

Overview of Forney 345/138 kV Switch Rebuild

ERCOT RPG Meeting

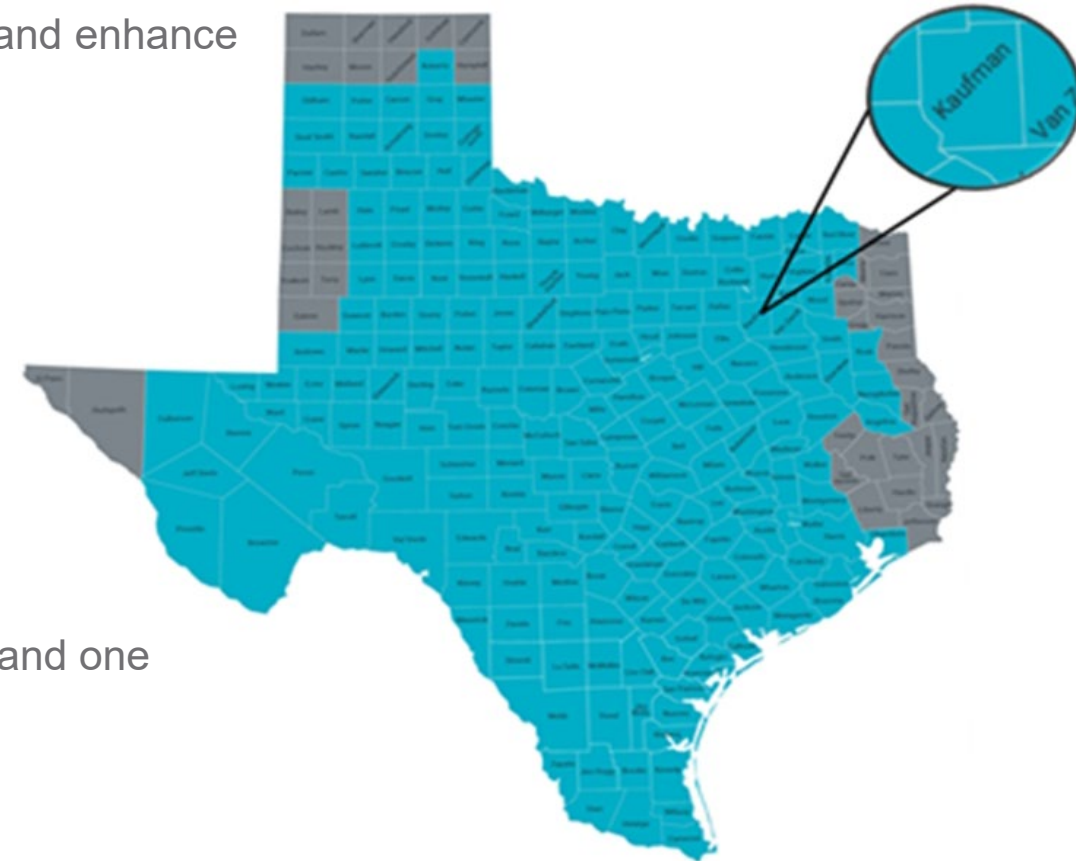
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Project Overview



- Tier-1 Project in the Kaufman County
- Resolves identified thermal violations, upgrade aged infrastructure, and enhance system reliability
- Existing Switch Yard (Forney 345/138 kV Switch)
 - 345 kV Switch: double bus double breaker
 - 138 kV Switch: Single bus
 - One 345/138 kV Autotransformer rated at 750 MVA
- New Switch Yard (Three Creek 345/138 kV Switch)
 - 345 kV Switch: breaker and a half
 - 138 kV Switch: breaker and a half
 - Two 345/138 kV Autotransformers rated at 750 MVA (one new and one existing)
 - New 110.4 Mvar 138 kV Capacitor Bank
- Cost Estimate: \$103.5M



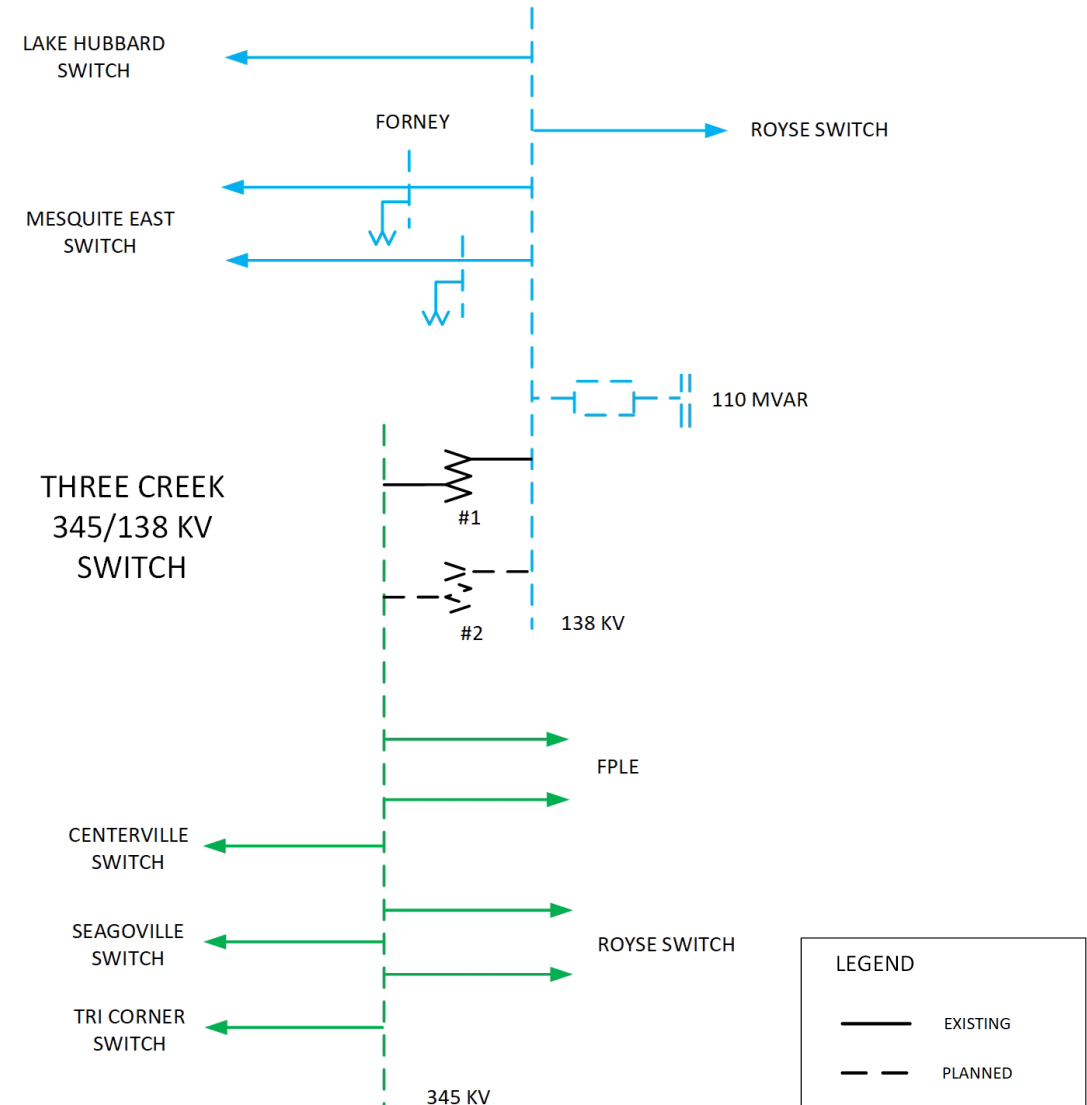
Post-Contingency Thermal Violations



Multiple contingencies of concern

- NERC P2.2
 - Forney Switch 345 kV North bus
- X-1+N-1
 - Seagoville 345/138 kV Autotransformer & Watermill Switch – Tri Corner Switch 345 kV Double-Circuit Line

Worst loading (%) : 106



Oncor Recommendation

- Rebuild Forney 345/138 kV Switch with breaker-and-a-half bus configuration
 - Terminal Equipment Capability:
 - 5000 A for 345 kV
 - 3200 A for 138 kV
- Install Forney 345/138 kV Autotransformer #2 rated at 750 MVA
- Connect the Forney substation transformers to the Forney Switch – Mesquite East Switch 138 kV Double-Circuit Line
- Install 110.4 Mvar 138 kV Capacitor Bank

Questions?

