



**AEP Generation Interconnection  
Facilities Study Report  
for  
ERAS-2025-001  
ERAS-2025-023  
Northeastern 345 kV  
Rogers County, OK**

**April 2026**

## 1 Facilities Study Summary

American Electric Power Southwest Transmission Planning (AEP) performed the following study at the request of the Southwest Power Pool (SPP) for SPP Generation Interconnection request ERAS-2025-001; ERAS-2025-023. Per the SPP Generator Interconnection Procedures (GIP), SPP requested that AEP perform an Interconnection Facilities Studies (IFS) for Network Upgrade(s) in accordance with Section 8.11 for the following Interconnection and/or Network Upgrade(s):

### 1.1 Project Description

ERAS-2025-023 proposes to connect a 510 MW gas generator into the 345 kV Northeastern AEP station (Figure 1) in Rogers County, Oklahoma (Figure 2).

### 1.2 AEP's Scope of Work to Facilitate Interconnection

- To accommodate the interconnections, AEP's existing 345 kV Northeastern station will have to expand the existing 345 kV breaker and a half configuration. Bus work and disconnect switches will be designed to accommodate the loading requirements, and circuit breakers will be rated to ensure adequate load and fault interrupting capability. AEP will own, operate, and maintain the 345 kV Northeastern station.
- Installation of associated protection and control equipment, SCADA, and revenue metering will be required at the AEP 345 kV Northeastern station. AEP reserves the right to specify the final acceptable configuration considering design practices, future expansion, and compliance requirements.
- AEP will extend one span of 345 kV transmission line for the generation lead going to the 345 kV Northeastern station. AEP will build and own the first transmission line structure outside of the 345 kV Northeastern station, to which AEP's transmission line conductor will attach. ROW will be required for this span.
- It is understood that the Interconnection Customer is responsible for all of the connection costs associated with interconnecting ERAS-2025-023 to the AEP transmission system. The cost of the customer's generating facility and the costs for the line connecting the generating facility to AEP's transmission system (Beyond the first span exiting the POI station) are not included in this report; these are assumed to be the Customer's responsibility.
- The customer will be responsible for the cost of constructing a fiber-optic connection from their telecom equipment to AEP's 345 kV Northeastern control house.

### 1.3 Short Circuit Evaluation

- It is standard practice for AEP to recommend replacing a circuit breaker when the current through the breaker for a fault exceeds 100% of its interrupting rating with recloser de-rating applied, as determined by the ANSI/IEEE C37.5-1979, C37.010-1979 & C37.04-1979 breaker rating methods.
- In the AEP system, no breakers were found to exceed their interrupting capability after the addition of the generation and related facilities. Therefore, there are no additional short circuit upgrade costs associated with the ERAS-2025-001; ERAS-2025-023 interconnection.

### 1.4 Stability Evaluation

- The stability analysis for the ERAS-2025-001 cluster will be completed in conjunction with the 2026 ITP. AEP will complete their evaluation of the results as part of that effort.

### 1.5 Interconnection Cost of Facilities Included in the Facilities Study:

|  |             |
|--|-------------|
| Network Upgrades (Expanding existing breaker and a half station for ERAS-2025-023) | \$3,989,596 |
| Transmission Owner Interconnection Facilities (TOIF)                               | \$5,476,117 |
| Total Cost   | \$9,465,713 |

*The estimates do not include the impact that delays in obtaining ROW, permits, or other approvals may have.*

### 1.6 Project Lead time

Project in-service date is projected to be 36 months after the issuance of Authorization to Proceed from the Interconnection Customer.

Figure 1: Point of Interconnection (POI INFORMATION) One-Line Diagram

— Existing  
 — Proposed

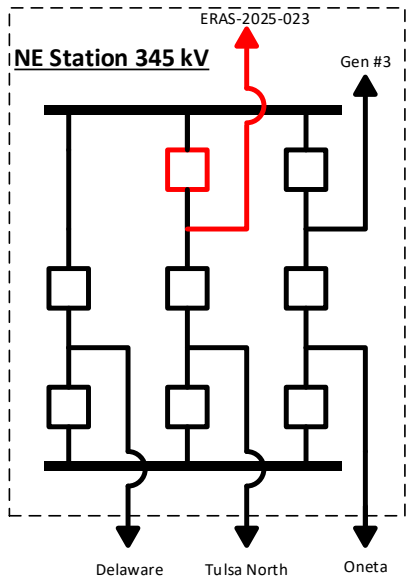


Figure 2: Point of Interconnection Maps

