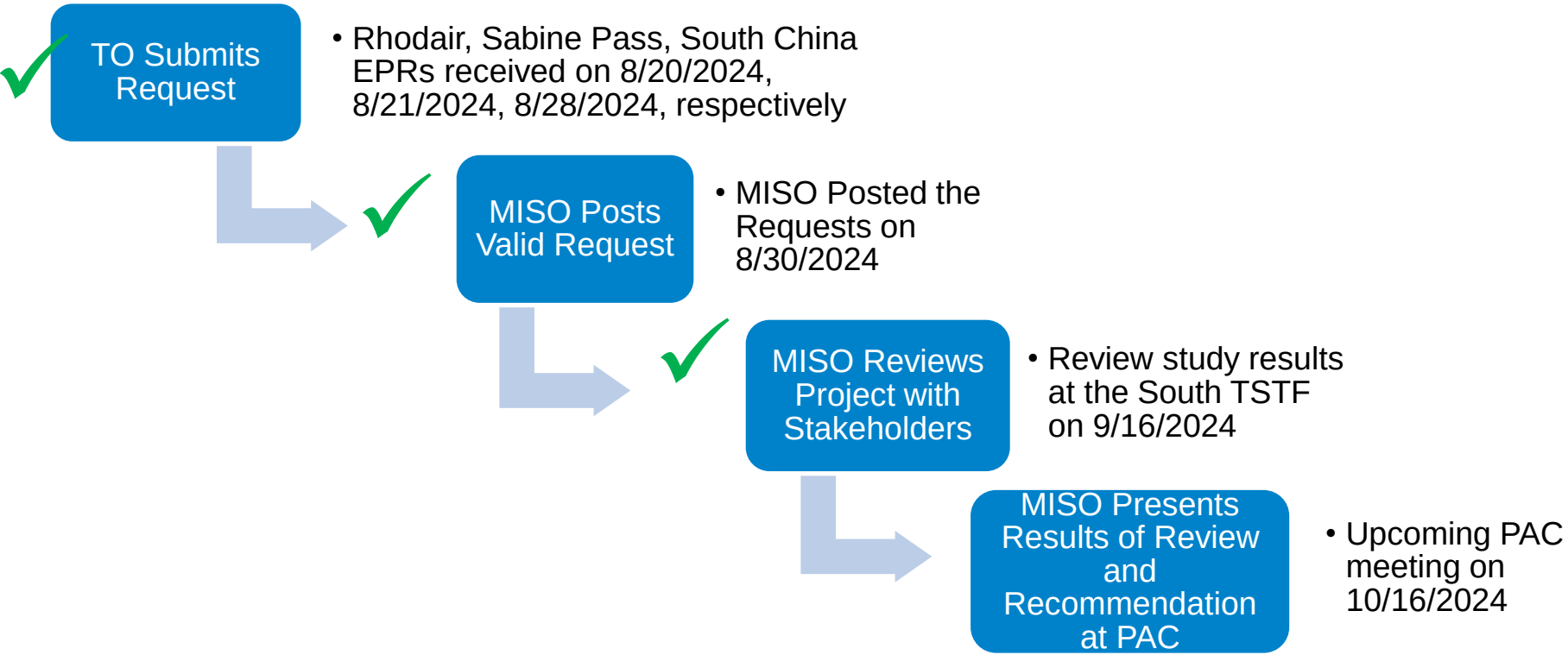
MTEP25 Expedited Project Review

Rhodair Substation
Sabine Pass Substation
South China Substation

South Technical Study Task Force (STSTF)

September 16, 2024

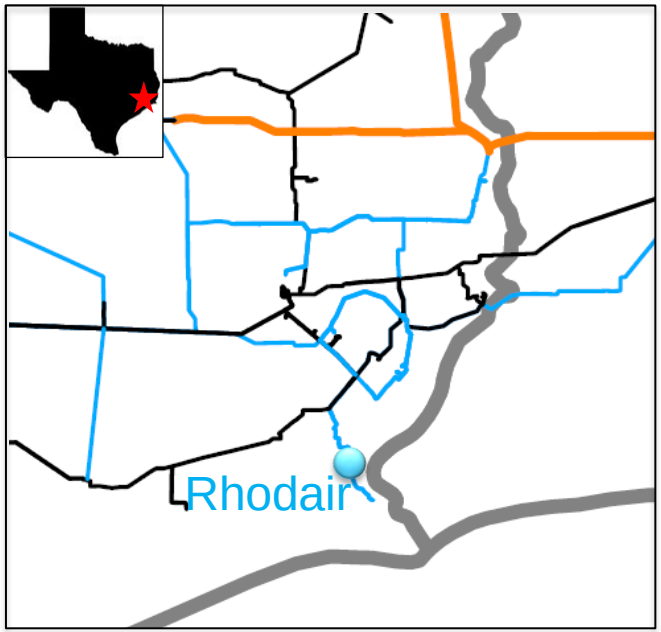
Expedited Project Review Process Timeline



Customer request drives need for load addition

- Entergy has received requests from customers adding new load in the Port Arthur, TX area. Upgrades, including this facility, have been identified as needed due to the load growth.
- Rhodair Substation targets an in-service-date of 7/1/2025 with a 12-month lead time
- EPR request was submitted after the cutoff for inclusion into the MTEP24 cycle and will therefore be classified as an MTEP25 cycle project.
- Regular MTEP25 cycle review cannot facilitate the requested in-service dates with the project lead times

Rhodair Substation Overview



Project description: Entergy is proposing to construct new 230 kV transmission lines sourced from the existing Garden 230 kV station to serve new load at the new Rhodair 230 kV station near Port Arthur, TX.

Estimated Cost: $85 M

Expected ISD: 7/1/2025

Project Type: Other - Load Growth

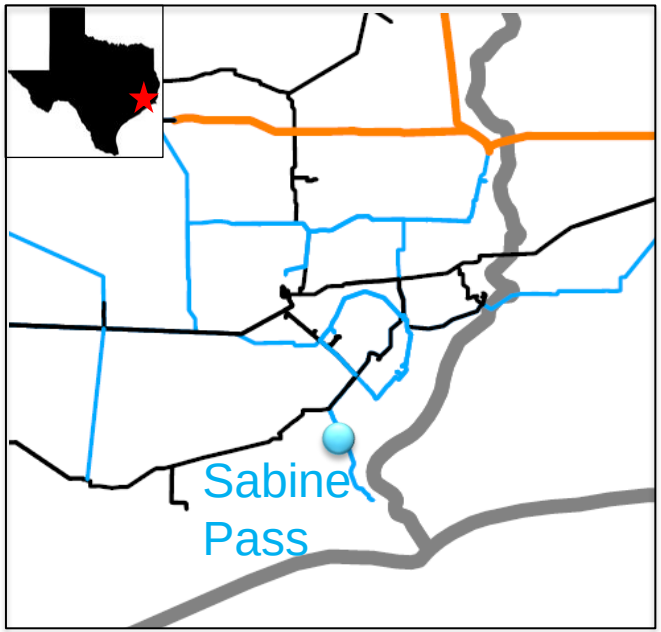
Target Appendix: A in MTEP25

Alternatives: No suitable alternative – other substations are too far from the new load

Customer request drives need for load addition

- Entergy has received requests from a customer adding new load in the Port Arthur, TX area. Upgrades, including this facility, have been identified as needed due to the load growth.
- Sabine Pass Substation targets an in-service-date of 6/1/2027 with a 33-month lead time.
- EPR request was submitted after the cutoff for inclusion into the MTEP24 cycle and will therefore be classified as an MTEP25 cycle project.
- Regular MTEP25 cycle review cannot facilitate the requested in-service dates with the project lead times

Sabine Pass Substation Overview



Project description: Entergy is proposing to tap the existing 230 kV transmission line from Legend to Keith Lake 230 kV stations to serve new load at the new Sabine Pass 230 kV station near Port Arthur, TX.

Estimated Cost: $41.3 M

Expected ISD: 6/1/2027

Project Type: Other - Load Growth

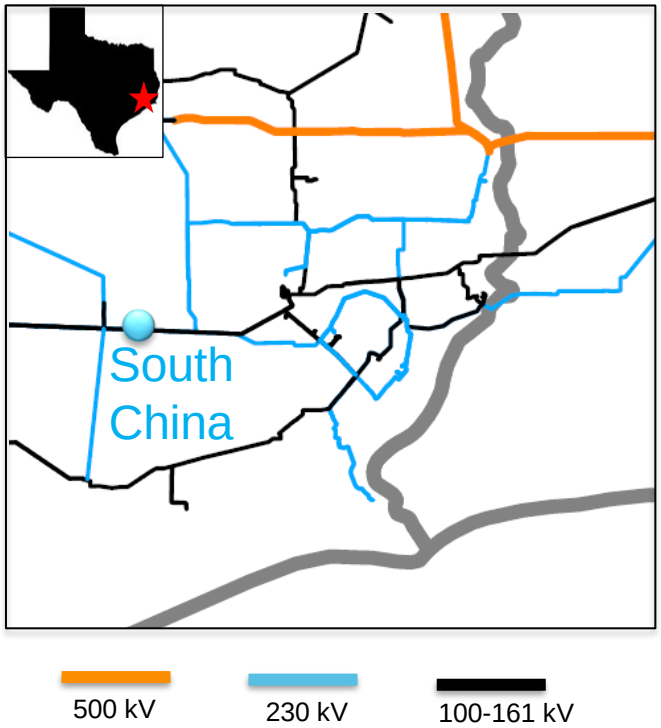
Target Appendix: A in MTEP25

Alternatives: No suitable alternative – other substations are too far from the new load

Customer requests drive need for load additions

- Entergy has received a request from a customer adding new load in the China, TX area.
- South China Substation targets an in-service-date of 4/1/2025 with a 8-month lead time.
- EPR request was submitted after the cutoff for inclusion into the MTEP24 cycle and will therefore be classified as an MTEP25 cycle project.
- Regular MTEP25 cycle review cannot facilitate the requested in-service dates with the project lead times

South China Substation Overview



Project description: Entergy is proposing to tap the existing 138 kV transmission line from Cheek to Petry Woods 138 kV stations to serve new load at the new South China 138 kV station near China, TX.

Estimated Cost: $5.8 M

Expected ISD: 4/1/2025

Project Type: Other - Load Growth

Target Appendix: A in MTEP25

Alternatives: No suitable alternative – other substations are too far from the new load

MISO Reliability Analysis Scope and Assumption

Study Overview

Description

- Perform Steady State analysis on MTEP models with and without project candidate
- Monitor MISO and neighboring facilities for voltage and thermal criteria violations
- Project passes the no harm test if there are no criteria violations that occur in the project case only

MTEP24 Models simulated with and without project candidates

- 2026 Light Load
- 2026 Summer Peak
- 2029 Light Load
- 2029 Shoulder Average & High Wind
- 2029 Summer Peak
- 2029 Winter Peak
- 2034 Summer Peak

Contingencies in MISO South

- P1 (Single Element)
- P2 (Single event that may cause multiple element outage
- P3 (Generator loss + P1)
- P4 (Stuck breaker)
- P5 (Relay failure)
- P6 (Two non-generator P1s)
- P7 (Common structure)

No negative impact on system reliability due to the project candidate

MISO recommends the Rhodair, Sabine Pass and South China Substations for inclusion of MTEP25 Appendix A

Reliability analysis results

- No adverse system impact caused by the project

MISO recommendation

- MISO recommends Rhodair, Sabine Pass and South China Substations be included in MTEP25 Appendix A, and that ETI proceed with construction as needed to meet the 7/1/2025, 6/1/2027,4/1/2025 ISD, respectively.

Next Steps

Stakeholders Provide Comments at STSTF

- Verbal comments today or written comments after the meeting

MISO makes its Recommendation

- MISO makes determination to include Rhodair, Sabine Pass, South China Substations in the MTEP25 Appendix A

Present at PAC

- Present at the October PAC
- Provide opportunity for stakeholder comment

Questions?

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