MTEP24 Expedited Projects Review

Kolbs to Port Acres 230 kV upgrade project
Sandling 230 kV Customer Load Addition Project
Legend to Sandling 230 kV Circuit 2 Project
“Sandling EPRs”

South Technical Study Task Force (STSTF)
October 3, 2023
Sandling Expedited Project Review Process Timeline

- **TO Submits Request**
  - Sandling EPRs received on 5/30/2023

- **MISO Posts Valid Request**
  - MISO Posted the Request on 6/06/2023

- **MISO Reviews Project with Stakeholders**
  - Review study results at the South TSTF on 10/3/2023

- **MISO Presents Results of Review and Recommendation at PAC**
  - Upcoming PAC meeting on 10/11/2023
Customer request drives need for load addition
Load addition drives need for reliability projects

- Entergy is proposing to construct one project to serve 270 MW of need load

<table>
<thead>
<tr>
<th>Project</th>
<th>ISD</th>
<th>Lead Time</th>
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<tbody>
<tr>
<td>Sandling Load Addition</td>
<td>January 2026</td>
<td>24 months</td>
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- Entergy is proposing two Baseline Reliability Projects to alleviate reliability issues due to the load addition.
  - MISO verified the NERC TPL-001 drivers for these projects

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<th>Project</th>
<th>ISD</th>
<th>Lead Time</th>
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<tr>
<td>Kolbs to Port Acres Upgrade</td>
<td>June 2025</td>
<td>18 months</td>
</tr>
<tr>
<td>Legend to Sandling Ckt 2</td>
<td>July 2027</td>
<td>36 months</td>
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- Regular MTEP24 cycle review cannot facilitate the requested in-service date with the project lead time
Project description: Entergy is proposing to upgrade the Port Acres Bulk to Kolbs 230 kV line due to load growth in the Port Arthur, TX area.

Project Need: The existing Port Acres to Kolbs 230 kV line overloads for the P7 common structure contingency of the Sabine to McFadden and Sabine to Nederland 230 kV lines. Partial rebuild and station equipment upgrades are required to achieve higher rating.

Estimated Cost: $ 14.7M

Expected ISD: June 2025

Project Type: Baseline Reliability Project

Target Appendix: A in MTEP24
Sandling 230 kV Customer Load Addition Overview

Project description: Entergy is proposing to construct a new 230 kV transmission station called Sandling 230 kV which will serve a new industrial customer’s ~270 MW of load near Port Arthur, TX. Sandling 230 kV station will be cut into the Legend to Keith Lake 230 kV line and the Keith Lake to Port Acres Bulk 230 kV line. Two capacitor banks will also be installed in the new Sandling 230 kV station.

Estimated Cost: $122.6M

Expected ISD: January 2026

Project Type: Other: Load Growth

Target Appendix: A in MTEP24
Legend to Sandling 230 kV Circuit 2
Overview

**Project description:** Entergy is proposing to construct a new 230 kV transmission line between Legend and Sandling 230 kV Stations near Port Arthur, TX. Legend to Sandling Circuit 2 consists of a new ~7.6 mile line.

**Project Need:** The Legend to Sandling 230 kV circuit 2 is driven by a P3 contingency overloading either Legend to Sandling or Port Acres to Sandling 230 kV lines.

**Estimated Cost:** $121.2M

**Expected ISD:** July 2027

**Project Type:** Baseline Reliability Project

**Target Appendix:** A in MTEP24
Dispatch Solutions

• The Sandling EPRs caused reliability issues in the MTEP23 models
• Entergy provided dispatch solutions for the base case that will be permanently implemented in the MTEP24 models
• With these dispatch solutions, the projects presented no reliability issues
### MISO Reliability Analysis Scope and Assumption

#### Study Overview

**Description**
- Perform Steady State analysis on MTEP models with and without project candidate
- Monitor MISO South 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

**MTEP23 Models with dispatch solutions simulated with and without project candidates**
- 2025 Summer Peak
- 2028 Light Load
- 2028 Shoulder Average & High Wind
- 2028 Summer Peak
- 2028 Winter Peak
- 2033 Summer Peak

**Contingencies in MISO South**
- P1 (Single Element)
- P2 (Single event that may cause multiple element outage)
- P4 (Stuck breaker)
- P5 (Relay failure)
- P7 (Common structure)

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No negative impact on system reliability due to the project candidate
MISO recommends the Sandling EPRs for inclusion of MTEP24 Appendix A

Reliability analysis results

- No adverse system impact caused by the project

MISO recommendation

- MISO recommends Sandling EPRs be included in MTEP24 Appendix A, and that Entergy proceed with construction as needed to meet the ISD
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 the EPRs in the MTEP24 Appendix A

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