

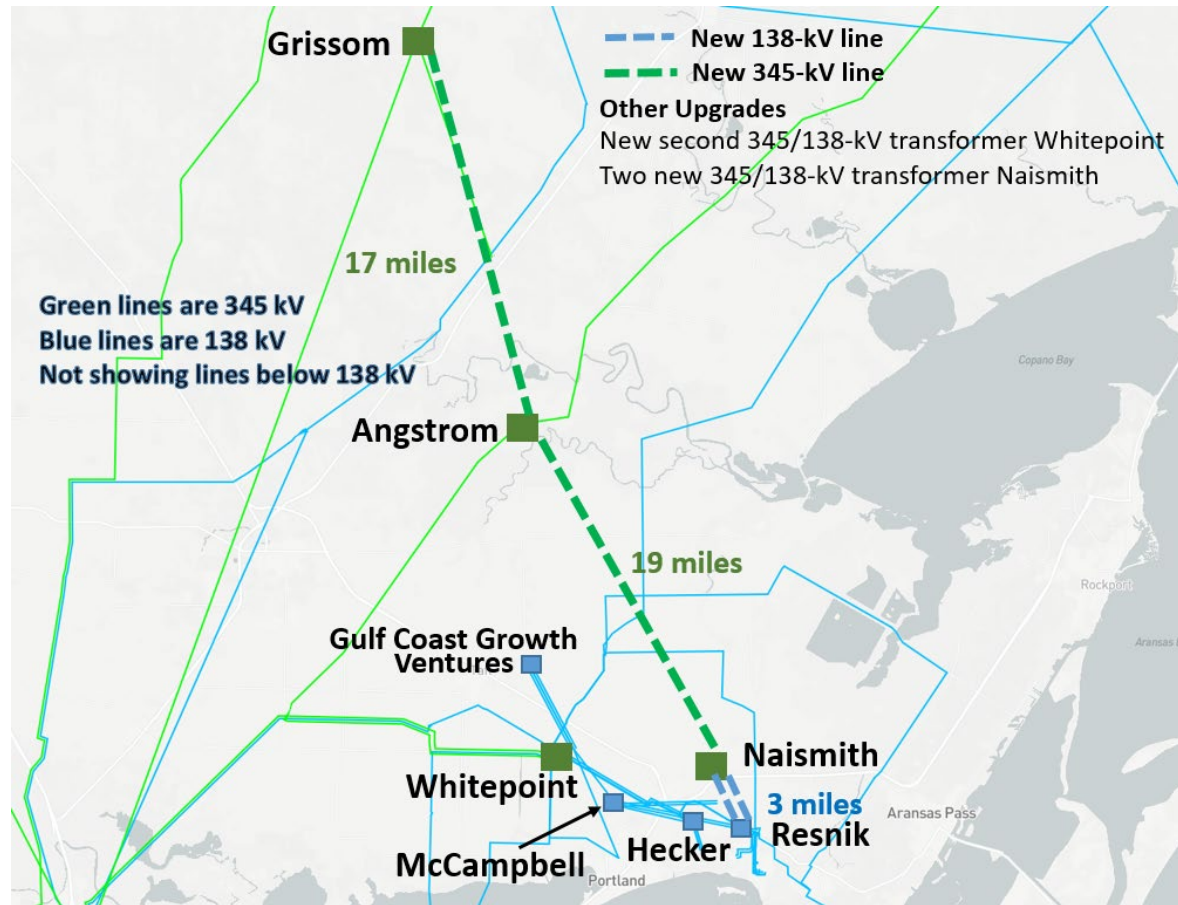
# **AEP Corpus North Shore Reactive study**

ERCOT RPG Meeting  
August 17<sup>th</sup> 2021

# Summary

- The project needed to provide transmission capacity to serve the following new load additions in the Corpus Christi area:
  - 528 MW of LNG load to be served from the 138-kV Resnik substation
  - 400 MW of industrial load to be served from a new 345-kV Angstrom substation
  - 144 MW of industrial load to be served from the existing 138-kV Gibbs substation
  - On March 27, 2020, AEP augmented the submittal to include 13 MW of additional industrial load to be served from the existing Homeport substation

# Endorsed project



## Option 4

- A new 345-kV Angstrom substation tapped into the Whitepoint to STP 345-kV line
- A new 345/138-kV Naismith substation
- Two new 345/138-kV transformers at Naismith
- Two new 138-kV circuits on a double-circuit tower from Naismith to Resnik (~3 miles)
- One new 345-kV line on a double-circuit tower from Grissom to Angstrom (~17 miles)
- One new 345-kV line on a double-circuit tower from Angstrom to Naismith (~19 miles)
- A new second 345/138-kV transformer at the Whitepoint substation

# Reactive needs in the original submission

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- Three “place holder” shunt capacitors banks were in the original study
  - 173 Mvar Switched Shunt at Resnik
  - 115 Mvar Switched Shunt at McCampbell
  - 115 Mvar Switched Shunt at Hecker

# Updated Reactive study conclusion

- Steady state study used the 2020 series SSWG cases specifically the 2024 Summer peak case posted October 2020. The Dynamic analysis was based on the 2022 SP final case posted in 2020.
- AEPSC recommends adding two sets of 28.8 Mvar or 2x28.8 Mvar (total 57.6 Mvar) shunt capacitor banks at Resnik and Hecker to mitigate the low voltage concerns post contingency.
- This is estimated to cost \$6 M and be in service by 4/30/2023.
- Dynamic study performed as well and did not show a need for dynamic reactive device i.e. SVC or STATCOM for the current committed load.



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# Questions ?

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