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Texas New Mexico Power (TNMP) Climax to Bells Area Transmission System Improvements Project (26RPG017) – ERCOT Independent Review (EIR) Status Update

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Regional Planning Group (RPG) Meeting
September 22, 2026

Introduction

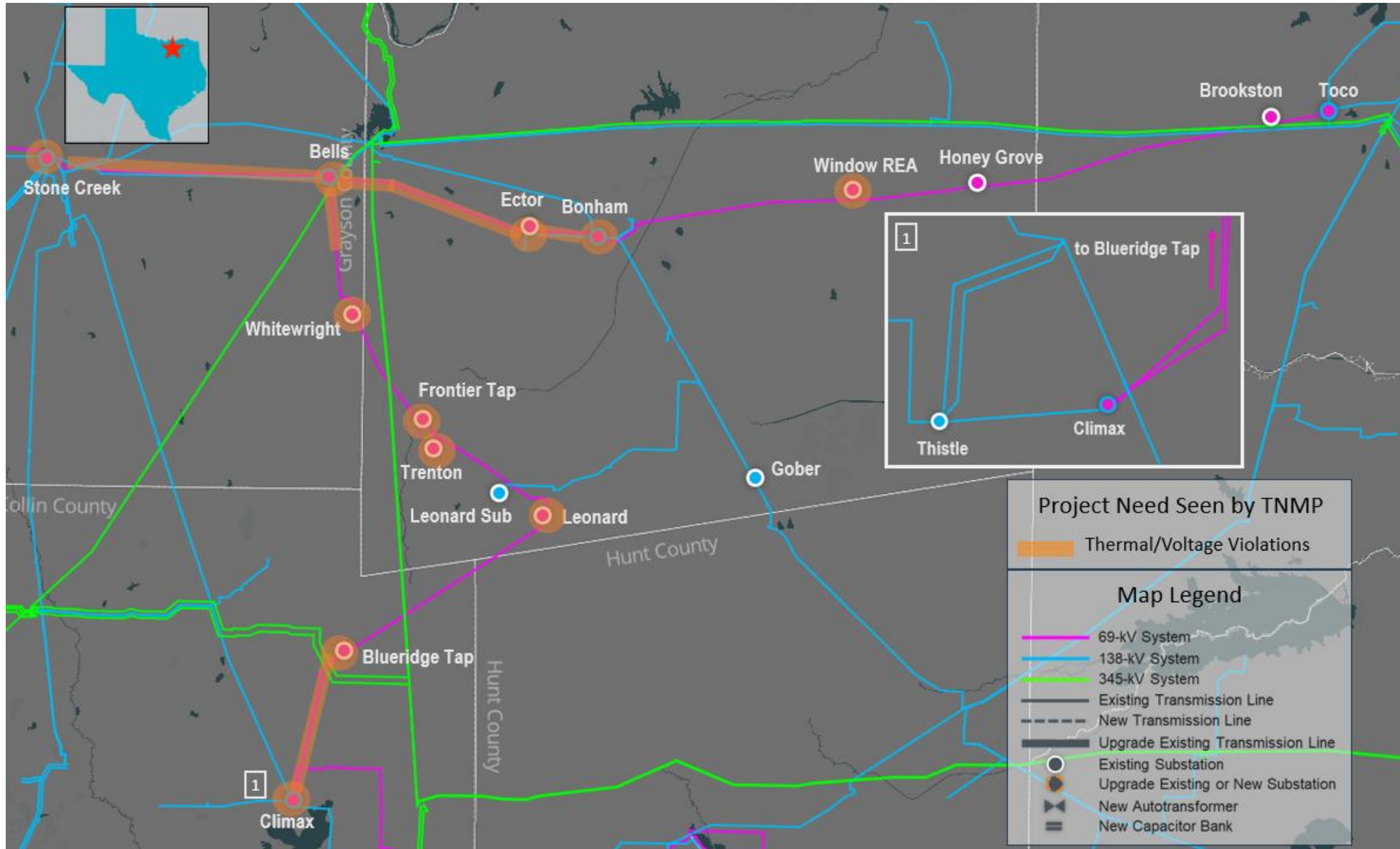
Texas New Mexico Power (TNMP) submitted the Climax to Bells Area Transmission System Improvements Project (26RPG017) for Electric Reliability Council of Texas' (ERCOT) Regional Planning Group (RPG) review in April 2026

- This is a Tier 1 project with an estimated cost of approximately \$225.4 million and will not require a Certificate of Convenience and Necessity (CCN)
- Estimated in-service date (ISDs) is December 2029
- This project is proposed to address the thermal overloads and voltage violations due to load growth in Grayson and Collin counties in the North Weather Zone

This project is currently under ERCOT Independent Review (EIR)

- TNMP presented a project overview and ERCOT provided the EIR scope at the [June 2026 RPG Meeting](#)
- ERCOT provided the EIR status update at the [July 2026 RPG Meeting](#)

Recap: Study Area Map with Project Needs Seen by TNMP



Recap: Study Assumptions

Study Region

- The project is located in Grayson, Fannin, and Collin counties in the North and North Central Weather Zones. All transmission elements in counties that are electrically close were monitored

Steady-State Base Case

- Final [2025 Regional Transmission Planning \(RTP\)](#) 2030 summer peak load case, published on Market Information System (MIS) on December 22, 2025, was updated to construct the study base case

Transmission Updates

- New transmission projects (listed in [Appendix A1](#)), based on February 2026 [Transmission Project and Information Tracking \(TPIT\) report](#) and/or recently approved RPG project, were added to the base case
- Transmission project (listed in [Appendix A2](#)) identified in the 2025 RTP in the study area that has not been approved by RPG was removed

Generation Updates

- New generation that met ERCOT Planning Guide Section 6.9(1) (listed in [Appendix B](#)) based on the [April 2026 Generator Interconnection Status \(GIS\) report](#) were added to the study base case
- Any generation that cancelled but was included in the 2025 RTP 2030 case was removed based on April GIS report
- All generation were 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

Load Updates

- New loads (total 65 MW) in Climax area in study region were added to create the study base case

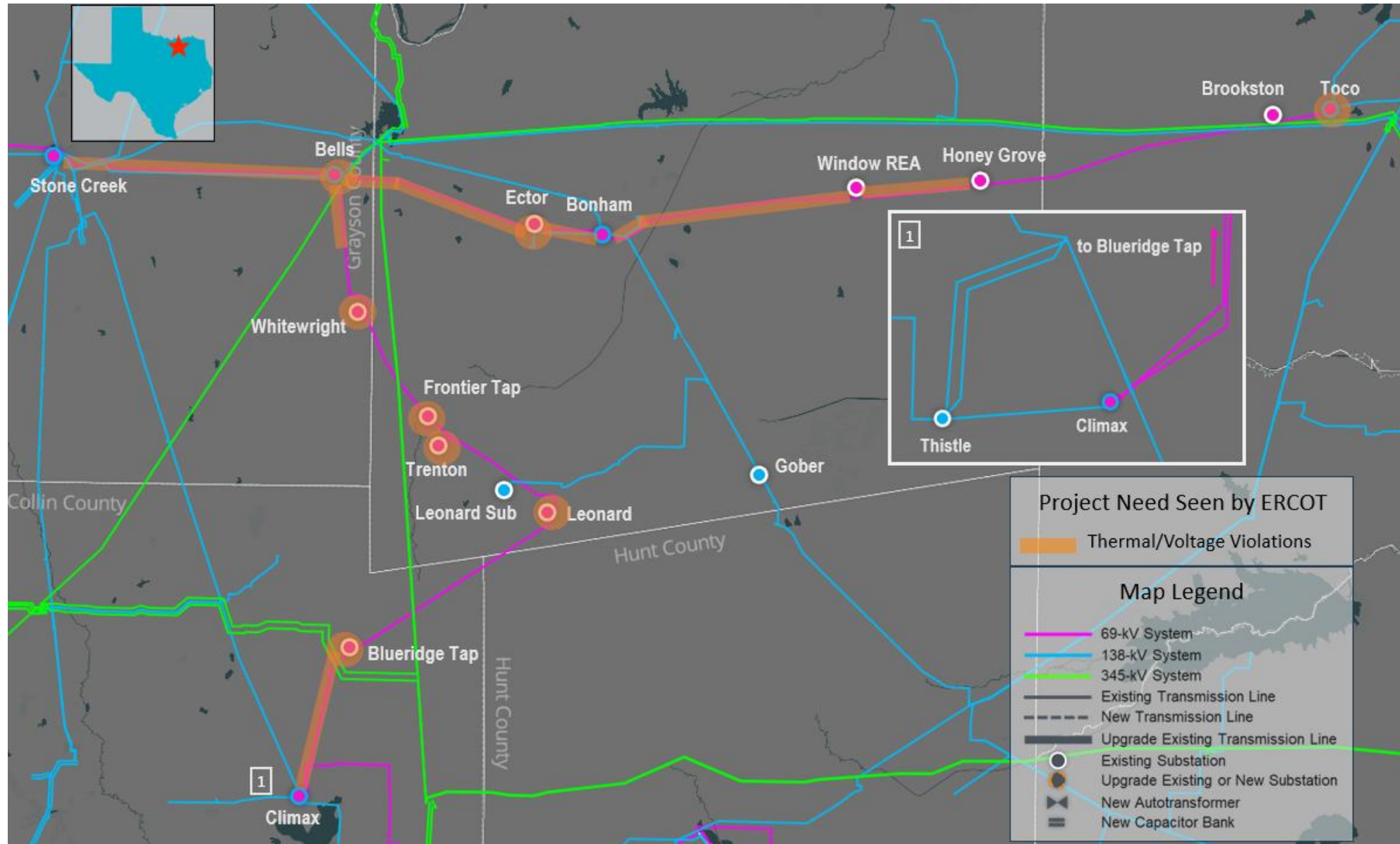
Recap: Preliminary Results of Reliability Assessment – Base Case

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	2	4	None
P1	2	7	None
P2, P4, P5	None	None	None
P3: (G-1+N-1)*	4	None	None
P6-2: (X-1+N-1)*	None	None	None
P7	1	None	None
Total	9	11	None

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

Recap: Study Area Map with Project Needs Seen by ERCOT

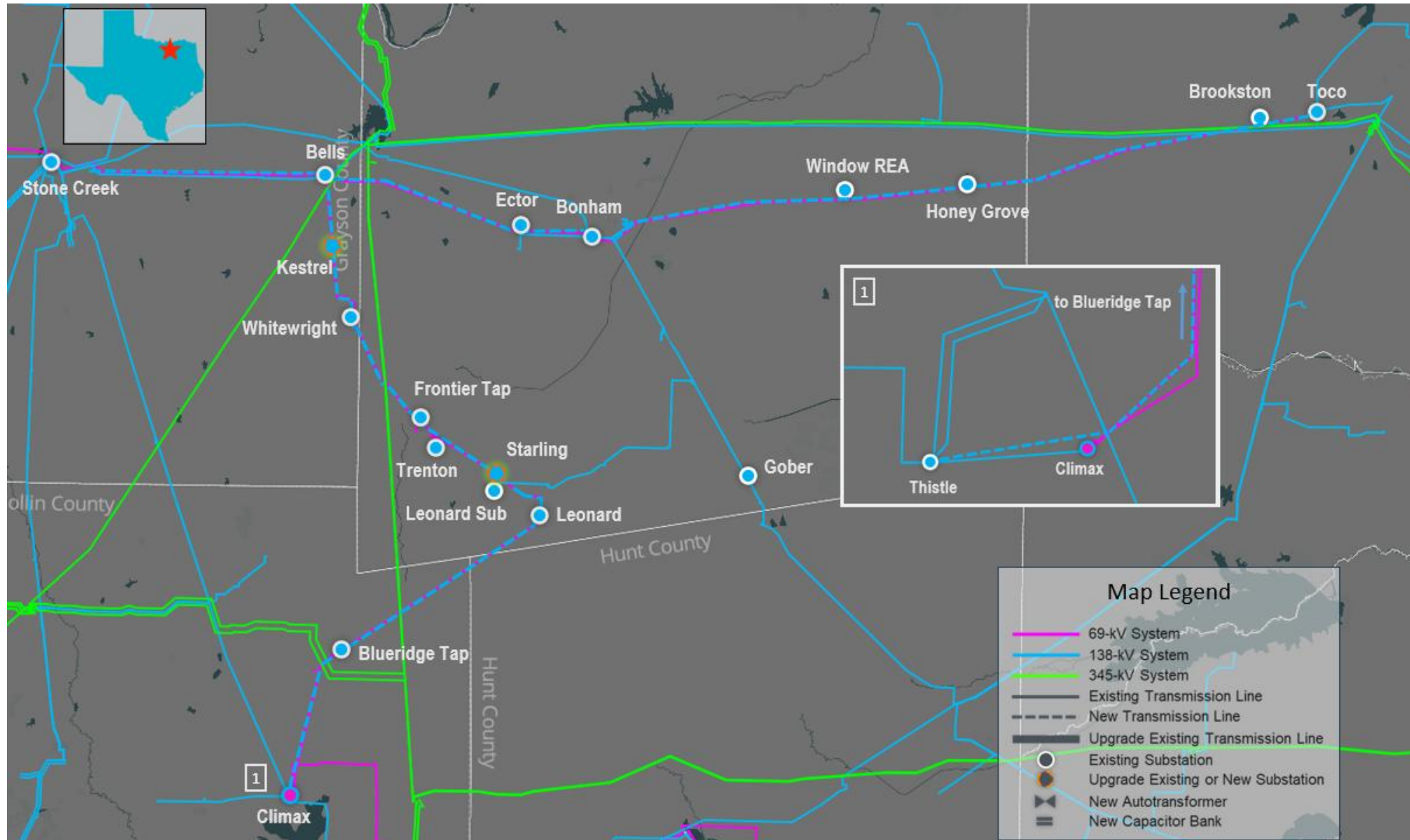


Status Update

Studies performed since the July RPG meeting

- Project alternatives evaluation
 - Option 1 – TNMP Proposed Project
 - Option 2 – ERCOT Alternative Option
 - Option 3 – ERCOT Alternative Option
 - Option 4 – ERCOT Alternative Option
- Short-listed options

Option 1 – TNMP Proposed Project

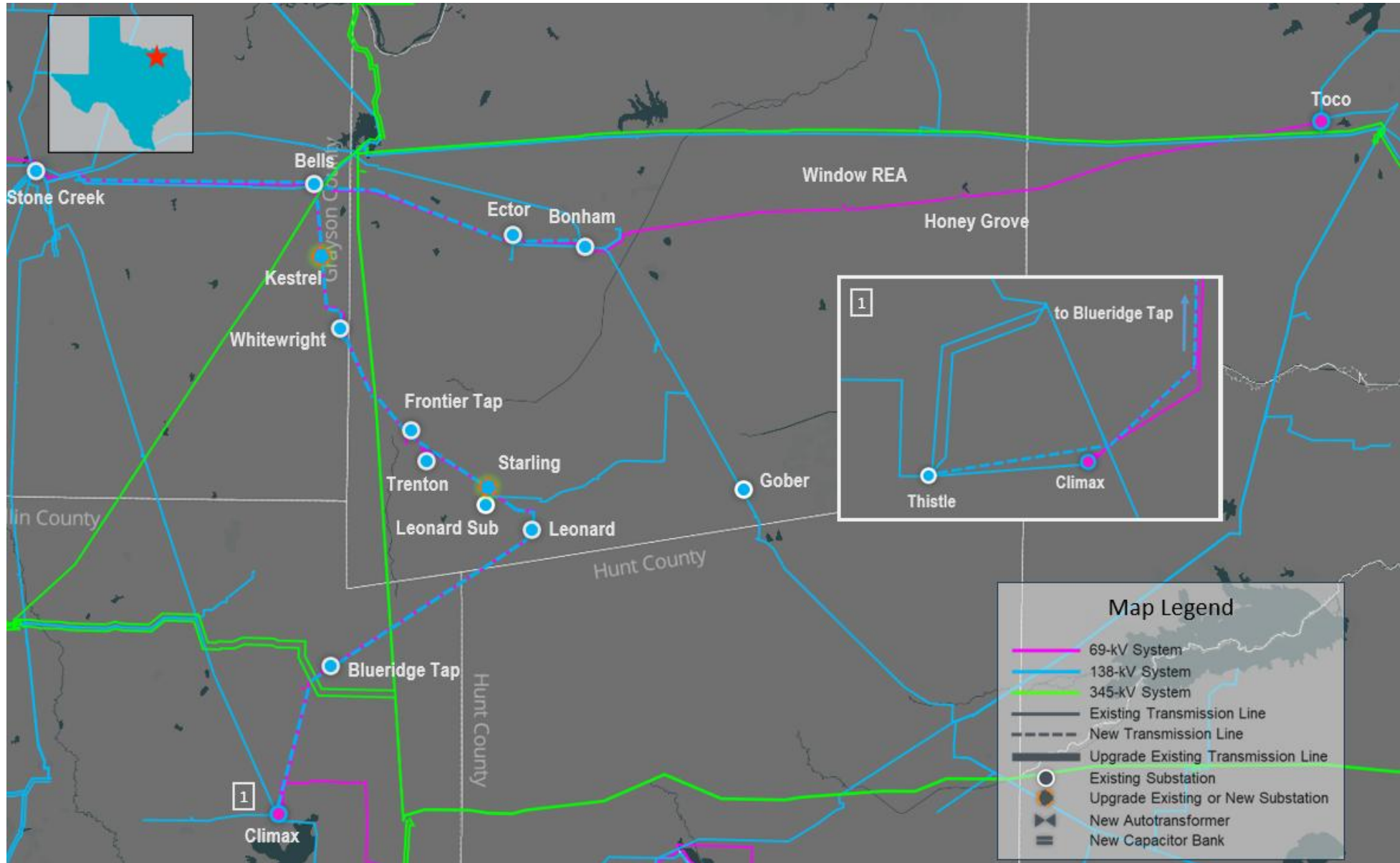


Option 1 – Summary of Upgrades

Overall Project Summary

- Two (2) new 138-kV substations
- Construct approximately 0.37 miles of new 138-kV transmission line on single-circuit structures with one circuit in place
- Rebuild/upgrade approximately 100 miles of 69-kV transmission lines to 138-kV
- Rebuild three (3) 138-kV substations
- Eliminate the existing 138/69-kV autotransformers at Stone Creek, Bonham, and Toco switching stations
- Detailed description in [Appendix D1](#)

Option 2 – ERCOT Alternative Option

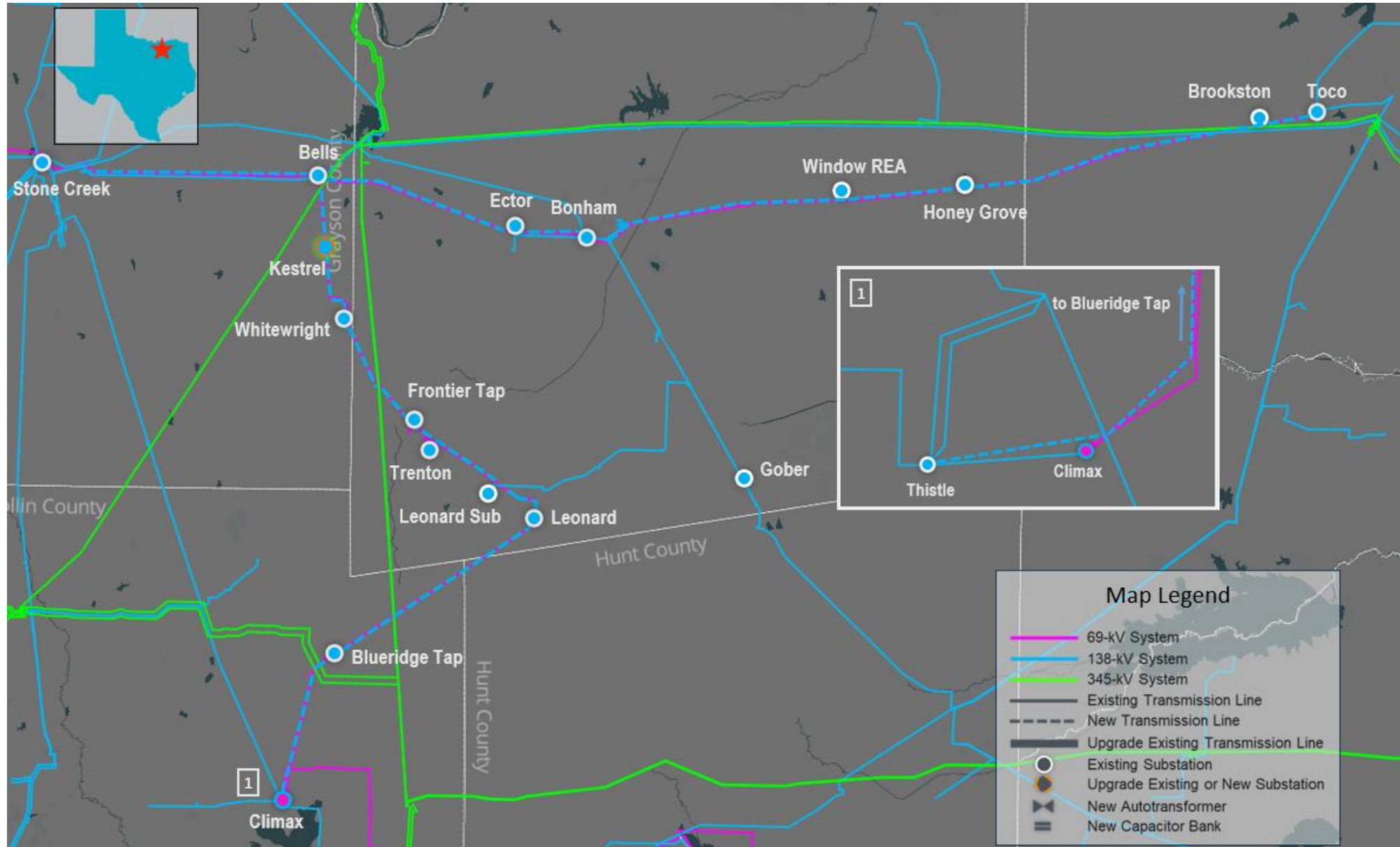


Option 2 – Summary of Upgrades

Overall Project Summary

- Two (2) new 138-kV substations
- Construct approximately 0.37 miles of new 138-kV transmission line on single-circuit structures with one circuit in place
- Rebuild/upgrade approximately 66 miles of 69-kV transmission lines to 138-kV
- Rebuild two (2) 138-kV substations
- Eliminate the existing 138/69-kV autotransformer at Stone Creek station
- Detailed description in [Appendix D2](#)

Option 3 – ERCOT Alternative Option

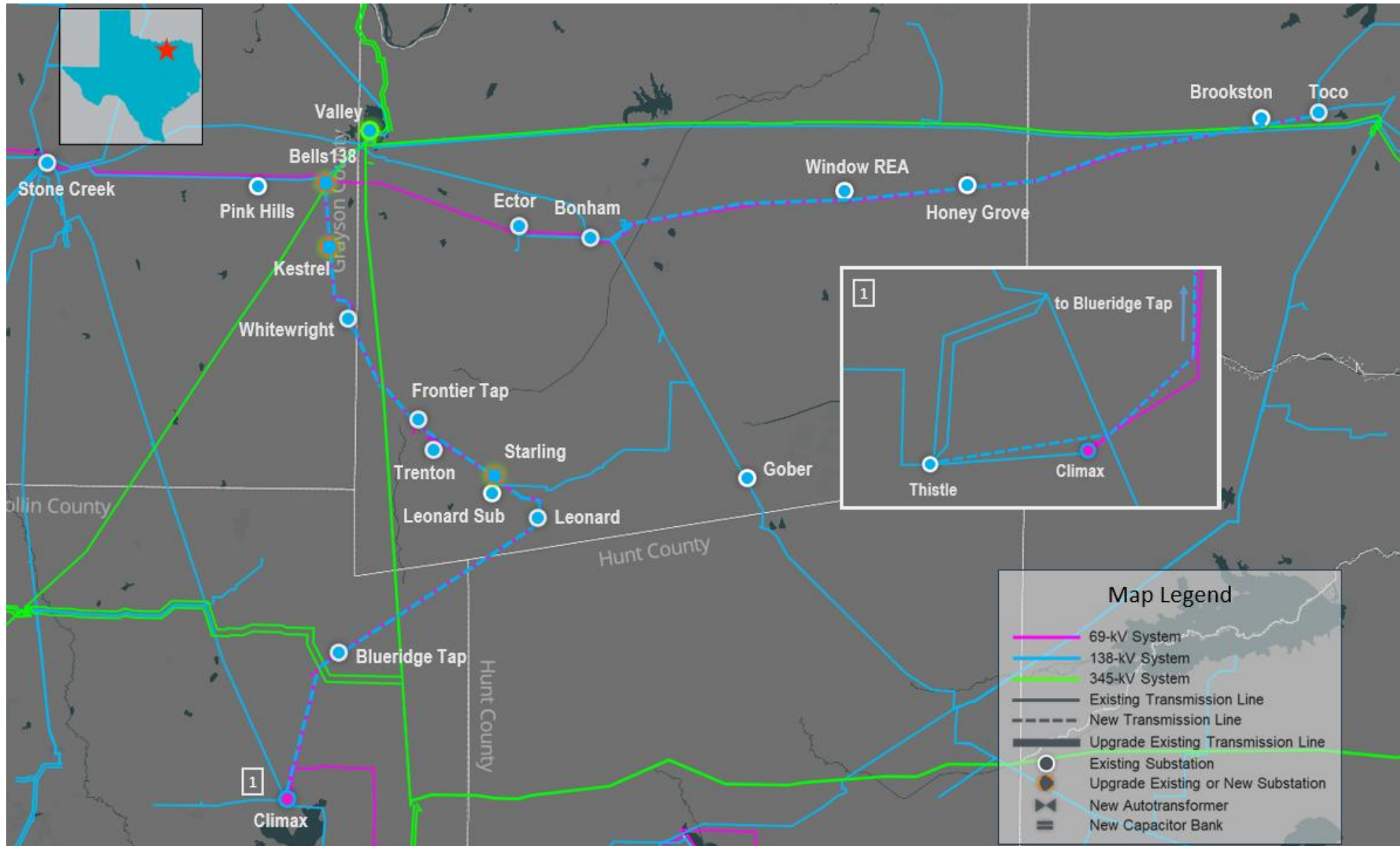


Option 3 – Summary of Upgrades

Overall Project Summary

- One (1) new 138-kV substation
- Rebuild/upgrade approximately 100 miles of 69-kV transmission lines to 138-kV
- Rebuild three (3) 138-kV substations
- Eliminate the existing 138/69-kV autotransformers at Stone Creek, Bonham, and Toco switching stations
- Detailed description in [Appendix D3](#)

Option 4 – ERCOT Alternative Option



Option 4 – Summary of Upgrades

Overall Project Summary

- Three (3) new 138-kV substations
- Construct approximately 0.37 miles of new 138-kV transmission line on single-circuit structures with one circuit in place
- Rebuild/upgrade approximately 74 miles of 69-kV transmission lines to 138-kV
- Rebuild two (2) 138-kV substations
- Eliminate the existing 138/69-kV autotransformer Toco switching station
- New Bells 138-kV substation is cutting into the existing Valley to Pink Hills 138-kV transmission line
- Connect the Whitewright to TNMP Bells transmission line to the new Bells 138-kV substation
- Detailed description in [Appendix D4](#)

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 alternative options

Option	N-0		N-1		(G-1+N-1)*		(X-1+N-1)*		Unsolved Power Flows
	Thermal Violations	Voltage Violations	Thermal Violations	Voltage Violations	Thermal Violations	Voltage Violations	Thermal Violations	Voltage Violations	
1	None	None	None	None	None	None	None	None	None
2	None	None	1	None	6	None	None	None	None
3	None	None	None	None	None	None	None	None	None
4	None	None	None	None	None	None	None	None	None

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

Key Takeaway: Option 1, Option 3, and Option 4 observed no reliability violations while Option 2 continued to show violations

Preliminary Results of Maintenance Outage Evaluation – Options

ERCOT conducted maintenance outage analyses on Option 1, Option 3, and Option 4 which resolved reliability violations under N-1, (G-1+N-1), and (X-1+N-1)

- Load level in the North Weather Zone was scaled down based on the historical non-summer peak data to 81.7%, in order to mimic the non-summer peak load condition
- Based on the review of system topology of the study area, ERCOT tested N-2 contingency combinations, and then tested all applicable contingency violations with system adjustments (N-1-1)

Option	Thermal Overloads	Voltage Violation	Unsolved Power Flow
1	None	None	None
2	n/a	n/a	n/a
3	None	27	2
4	None	None	None

Key Takeaway: Voltage violations were observed in the N-1-1 analysis for Option 3 while Option 1 and Option 4 observed no violations.

Short-Listed Options

Based on the reliability results, Option 1 and Option 4 were short-listed for further evaluation

- Long-Term Load-Serving Capability Assessment
- Cost Estimate and Feasibility Assessment

Deliverables and Next Step

Tentative Timelines

- ERCOT will continue evaluating proposed upgrade and the alternatives
 - ERCOT may also perform the following study
 - 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 Q4 2026

Key Takeaway: ERCOT recommendation in Q4 2026

Thank you!

Questions/Comments?

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Appendix

- Appendix A1: Transmission Projects to Add to Base Case
- Appendix A2: Transmission to Remove from Base Case
- Appendix B: Generation to Add to Base Case
- Appendix C: G-1 Generators and X-1 Transformers List

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Appendix A1: Transmission Projects to Add

TPIT/RPG	Project Name	Tier	Project ISD	County(s)
99321	Austin Ranch 138kV Capacitor Bank	Tier 4	May-27	Denton
91611	Spring to Rector 138 kV Line Upgrade	Tier 4	Sep-27	Cooke
92867	Oncor_ME_Renner Switch – Plano West Switch 138 kV Double-Circuit Line	Tier 4	May-26	Collin
92849	Oncor_ME_92849_Renner Switch 138kV Capacitor Bank	Tier 4	May-26	Collin
25RPG030	Bonham Switch to Toco Switch 69-kV Line Rebuild Project	Tier 4	Dec-28	Lamar and Fannin

Appendix A2: Transmission Project to Remove

RTP Project ID	Project Name	County(s)
2025-N07	Toco (1703) Area 69-kV to 138-kV Line Conversion	Fannin, Lamar

Appendix B: New Generation Projects to Add

GINR	Project Name	Fuel	Project COD	Max Capacity (~MW)	County
19INR0002	Grandfalls Solar	SOL	07/01/2027	175.6	Upton
21INR0265	Sisters Solar	SOL	05/31/2027	301.6	Ector
22INR0503	Tidwell Prairie II Batt	OTH	06/01/2026	203.6	Robertson
22INR0504	Barton Branch IA	OTH	03/01/2026	203.6	Robertson
24INR0136	Eagle Springs Storage	OTH	12/31/2026	33.1	Delta
24INR0137	Eagle Springs Solar	SOL	12/31/2026	77.2	Delta
24INR0442	Midnight Sun Energy Storage	OTH	06/29/2028	510.0	Crockett
24INR0485	Rutile BESS	OTH	03/31/2028	100.7	Runnels
25INR0101	Drake BESS	OTH	07/14/2026	257.3	Collin
25INR0112	August Draw Solar	SOL	06/27/2028	250.0	Reeves
25INR0368	Echols Grove, LLC	SOL	04/03/2027	201.2	Lamar
25INR0432	Brotherton Storage	OTH	05/01/2027	176.1	Anderson
25INR0628	Carolina Storage Wichita Falls	OTH	08/01/2028	202.0	Archer
26INR0255	Operation Sunshine	SOL	03/12/2028	603.2	Concho
26INR0357	Operation Sunshine Storage	OTH	03/12/2028	409.8	Concho
26INR0380	Pepper Solar Farm	SOL	09/20/2027	120.9	McLennan
26INR0530	Longview Wind	WIN	12/01/2028	352.6	Dawson
27INR0076	Bob Creek Wind	WIN	07/01/2028	240.0	Sterling
27INR0383	Windjammer Windpower	WIN	12/31/2028	292.6	Glasscock
27INR0435	Clairemont Solar 1	SOL	02/13/2029	251.8	Kent

Appendix B: New Generation Projects to Add (continued)

GINR	Project Name	Fuel	Project COD	Max Capacity (~MW)	County
23INR0421	Bee Branch IA	OTH	06/01/2027	200.5	Robertson
25INR0143	Ariji BESS	OTH	06/28/2027	100.3	Howard
25INR0430	Hackberry Creek Solar	SOL	07/01/2028	175.5	Mitchell
26INR0033	Fairway Storage	OTH	09/24/2027	120.3	Freestone
27INR0313	Spindletop Solar	SOL	12/29/2027	286.0	Nacogdoches
28INR0176	Gail Mountain Solar	SOL	08/25/2028	244.4	Borden
29INR0003	Aurelius Solar	SOL	06/30/2028	1124.2	Deaf Smith
29INR0004	Aurelius Wind	WIN	06/30/2028	621.6	Deaf Smith
29INR0025	Skyrider Wind	WIN	07/01/2028	370.0	Pecos
29INR0040	Gusty Windpower	WIN	12/31/2028	208.5	Glasscock
29INR0147	Selenite Springs Solar	SOL	08/30/2028	253.0	Pecos
30INR0018	Big Canyon Wind	WIN	07/01/2030	1500.0	Pecos
30INR0058	Springfield Solar	SOL	08/30/2028	400.0	Pecos
21INR0371	Pecan Prairie South	SOL	05/01/2027	133.0	Leon
26INR0098	Douie Solar	SOL	04/18/2028	221.2	Freestone
26INR0440	Hamby Solar	SOL	06/27/2028	205.8	Jones
28INR0013	Varadero Solar	SOL	04/01/2029	206.0	Limestone

Appendix C: G-1 Generators and X-1 Transformers List

Generator	Transformer
Panda Sherman Combined Cycle Train	Royse 345/138-kV Transformer
Coniglio Solar	Valley 345/138-kV Transformer

Appendix D1: Option 1 – TNMP Proposed Project

Project Description

- Re-terminate the Climax terminal of the existing Climax to Blueridge Tap 69-kV transmission line into Thistle 138-kV substation, creating a new Thistle to Blueridge Tap 138-kV transmission line
- Upgrade the existing Thistle to Blueridge Tap to Blueridge 69-kV transmission line to operate at 138-kV, using a conductor rated at 1600 A or greater; increase the existing normal and emergency ratings of 36 MVA to at least 383 MVA, for approximately 7.3 miles
- Upgrade the existing Blueridge to Leonard to Trenton to Frontier to Whitewright to Bells 69-kV transmission line to operate at 138kV, using a conductor rated at 1600 A or greater; increase the existing normal and emergency ratings of 43 MVA to at least 383 MVA, for approximately 32.5 miles
- Construct a new Starling 138-kV substation by cutting into the upgraded Leonard to Trenton 138-kV transmission line, approximately 3 miles from Leonard, initially configured with three 138-kV, 3000 A circuit breakers in a three-breaker ring bus arrangement. The ultimate build-out will transition to a breaker-and-a-half scheme
- Construct a new Kestrel 138-kV substation by cutting into the upgraded Whitewright to Bells 138-kV transmission line, approximately 3.55 miles from Bells, initially configured with three 138-kV, 3000 A circuit breakers in a three-breaker ring bus arrangement. The ultimate build-out will transition to a breaker-and-a-half scheme
- Construct a new Starling to Leonard Sub 138-kV transmission line, on single-circuit structures with one circuit in place, using a conductor rated at 1600 A or greater with normal and emergency ratings of at least 383 MVA, for approximately 0.37 miles

Appendix D1: Option 1 – TNMP Proposed Project (continued)

Project Description

- Operate the 138kV line segment from Trenton to Starling to Leonard as normally closed
- Eliminate the existing 138/69-kV autotransformers at Stone Creek, Bonham, and Toco switching stations
- Rebuild the existing Bells 138-kV Switch by installing three 138-kV, 3200 A circuit breakers in a ring bus arrangement
- Rebuild the existing Bonham 138-kV Switch by installing eight 138 kV, 3200 A circuit breakers in a breaker-and-a-half bus arrangement
- Rebuild the existing Windom 138-kV Switch by installing three 138 kV, 3200 A circuit breakers in a ring bus arrangement
- Rebuild the existing 69-kV transmission line from Stone Creek Switch to Bells Switch to Ector to Bonham Switch, on double-circuit-capable structures with one circuit in place, using a conductor rated at 2569 A or greater and operated at 138-kV; increase the existing normal and emergency ratings of 60 MVA to at least 614 MVA, for approximately 26.1 miles
- Upgrade the existing 69-kV transmission line from Bonham Switch to Windom REA to Honey Grove to Brookston to Toco Switch to operate at 138-kV using a conductor rated at 2569 A or greater; increase the existing normal and emergency ratings of 70 MVA to at least 614 MVA, for approximately 34.2 miles

Appendix D2: Option 2 – ERCOT Alternative Option

Project Description

- Re-terminate the Climax terminal of the existing Climax to Blueridge Tap 69-kV transmission line into Thistle 138-kV substation, creating a new Thistle to Blueridge Tap 138-kV transmission line
- Upgrade the existing Thistle to Blueridge Tap to Blueridge 69-kV transmission line to operate at 138-kV, using a conductor rated at 1600 A or greater; increase the existing normal and emergency ratings of 36 MVA to at least 383 MVA, for approximately 7.3 miles
- Upgrade the existing Blueridge to Leonard to Trenton to Frontier to Whitewright to Bells 69-kV transmission line to operate at 138kV, using a conductor rated at 1600 A or greater; increase the existing normal and emergency ratings of 43 MVA to at least 383 MVA, for approximately 32.5 miles
- Construct a new Starling 138-kV substation by cutting into the upgraded Leonard to Trenton 138-kV transmission line, approximately 3 miles from Leonard, initially configured with three 138-kV, 3000 A circuit breakers in a three-breaker ring bus arrangement. The ultimate build-out will transition to a breaker-and-a-half scheme
- Construct a new Kestrel 138-kV substation by cutting into the upgraded Whitewright to Bells 138-kV transmission line, approximately 3.55 miles from Bells, initially configured with three 138-kV, 3000 A circuit breakers in a three-breaker ring bus arrangement. The ultimate build-out will transition to a breaker-and-a-half scheme
- Construct a new Starling to Leonard Sub 138-kV transmission line, on single-circuit structures with one circuit in place, using a conductor rated at 1600 A or greater with normal and emergency ratings of at least 383 MVA, for approximately 0.37 miles

Appendix D2: Option 2 – ERCOT Alternative Option (continued)

Project Description

- Operate the 138kV line segment from Trenton to Starling to Leonard as normally closed
- Eliminate the existing 138/69-kV autotransformer at Stone Creek
- Rebuild the existing Bells 138-kV Switch by installing three 138-kV, 3200 A circuit breakers in a ring bus arrangement
- Rebuild the existing Bonham 138-kV Switch by installing eight 138 kV, 3200 A circuit breakers in a breaker-and-a-half bus arrangement
- Rebuild the existing 69-kV transmission line from Stone Creek Switch to Bells Switch to Ector to Bonham Switch, on double-circuit-capable structures with one circuit in place, using a conductor rated at 2569 A or greater and operated at 138-kV; increase the existing normal and emergency ratings of 60 MVA to at least 614 MVA, for approximately 26.1 miles

Appendix D3: Option 3 – ERCOT Alternative Option

Project Description

- Re-terminate the Climax terminal of the existing Climax to Blueridge Tap 69-kV transmission line into Thistle 138-kV substation, creating a new Thistle to Blueridge Tap 138-kV transmission line
- Upgrade the existing Thistle to Blueridge Tap to Blueridge 69-kV transmission line to operate at 138-kV, using a conductor rated at 1600 A or greater; increase the existing normal and emergency ratings of 36 MVA to at least 383 MVA, for approximately 7.3 miles
- Upgrade the existing Blueridge to Leonard to Trenton to Frontier to Whitewright to Bells 69-kV transmission line to operate at 138kV, using a conductor rated at 1600 A or greater; increase the existing normal and emergency ratings of 43 MVA to at least 383 MVA, for approximately 32.5 miles
- Construct a new Kestrel 138-kV substation by cutting into the upgraded Whitewright to Bells 138-kV transmission line, approximately 3.55 miles from Bells, initially configured with three 138-kV, 3000 A circuit breakers in a three-breaker ring bus arrangement. The ultimate build-out will transition to a breaker-and-a-half scheme

Appendix D3: Option 3 – ERCOT Alternative Option (continued)

Project Description

- Operate the 138kV line segment from Trenton to Starling to Leonard as normally closed
- Eliminate the existing 138/69-kV autotransformers at Stone Creek, Bonham, and Toco switching stations
- Rebuild the existing Bells 138-kV Switch by installing three 138-kV, 3200 A circuit breakers in a ring bus arrangement
- Rebuild the existing Bonham 138-kV Switch by installing eight 138 kV, 3200 A circuit breakers in a breaker-and-a-half bus arrangement
- Rebuild the existing Windom 138-kV Switch by installing three 138 kV, 3200 A circuit breakers in a ring bus arrangement
- Rebuild the existing 69-kV transmission line from Stone Creek Switch to Bells Switch to Ector to Bonham Switch, on double-circuit-capable structures with one circuit in place, using a conductor rated at 2569 A or greater and operated at 138-kV; increase the existing normal and emergency ratings of 60 MVA to at least 614 MVA, for approximately 26.1 miles
- Upgrade the existing 69-kV transmission line from Bonham Switch to Windom REA to Honey Grove to Brookston to Toco Switch to operate at 138-kV using a conductor rated at 2569 A or greater; increase the existing normal and emergency ratings of 70 MVA to at least 614 MVA, for approximately 34.2 miles

Appendix D4: Option 4 – ERCOT Alternative Option

Project Description

- Re-terminate the Climax terminal of the existing Climax to Blueridge Tap 69-kV transmission line into Thistle 138-kV substation, creating a new Thistle to Blueridge Tap 138-kV transmission line
- Upgrade the existing Thistle to Blueridge Tap to Blueridge 69-kV transmission line to operate at 138-kV, using a conductor rated at 1600 A or greater; increase the existing normal and emergency ratings of 36 MVA to at least 383 MVA, for approximately 7.3 miles
- Upgrade the existing Blueridge to Leonard to Trenton to Frontier to Whitewright to Bells 69-kV transmission line to operate at 138kV, using a conductor rated at 1600 A or greater; increase the existing normal and emergency ratings of 43 MVA to at least 383 MVA, for approximately 32.5 miles
- Construct a new Starling 138-kV substation by cutting into the upgraded Leonard to Trenton 138-kV transmission line, approximately 3 miles from Leonard, initially configured with three 138-kV, 3000 A circuit breakers in a three-breaker ring bus arrangement. The ultimate build-out will transition to a breaker-and-a-half scheme
- Construct a new Kestrel 138-kV substation by cutting into the upgraded Whitewright to Bells 138-kV transmission line, approximately 3.55 miles from Bells, initially configured with three 138-kV, 3000 A circuit breakers in a three-breaker ring bus arrangement. The ultimate build-out will transition to a breaker-and-a-half scheme
- Construct a new Starling to Leonard Sub 138-kV transmission line, on single-circuit structures with one circuit in place, using a conductor rated at 1600 A or greater with normal and emergency ratings of at least 383 MVA, for approximately 0.37 miles

Appendix D4: Option 4 – ERCOT Alternative Option (continued)

Project Description

- Operate the 138kV line segment from Trenton to Starling to Leonard as normally closed
- Eliminate the existing 138/69-kV autotransformer at Toco switching station
- Rebuild the existing Bonham 138-kV Switch by installing eight 138 kV, 3200 A circuit breakers in a breaker-and-a-half bus arrangement
- Rebuild the existing Windom 138-kV Switch by installing three 138 kV, 3200 A circuit breakers in a ring bus arrangement
- Upgrade the existing 69-kV transmission line from Bonham Switch to Windom REA to Honey Grove to Brookston to Toco Switch to operate at 138-kV using a conductor rated at 2569 A or greater; increase the existing normal and emergency ratings of 70 MVA to at least 614 MVA, for approximately 34.2 miles
- Construct a new Bells 138-kV substation by cutting into the existing Valley to Pink Hills 138-kV transmission line
- Re-terminate the Whitewright to TNMP Bells transmission line to the new Bells 138-kV substation