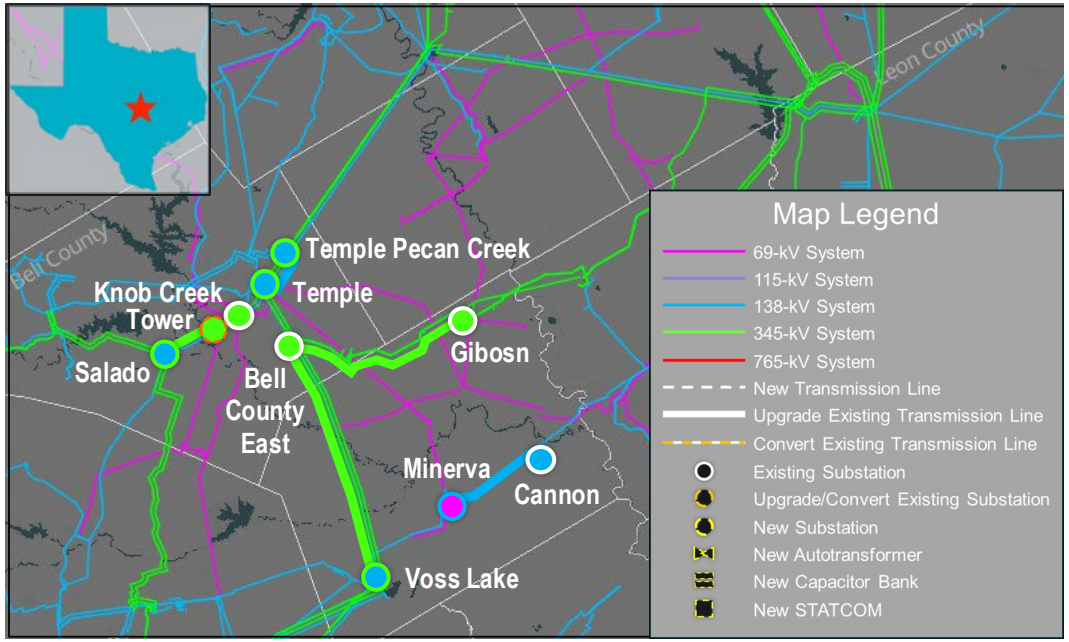
Recap: Group 1 Upgrades Evaluated in Ongoing Project

Group 1 Summary of Upgrades

- Construct one (1) new 345-kV Switch
- Construct one (1) new 345-kV transmission lines, approximately 2.4 circuit miles
- Rebuild existing 345-kV transmission lines, approximately 127.4 circuit miles
- Rebuild existing 138-kV transmission lines, approximately 9.9 circuit miles
- Detailed component list in Appendix A1

Total estimated cost is approximately $517.9 million



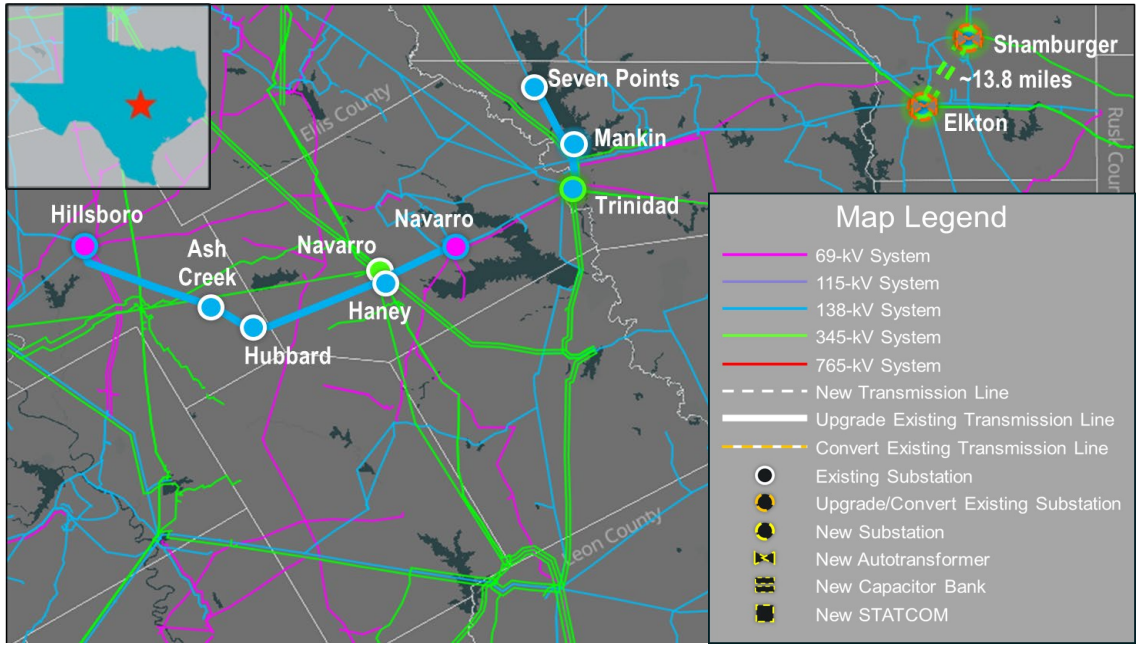
Key Takeaway: Upgrades identified as Group 1 are currently being evaluated in the ongoing EIR for the Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV Project (25RPG009) and will not be evaluated as part of this EIR evaluation

Recap: Group 2 Upgrades for Expedited Evaluation

Group 2 Summary of Upgrades

- Upgrade existing 138-kV transmission lines, approximately 67.0 circuit miles
- Rebuild two (2) existing 345/138-kV substations
  - Install two (2) new 345/138-kV autotransformers
- Construct one (1) new 345-kV transmission lines, which would require new right of way (ROW), approximately 27.4 circuit miles
- Detailed component list in Appendix A2

Total estimated cost is approximately $381.09 million



Key Takeaway: Upgrades identified as Group 2 are being considered for expediated evaluation

Group 2 Upgrades – Additional Analyses

Generation Addition Sensitivity Analysis

- ERCOT performed a generation addition sensitivity using the Final 2025 RTP 2031 summer peak load case with the Group 2 upgrades modelled, per ERCOT Planning Guide Section 3.1.3(4)(a), by adding new the generation listed in Appendix B to the case. The additional 29 resources were modeled following the 2025 RTP methodology. ERCOT determined relevant generators do not impact the Group 2 upgrades

Load Scaling Sensitivity Analysis

- ERCOT Planning Guide Section 3.1.3(4)(b) requires an evaluation of the potential impact of load scaling on the criteria violations seen in this EIR. Starting 2024, ERCOT RTP adopted a new methodology of having one summer peak case for each study year with non-coincident peaks for each of the Weather Zones, which would eliminate the load scaling impact. The study case did not include load scaling as such load scaling sensitivity analysis is no longer needed

ERCOT is currently evaluating the SSO Assessment

Group 2 Deliverables or Next Step

Tentative Timelines

- ERCOT recommendation at the May RPG Meeting
- EIR report to be posted in the Market Information Service (MIS) in May 2026
- EIR recommendation to Technical Advisory Committee (TAC) in May 2026
- Seek ERCOT Board of Directors (BOD) endorsement in June 2026

Key Takeaway: Seek ERCOT BOD endorsement in June 2026

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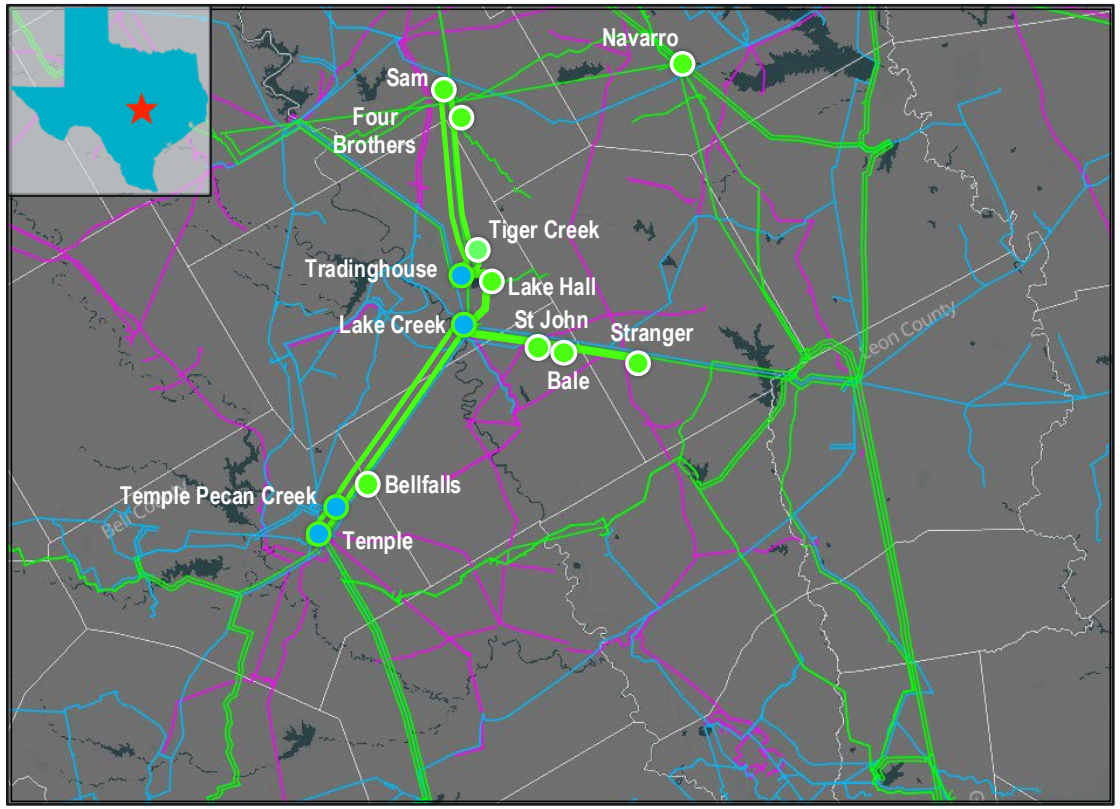
Recap: Group 3 Upgrades for EIR Evaluation

Group 3 Summary of Upgrades

- Upgrade existing 345-kV transmission lines, approximately 120.3 circuit miles
- Detailed component list in Appendix A3

Total estimated cost is approximately $486.01 million



Key Takeaway: ERCOT is currently conducting an independent review for the upgrades identified for Group 3 and the alternatives commented by TSPs

Group 3 Study Assumptions

Study Region

- This project is located in the Bell, Falls, Hill, Limestone, and McLennan counties in the North Central Weather Zone bordering South Central Weather Zone, and all transmission elements in the counties that are electrically close will be monitored

Steady-State Base Case

- Final 2025 RTP 2031 summer peak load case, published on MIS on December 22, 2025, is being updated to construct the study base case

Transmission Updates

- New transmission projects (listed in Appendix C1), based on February 2026 Transmission Project and Information Tracking (TPIT) report and/or recently approved RPG project, will be added to the study base case
- Transmission projects (listed in Appendix C2) identified in the 2025 RTP in the study area that have not been approved by RPG will be removed

Generation Updates

- New generation that met ERCOT Planning Guide Section 6.9(1) (listed in Appendix D) based on the February 2026 Generator Interconnection Status (GIS) report will be added to the study base case
- New generation completed Full Interconnection Studies (FIS) or started FIS may be added to balance any new loads addition
- All generation will be dispatched consistent with the 2025 RTP methodology

Load & Reserve Updates

- Confirmed loads in study region will be updated to create the study base case
- The reserve will be kept consistent with the 2025 RTP

Group 3 Contingencies & Criteria

Contingencies for Study Region

- North American Electric Reliability Corporation (NERC) Reliability Standard TPL-001-5.1 and ERCOT Planning Criteria
  - P0 (System Intact)
  - P1, P2-1, P7 (N-1 conditions)
  - P2-2, P2-3, P4, and P5 (Extra High Voltage (EHV) only)
  - P3: G-1+N-1 (G-1: list in Appendix E)
  - P6-2: X-1+N-1 (X-1: list in Appendix E)

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

Group 3 Procedure

Need Analysis

- The reliability analysis will be performed to identify the need to serve the projected area load using the study base case

Project Evaluation

- Project alternatives will be tested to satisfy the NERC and ERCOT reliability requirements
- ERCOT may also perform the following studies
  - Maintenance Outage Evaluation
  - Long-Term Load-Serving Capability Assessment
- TSP(s) will provide Cost and Feasibility Assessment

Additional Analyses for Preferred Option

- Generation Addition and Load Scaling Sensitivity Analyses
  - ERCOT Planning Guide Section 3.1.3(4)
- SSO Assessment
  - ERCOT Nodal Protocol Section 3.22.1.3(2)
- Congestion analysis may be performed based on the preferred transmission upgrades to ensure that the identified transmission upgrades do not result in new congestion within the study area

Group 3 Preliminary List of Options to be Considered

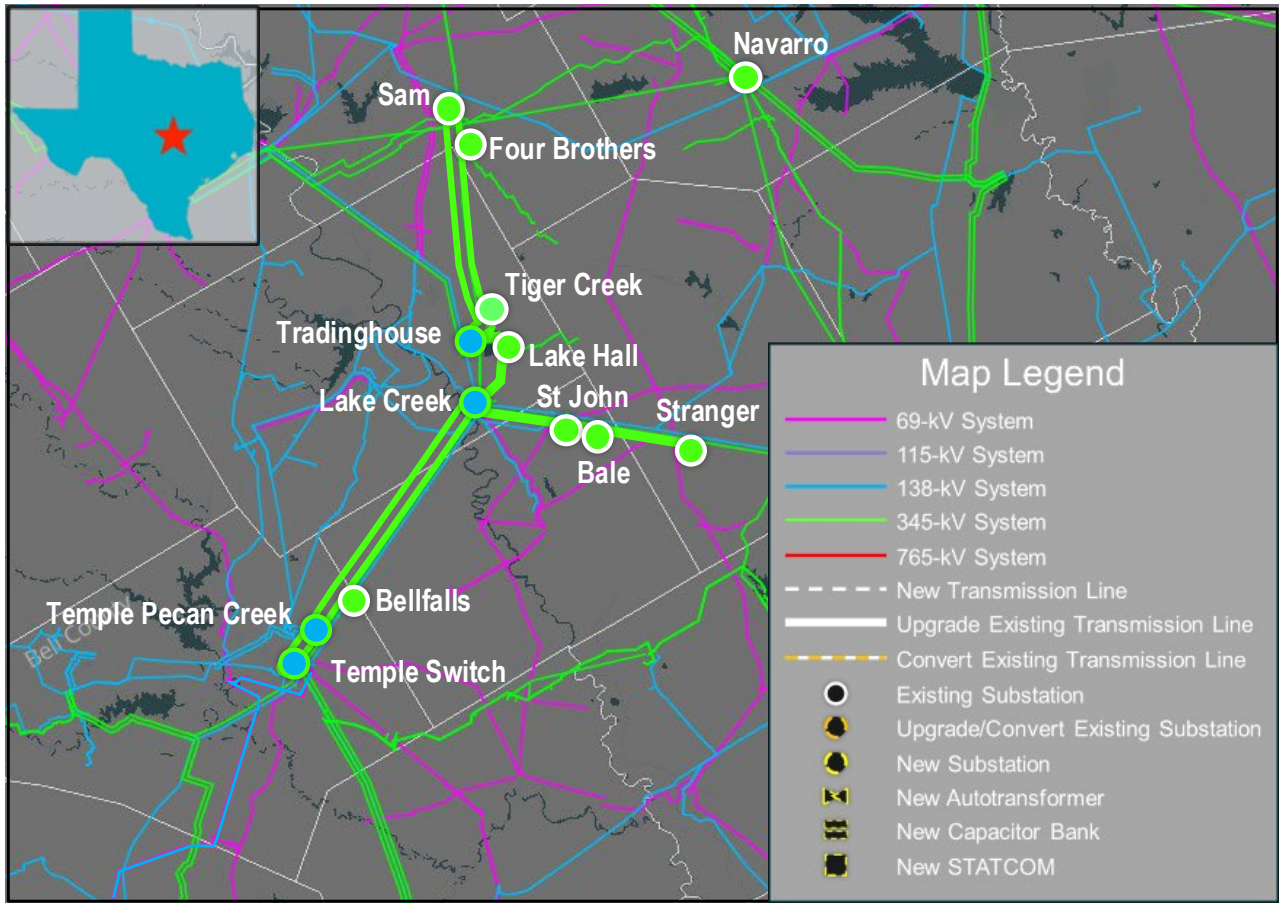
ERCOT plans to evaluate three (3) options including alternatives to address comments received from TSPs for Group 3

- Option 1 is Oncor's proposed upgrades
- Option 2 is alternative based on comments from Brazos Electric Cooperative (Brazos)
- Option 3 is alternative based on comments from Lone Star Transmission, LLC (Lone Star)

Group 3 Option 1 – Oncor's Proposed Upgrades

Option 1 Summary of Upgrades

- Upgrade existing 345-kV transmission lines, approximately 120.3 circuit miles
- Detailed component list in Appendix F1



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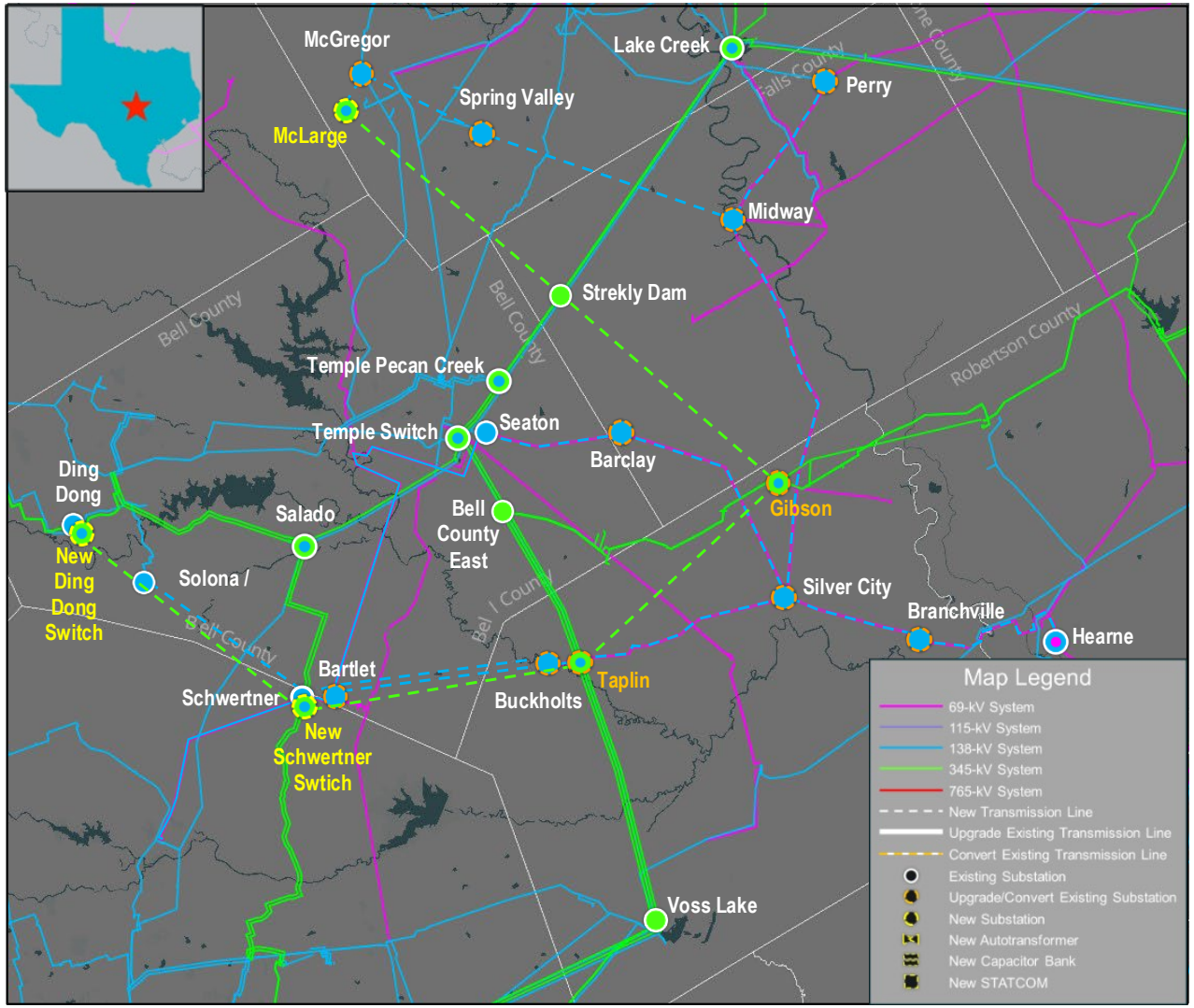
Group 3 Option 2 – Brazos' Proposed Alternative

Option 2 Summary of Upgrades

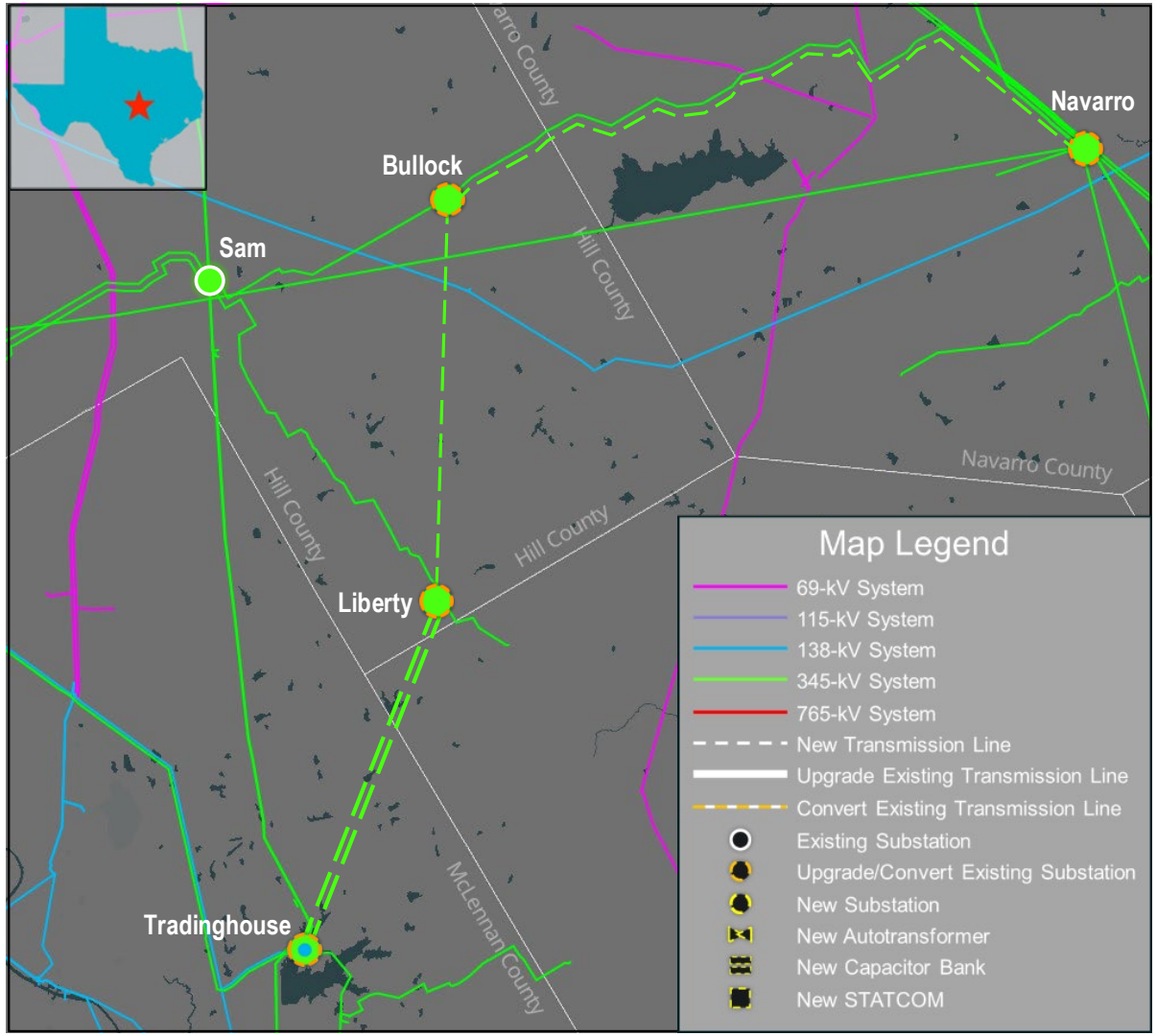
- Construct three (3) new 345/138-kV switching stations
- Convert one (1) existing 345-kV station into 345/138-kV switching station
- Expand and convert one (1) existing 138-kV station into 345/138-kV switching station
- Install ten (10) new 345/138-kV autotransformers
- Construct new 345-kV transmission lines, which will require new ROW, approximately 115.2 circuit miles
- Construct new 138-kV transmission lines, approximately 64.13 circuit miles
- Upgrade existing 138-kV transmission lines, approximately 20.4 circuit miles
- Convert ten (10) existing 69-kV substation into 138-kV substations
- Convert existing 69-kV transmission lines into 138-kV transmission lines, approximately 110.4 circuit miles
- Detailed component list in Appendix F2



Group 3 Option 3 – Lone Star's Proposed Alternative

Option 3 Summary of Upgrades

- Expand four (4) existing 345-kV substations
- Construct new 345-kV transmission lines, approximately 73.0 circuit miles
- Detailed component list in Appendix F3



Group 3 Deliverables and Next Step

Tentative Timelines

- ERCOT will continue to evaluation Group 3 upgrades and the alternatives
- Status updates at the future RPG meetings
- Final recommendation for Group 3 in Q3 2026

Key Takeaway: Final recommendation in Q3 2026

Thank you!

Questions/Comments?

Tanzila.Ahmed@ercot.com
Robert.Golen@ercot.com

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Appendix

- Appendix A1: Group 1 Upgrades
- Appendix A2: Group 2 Upgrades
- Appendix A3: Group 3 Upgrades
- Appendix B: New Generation Projects Added for Generation Addition Sensitivity Analysis for Group 2
- Appendix C1: Transmission Projects to Add to Group 3 Base Case
- Appendix C2: Transmission to Remove from Group 3 Base Case
- Appendix D: Generation to Add to Group 3 Base Case
- Appendix E: G-1 Generators and X-1 Transformers List for Group 3 Analyses
- Appendix F1: Group 3 Option 1 Details – Oncor Proposed Project
- Appendix F2: Group 3 Option 2 Details – Brazos' Alternative
- Appendix F3: Group 3 Option 3 Details – Lone Star's Alternative

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Appendix A1: Group 1 Upgrades

Oncor Project Description	RTP Project Number	Counties
Construct a new Tower 345-kV Switch (SW); Terminate the existing Salado SW to Knob Creek SW 345-kV Line into the new Tower 345-kV SW; Construct a new Tower SW to Knob Creek 345-kV Line on separate structures, ~1.2-mile Rebuild the Salado SW to Tower SW 345-kV Line, ~12.4-mile;	2024-NC12	Bell
Rebuild the existing Temple SW to Temple Pecan Creek SW 345-kV Double-Circuit Line, ~4.5-mile;	2024-NC32	Bell
Rebuild the existing Bell County East SW to Gibson SW 345-kV Double-Circuit Line, ~23.4-mile;	2024-NC60 and 2024-NC91	Bell and Milam
Rebuild the existing Bell County East SW to Voss Lake SW 345-kV Double-Circuit Line, ~29.6-mile; Rebuild the existing Minerva SW to Cannon 138-kV Line, ~9.9-mile;	2024-SC28	Bell and Milam

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Appendix A2: Group 2 Upgrades

Oncor Project Description	RTP Project Number	Counties
Rebuild the existing Revolution SW to Hubbard 138-kV Line, ~27.3-mile; Rebuild the Ash Creek Switch to Hubbard 138-kV Line, ~5.1-mile; Rebuild the Hillsboro Switch to Ash Creek Switch 138-kV Line, ~19.30-mile;	2024-NC27 and 2024-NC04	Hill and Navarro
Rebuild the existing Mankin SW to Seven Points 138-kV Line, ~11.2-mile;	2024-NC44	Henderson
Rebuild the existing Trinidad SW to Mankin SW 138-kV Line, ~4.1-mile;	2024-NC34	Henderson
Rebuild the existing Elkton 345/138-kV Switch; Install one new 345/138-kV autotransformer at Elkton Switch; Construct a new Elkton Switch to Shamburger Switch 345-kV Double-Circuit Line, ~13.8-mile; Rebuild the existing Shamburger 345/138 kV Switch; and Install one new 345/138-kV autotransformer at Shamburger	2024-E2	Smith

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Appendix A3: Group 3 Upgrades

Oncor Project Description	RTP Project Number	Counties
Rebuild the existing Temple Pecan Creek SW to Bellfalls/STR26/4C 345-kV Double-Circuit Line, ~2.6-mile; Rebuild the existing Possum Trot SW to Bellfalls/STR26/4C 345-kV Double-Circuit Line, ~26.1-mile; Rebuild the Tradinghouse Switch to Four Brothers Switch 345-kV Line, ~20.6-mile; Rebuild the Tiger Creek Switch to Sam Switch (Lone Star) 345-kV Line, ~21.2-mile; and Rebuild the Possum Trot Switch to Lake Hall Switch to Tradinghouse Switch 345-kV Double-Circuit Line, ~9.6-mile	2024-NC32	Bell, Falls, Hill, and McLennan
Rebuild the existing Sam SW to Four Brothers SW 345-kV Line, ~2.3-mile;	2024-NC69	Hill, and McLennan
Rebuild the existing Possum Trot SW to St John SW to Bale SW to Stranger SW 345-kV Line, ~18.4-mile;	2024-NC23	McLennan, Falls, and Limestone

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Appendix B: New Generation Projects Added for Generation Addition Sensitivity Analysis for Group 2 (continued)

GINR	Project Name	County	Project COD	Fuel Type	Capacity (~MW)
24INR0075	Blue Bird Solar	Johnson	6/27/2028	SOL	773.0
24INR0117	Utley Solar	Freestone	5/11/2028	SOL	221.8
24INR0412	Camino Ranch Solar SLF	Houston	12/9/2028	SOL	296.4
24INR0420	Camino Ranch Storage SLF	Houston	12/9/2028	OTH	298.1
25INR0204	Claxton Solar	Hopkins	9/17/2027	SOL	150.6
25INR0247	Bluebonnet Prairie Wind	Navarro	7/15/2027	WIN	173.0
25INR0616	Bobcat Bluff Storage SLF	Archer	4/15/2027	OTH	0.0
25INR0661	McCrae Energy Storage	Erath	9/25/2028	OTH	306.4
26INR0033	Fairway Storage	Freestone	9/24/2027	OTH	120.3
26INR0252	Neutron Storage	McLennan	4/29/2028	OTH	104.5
26INR0256	Camino Ranch Solar 2 SLF	Houston	12/9/2028	SOL	237.2
26INR0257	Camino Ranch Storage 2 SLF	Houston	12/9/2028	OTH	238.5
26INR0409	Lucky 7 Solar	Hopkins	9/20/2027	SOL	101.4
26INR0531	West Munday Wind	Knox	6/30/2028	WIN	351.9
27INR0022	Panhandle Flagship Solar 1	Carson	6/30/2031	SOL	439.4
27INR0025	Panhandle Flagship Storage	Carson	6/30/2031	OTH	371.7

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Appendix B: New Generation Projects Added for Generation Addition Sensitivity Analysis for Group 2 (continued)

GINR	Project Name	County	Project COD	Fuel Type	Capacity (~MW)
27INR0105	Starlight Solar	Mills	5/9/2030	SOL	130.7
27INR0107	Starlight Storage	Mills	5/9/2030	OTH	104.7
27INR0140	Kingsmill Wind SLF	Carson	9/1/2029	WIN	606.3
27INR0173	Trenno BESS	Johnson	9/13/2027	OTH	202.6
27INR0181	Elk Unit 4	Hale	2/28/2027	GAS	210.0
27INR0313	Spindletop Solar	Nacogdoches	12/29/2027	SOL	286.0
27INR0314	Spindletop Storage	Nacogdoches	6/30/2027	OTH	142.6
27INR0581	Limitless Energy Hub I	Wilbarger	12/1/2028	GAS	1,238.3
27INR0582	Limitless Energy Hub II	Wilbarger	12/1/2028	GAS	1,238.3
28INR0008	Oriole Solar	Knox	12/29/2028	SOL	503.9
28INR0009	Oriole BES	Knox	12/29/2028	OTH	150.4
29INR0003	Aurelius Solar	Deaf Smith	6/30/2028	SOL	1,124.2
29INR0004	Aurelius Wind	Deaf Smith	6/30/2028	WIN	621.6

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Appendix C1: Transmission Projects to Add to Group 3 Base case

RPG/TPIT	Project Name	Tier	Project ISD	County(s)
25RPG033	Skyview 345138-kV Switch Project	2	May 2027	Dallas and Tarrant
25RPG004	Southern DFW Load Interconnection and General Grid Strengthening Project	1	May 2026 - April 2033	Multiple counties in North Central Weather Zone
25RPG040	Group 2 and Group 3 upgrades from Set 1 North and Central Texas Reliability Project	1	2028-2038	Multiple counties in North Central Weather Zone
25RPG041	Group 1 and Group 2 upgrades from Set 1 North Central and South Central Texas Reliability Project	1	2028-2038	Multiple counties in North Central Weather Zone
25RPG042	Group 2 and Group 3 upgrades from Set 2 North and Central Texas Reliability Project	1	2028-2038	Multiple counties in North Central Weather Zone
25RPG043	Group 1 and Group 2 upgrades from Set 2 North Central and South Central Texas Reliability Project	1	2028-2038	Multiple counties in North Central Weather Zone

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Appendix C2: Transmission Projects to Remove from Group 3 Base case

RTP Project ID	Project Name	County(s)
2024-NC05	Hillsboro (3522/3523) 138/69-kV Transformer Upgrade	Hill
2024-NC24	Lake Creek SES (3410) to Riesel Switch (3702) 138-kV Line Upgrade	Falls, McLennan
2025-NC08	Possum Trot (3791) Area 345-kV Reconfiguration and Line Upgrades	Bell, Falls, McLennan
2025-NC12	Peppervine Switch (3446) to Central Park Switch (3474) 138-kV Line Upgrade	McLennan
2025-NC16	Gibson (3706) to Littlepond (3377) 345-kV Line Upgrades	Bell, Milam
2025-NC18	Railport (442) Area 138-kV Line Upgrades	Ellis, Hill, Johnson
2025-NC21	Temple Switch (3415) to Temple Pecan Creek (3420) 138-kV Line Upgrades	Bell
2025-NC31	Holland (3646) to Bartlett (13647) 69-kV Line Upgrade	Bell, Williamson
2025-NC38	Bell East (3687) to Temple Pecan (3412) 345-kV Line Addition	Bell
2025-NC39	Poage (33126) to Nolan Creek (3735) to Temple Taylor Valley (3636) 138-kV Line Upgrades	Bell
2025-NC42	Waco Northeast Tap (3551) to Waco North (3552) 138-kV Line Upgrade	McLennan

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Appendix D: New Generation Projects to Add for Generation Sensitivity Analysis to Group 3

GINR	Project Name	Fuel	Project COD	Capacity (~MW)	County
To be Determined					

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Appendix E: G-1 Generators and X-1 Transformers List for Group 3 Analyses

Generator	Transformer
Forney Combine Cycle Train (CCT)	Desoto Switch 345/138-kV
Martain Lake	Temple Switch 345/138-kV
Mt. Creek SES	Temple Pecan Creek Switch 345/138-kV
Comanche Peak	Salado Switch 345/138-kV
Panda CCT	Sam Switch 345/138-kV

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Appendix F1: Group 3 Option 1 Details – Oncor Proposed Project

Option 1 Details

- Rebuild the existing Temple Pecan Creek Switch to Possum Trot Switch 345-kV double-circuit transmission lines, on existing ROW, with normal and emergency ratings of at least 1,912 MVA, approximately 28.6 miles per circuit
- Rebuild the existing Possum Trot Switch to St John Switch to Bale Switch 345-kV single-circuit transmission line, on existing ROW, with normal and emergency ratings of at least 1,912 MVA, approximately 11.9 miles
- Rebuild the existing Possum Trot Switch to Lake Hall 345-kV single-circuit transmission lines, on existing ROW, with normal and emergency ratings of at least 1,912 MVA, approximately 6.1 miles
- Rebuild the existing Lake Hall to Tradinghouse Switch 345-kV single-circuit transmission lines, on existing ROW, with normal and emergency ratings of at least 1,793 MVA, approximately 3.5 miles
- Rebuild the existing Tradinghouse Switch to Four Brothers 345-kV single-circuit transmission lines, on existing ROW, with normal and emergency ratings of at least 1,793 MVA, approximately 20.5 miles
- Rebuild the existing Tiger Creek to Sam Switch 345-kV single-circuit transmission lines, on existing ROW, with normal and emergency ratings of at least 1,912 MVA, approximately 20.8 miles
- Rebuild the existing Sam Switch to Four Brothers 345-kV single-circuit transmission lines, on existing ROW, with normal and emergency ratings of at least 1,912 MVA, approximately 2.3 miles

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Appendix F2: Group 3 Option 2 Details – Alternative Brazos

Option 2 Details

- Construct a new New-Ding Dong 345/138-kV Switch adjacent/near to the existing Ding Dong 138-kV Station
  - Install two 345/138-kV autotransformers with normal rating of 700 MVA and emergency rating of 750 MVA, respectively
  - Loop the existing Killeen Switch to Buckhorn/Russell Gap 345-kV double-circuit transmission lines into the new New-Ding Dong Switch, creating new Killeen Switch to New-Ding Dong, which will require new ROW and CCN, approximately 6.9 miles per circuit, and New-Ding Dong to Buckhorn/Russell Gap 345-kV double-circuit transmission line, approximately 70.0 miles and 60.6 miles, respectively
- Construct a new New-Schwertner 345/138-kV Switch near the existing Schwertner 138-kV Substation
  - Install two 345/138-kV autotransformers with normal and emergency ratings of 700 MVA and 750 MVA, respectively
  - Loop the existing Salado Switch to Hutto 138-kV single-circuit transmission line into the New-Schwertner Switch, creating new Salado Switch to New-Schwertner Switch and Hutto to New-Schwertner 138-kV single-circuit transmission lines

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Appendix F2: Group 3 Option 2 Details – Alternative Brazos (continued)

Option 2 Details (continued)

- Expend the planned Taplin 138-kV substation into Taplin 345/138-kV Switch
  - Install two 345/138-kV autotransformers with normal and emergency ratings of 700 MVA and 750 MVA, respectively
  - Loop the existing Badger to Sandow Switch 345-kV double-circuit transmission lines into the new Taplin Switch, creating new Badger to Taplin Switch and Sandow Switch to Taplin Switch 345-kV double-circuit transmission lines
  - Loop the existing Rodgers to Voss Lake 138-kV single-circuit transmission line into the new Taplin Switch, creating new Rodgers to Taplin Switch and Voss Lake to Taplin Switch 138-kV single-circuit transmission lines
- Upgrade the existing Gibson 345-kV substation into 345/138-kV Switch
  - Install two 345/138-kV autotransformers at Gibson station with the secondary terminal at Calvert Switch 138-kV station with normal ratings of 700 MVA and 750 MVA, respectively
- Construct a new McLarge 345/138-kV Switch
  - Install two 345/138-kV autotransformers with normal and emergency ratings of 700 MVA and 750 MVA, respectively
  - Loop the existing Judith to McGregor 138-kV transmission line into the new McLarge 345/138-kV Switch

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Appendix F2: Group 3 Option 2 Details – Alternative Brazos (continued)

Option 2 Details (continued)

- Construct new New-Ding Dong Switch to New-Schwertner Switch to Taplin Switch to Gibson Switch to Steckly Dam to McLarge 345-kV single-circuit transmission lines, on double-circuit structures with only one circuit in place, which will require new ROW, with normal and emergency ratings of at least 2,980 MVA, approximately 115.2 miles
- Upgrade the existing Trimmer to Ding Dong to Solana to Cedar Valley 138-kV single-circuit transmission lines, on double-circuit capable structures with only one circuit in place, using the existing ROW, with normal and emergency ratings of at least 418 MVA, approximately 20.4 miles
- Construct new Solana to Schwertner to New-Schwertner Switch 138-kV single-circuit transmission lines, on double-circuit structures with only one circuit in place, which will require new ROW, with normal and emergency ratings of at least 837 MVA, approximately 21.3 miles
- Construct new New-Schwertner Switch to Bartlett Switch to Bartlett to Buckholts 138-kV double-circuit transmission lines, on double-circuit structures with both circuits in place, which will require new ROW, with normal and emergency ratings of at least 837 MVA, approximately 22.7 miles per circuit

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Appendix F2: Group 3 Option 2 Details – Alternative Brazos (continued)

Option 2 Details (continued)

- Construct a new Buckholts to Taplin Switch 138-kV double-circuit transmission line, on double-circuit capable structures with both circuits in place, which will require new ROW, with normal and emergency ratings of at least 524 MVA, approximately 1.2 miles per circuit
- Reconstruct and convert the existing Taplin Switch to Silver City 69-kV single-circuit transmission line into 138-kV single-circuit transmission line, on double-circuit capable structures with only one circuit in place, on the existing ROW, with normal and emergency ratings of at least 837 MVA, approximately 14.3 miles
- Convert the existing Buckholts, Silver City, Branchville, Baggins, Barclay, Calvert Switch, Calvert, Baileyville, Pleasant grove, and Midway 69-kV substations into 138-kV substations
- Convert the existing Silver City to Branchville to Hearne 69-kV transmission lines to 138-kV operational, with normal and emergency ratings of at least 238 MVA, approximately 48.7 miles
- Decommission the existing 138/69-kV autotransformer at Seaton substation
- Convert the existing Seaton to Barclay to Biggins to Silver City 69-kV transmission line to 138-kV operational, with normal and emergency ratings of at least 237 MVA, approximately 27.08 miles

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Appendix F2: Group 3 Option 2 Details – Alternative Brazos (continued)

Option 2 Details (continued)

- Convert the existing Calvert Switch to Calvert 69-kV transmission line to 138-kV transmission lines, with normal and emergency ratings of at least 144 MVA, approximately 6.9 miles
- Convert the existing Silver City to Calvert Switch to Pleasant Grove to Midway to Perry 69-kV transmission line to 138-kV transmission line, on the existing ROW, with normal and emergency ratings of at least 418 MVA, approximately 40.2 miles
- Construct new Midway to Spring Valley 138-kV single-circuit transmission line, on double-circuit capable structures with only one circuit in place, which will require new ROW, with normal and emergency ratings of at least 837 MVA, approximately 18.5 miles
- Move the existing Spring Valley to Spring Valley Tap 138-kV transmission line from Spring Valley Tap to McLarge Switch creating the new Spring Valley to McLarge Switch 138-kV single-circuit transmission line, using double-circuit capable structures with only one circuit in place, which will require approximately 4.3 miles of new ROW, with a normal and emergency ratings of at least 837 MVA, approximately 8.0 miles
- Construct a new Bewley to McLarge 138-kV single-circuit transmission line, on double-circuit capable structures with only one circuit in place, with normal and emergency ratings of at least 837 MVA, approximately 0.1 mile

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Appendix F3: Group 3 Option 3 Details – Lone Star's Alternative

Option 3 Details

- Construct a second circuit Bullock to Navarro Switch 345-kV transmission line, on double-circuit structures with both circuits in place, on existing ROW but will require a CCN, with normal and emergency ratings of at least 2,988 MVA, approximately 27.0 miles
- Construct a new Liberty to Bullock 345-kV single-circuit transmission line, on single/double-circuit structures with only one circuit in place, which will require new ROW, with normal and emergency ratings of at least 2,988 MVA, approximately 16.0 miles
- Construct new Tradinghouse to Liberty 345-kV double-circuit transmission line, on double-circuit structures with both circuits in place, which will require new ROW, with normal and emergency ratings of at least 2,988 MVA, approximately 15.0 miles per circuit
- Expand the existing Bullock, Liberty, Navarro, and Tradinghouse 345-kV substations to accommodate the new 345-kV transmission lines

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