

Overview of Venus Switch – Sam Switch 345 kV Double-Circuit Line Rebuild

ERCOT RPG Meeting

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Project Overview

- Tier-1 Project in the Ellis and Hill Counties
- Resolves identified thermal violations and enhance system reliability
- Existing rating: 1072 MVA
- Cost Estimate: \$118.9M
- 38 miles of 345 kV transmission line rebuild

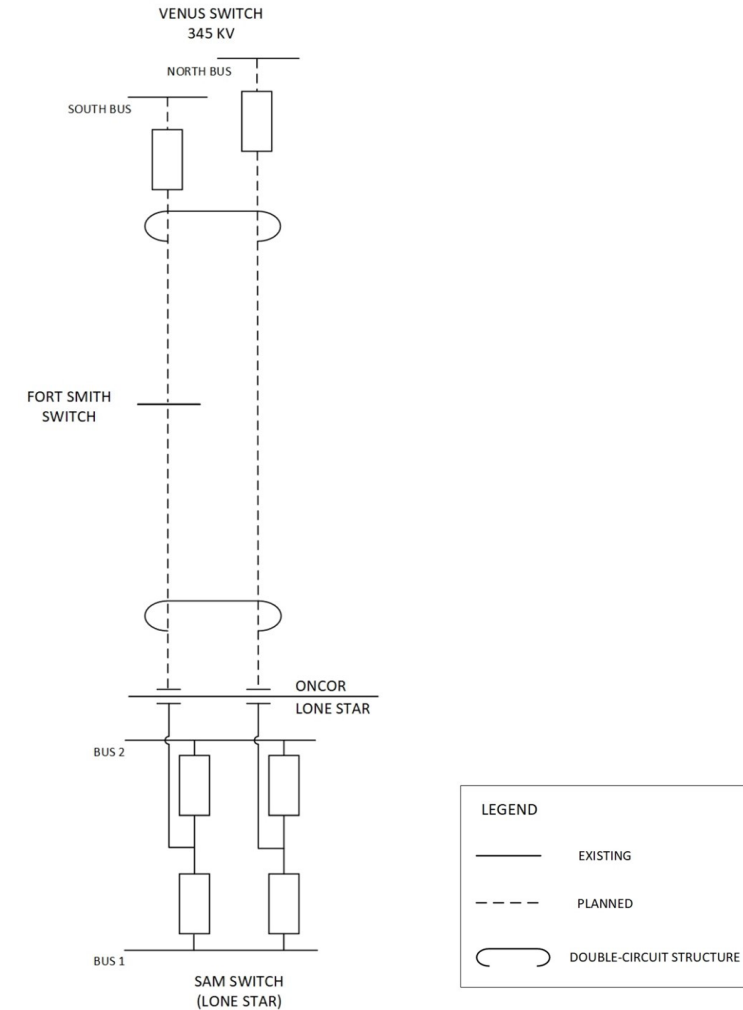
Post-Contingency Thermal Violations

Multiple contingencies of concern

- NERC P1.1
 - Venus Switch – Fort Smith Switch 345 kV Line
 - Venus Switch – Sam Switch 345 kV Line

- NERC P2.2
 - Venus Switch 345 kV North bus
 - Venus Switch 345 kV South bus

Worst loading (%) : 117



Oncor Recommendation

- Rebuild Venus Switch – Sam Switch 345 kV Double-Circuit Line using a conductor rated at 5000 A
 - Existing rating: 1072 MVA
- The Venus Switch – Sam Switch 345 kV Double-Circuit Line rating will be limited to the terminal equipment rating of the following stations:
 - Terminal equipment at Sam Switch: 3000 A (1792 MVA)
 - Venus Switch – Sam Switch 345 kV Line
 - Fort Smith – Sam Switch 345 kV Line
 - Terminal equipment at Venus Switch and Fort Smith Switch: 3200 A (1912 MVA)
 - Venus Switch – Fort Smith Switch 345 kV Line
- > Oncor has not identified the need to upgrade the limiting terminal equipment at this point, as each circuit will have enough capacity once the project is complete.

Questions?

