FACILITY STUDY

for

Expedited Resource Adequacy Study ERAS-2025-010

496MW Thermal Generating Facility
Oklahoma County
Oklahoma

June 8, 2026

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Summary

Pursuant to the tariff and at the request of the Southwest Power Pool (SPP), Oklahoma Gas and Electric (OG&E) performed the following Facility Study to satisfy the Facility Study Agreement executed by the requesting customer for SPP Expedited Resource Adequacy Study request ERAS-2025-010. The request for interconnection was placed with SPP in accordance with SPP's Open Access Transmission Tariff, which covers this one-time accelerated study for generation on SPP's transmission system. The requirements for interconnection at Horseshoe Lake Substation consist of installing a new terminal, a line disconnect switch, relay and setting upgrades, and other associated equipment. Network upgrades for this project consist of replacing two 138kV breakers and four disconnect switches, installing a new control house, expanding the yard, and other associated equipment. The total cost of OKGE is estimated at **$2,908,272.**

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Introduction

The Southwest Power Pool has requested a Facility Study for the purpose of interconnecting a thermal generating facility within the service territory of OG&E Electric Services (OKGE) in Oklahoma County, Oklahoma. The proposed 138kV point of interconnection is a Horseshoe Lake Substation in Oklahoma County. This substation will be owned by OKGE. The cost for installing the new terming and all other associated equipment at Horseshoe Lake Substation to accommodate the new generation is estimated at **$2,908,272**.

Network Constraints in the Southwest Public Service (SPS), OKGE and Western Farmers Electric Cooperative (WFEC) systems may be verified with a transmission service request and associated studies.

Other Network Constraints in the American Electric Power West (AEPW), Southwest Public Service (SPS), OKGE and Western Farmers Electric Cooperative (WFEC) systems may be verified with a transmission service request and associated studies.

Interconnection Facilities

The primary objective of this study is to identify attachment facilities. The requirements for interconnection consist of installing a new terminal and control house, and upgrading existing equipment at Horseshoe Lake Substation to meet the new rating. Two breakers, 4 disconnect switches, and other associated equipment will be upgraded to 3000A. This 138kV addition shall be constructed and maintained by OKGE.

The total cost for OKGE to make this upgrade is $2,908,272. This does not include the transmission line from the substation to the generating units, and the cost estimate should be determined by the Generator.

This Facility Study does not guarantee the availability of transmission service necessary to deliver the additional generation to any specific point inside or outside the Southwest Power Pool (SPP) transmission system. The transmission network facilities may not be adequate to deliver the additional generation output to the transmission system. If the customer requests firm transmission service under the SPP Open Access Transmission Tariff at a future date, Network Upgrades or other new construction may be required to provide the service requested under the SPP OATT.

The costs of interconnecting the facility to the OKGE transmission system are listed in Table 1.

Short Circuit Fault Duty Evaluation

It is standard practice for OG&E to recommend replacing a circuit breaker when the current through the breaker for a fault exceeds 100% of its interrupting rating with re-closer de-rating applied, as determined by the ANSI/IEEE C37.5-1979, C37.010-1979 & C37.04-1979 breaker rating methods.

For this generator interconnection, no breakers were found to exceed their interrupting capability after the addition of the Customer's 496 MW generation and related facilities. OG&E found no breakers that exceeded their interrupting capabilities on their system. Therefore, there are no short circuit upgrade costs associated with the ERAS-2025-010 interconnection.

Table 1: Required Interconnection Network Upgrade Facilities

Facility	ESTIMATED COST (2026 DOLLARS)
Lead time	36 Months
OKGE – **Interconnection Facilities (UID 170775)**- Install a new 138kV terminal, line disconnect switch, control house, metering equipment (CT/PTs), and other associated equipment.	$1,486,183
OKGE – **Network Upgrades (UID 170807)-** Install two 138kV 3000A breakers, four disconnect switches, and associated disconnects.	$1,422,089
OKGE – **Land or ROW** –	$0
Total	**$2,908,272**

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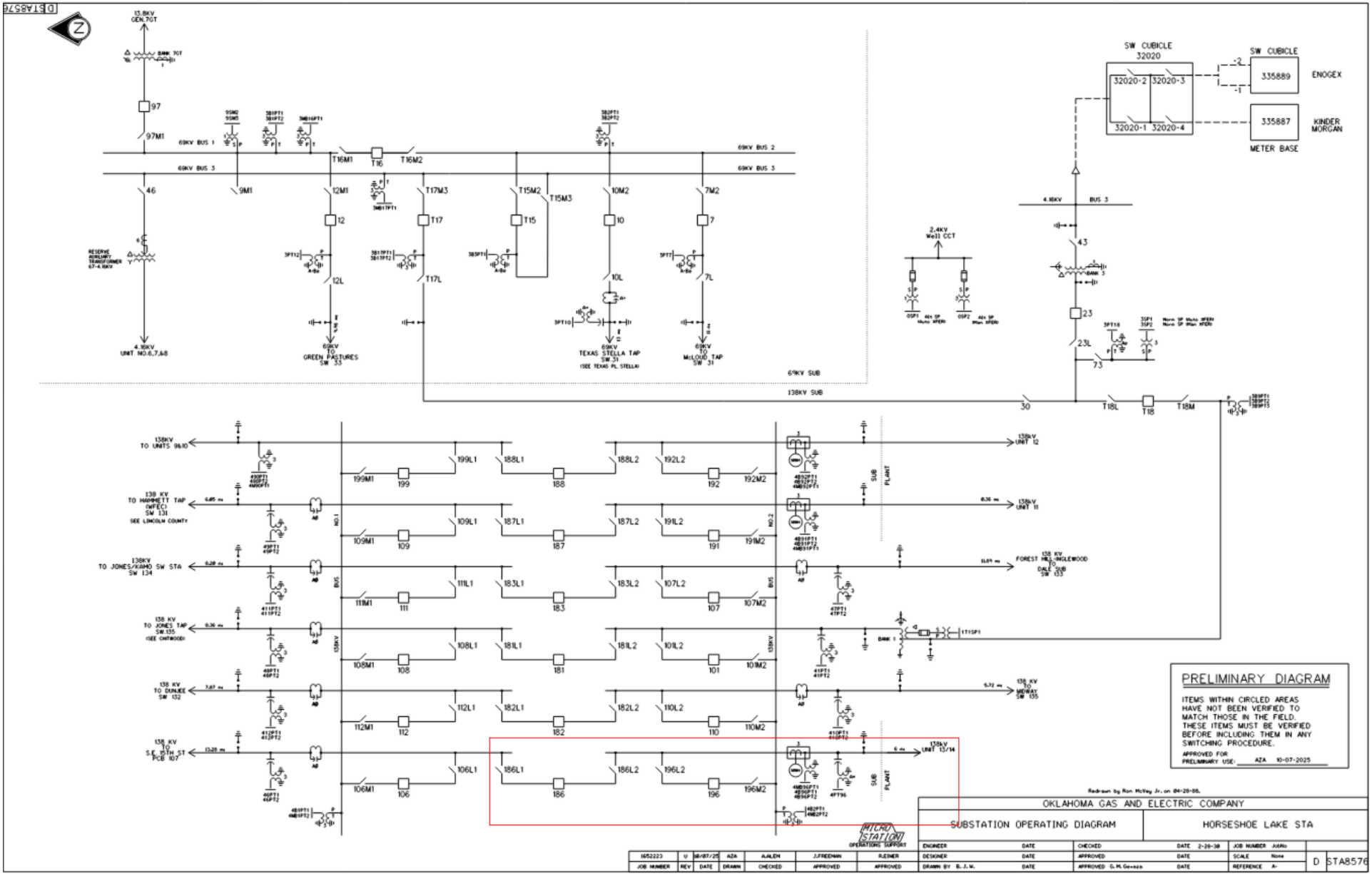
SW CUBICLE
32020
32020-2
32020-3
32020-1
32020-4
SW CUBICLE
335889
ENOGEX
335887
KINDER MORGAN
METER BASE
69KV BUS 1
69KV BUS 2
69KV BUS 3
69KV SUB
138KV SUB
PRELIMINARY DIAGRAM
ITEMS WITHIN CIRCLED AREAS HAVE NOT BEEN VERIFIED TO MATCH THOSE IN THE FIELD. THESE ITEMS MUST BE VERIFIED BEFORE INCLUDING THEM IN ANY SWITCHING PROCEDURE.
APPROVED FOR PRELIMINARY USE: AZA 10-07-2025
OKLAHOMA GAS AND ELECTRIC COMPANY
SUBSTATION OPERATING DIAGRAM
HORSESHOE LAKE STA
D STA8576

Interconnection Facilities Study

Costs associated with ERAS-2025-001 Rebuild LaCygne-G20-047 Tap 345kV Line

April 2026

Introduction

This report summarizes the scope of the Interconnection Facilities Analysis for Network Upgrade(s) to determine costs related to the addition of the SPP-GI ERAS-2025-001 Interconnection Request(s). Evergy, as a TO, is receiving an unprecedented amount of GI interconnect requests. The cost estimates and interconnect information supplied are based on current system configuration. There are many cases of multiple GI's requesting POIs at the same substation. Ongoing changes in Evergy's transmission system configuration could affect the required system upgrades and costs necessary to meet any particular GI interconnect request in the future.

Southwest Power Pool Generation Interconnection Request:

Per the SPP Generator Interconnection Procedures (GIP), SPP has requested that Evergy perform an Interconnection Facilities Study (IFS) for Network Upgrade(s) in accordance with the Scope of Interconnection Facilities Study GIP Section 8.10 and the Interconnection Facilities Study Procedures in accordance with GIP Section 8.11 for the following Interconnection Request(s):

Upgrade Type	UID	Upgrade Name	ERAS Cost Estimate	ERAS Lead Time
Current Study	172059	LACYGNE7-G20-007-TAP 345 kV Ckt 1 Rebuild	$ 8,143,803.00	48 months

Rebuild LaCygne-G20-007-TAP (Current Study)

345kV Substation

Network Upgrades to rebuild the LaCygne – G20-007 Tap 345 kV line. This line is to be double circuited with LaCygne – Neosho for 2.25 miles back to LaCygne. Estimate also includes upgrading traps, tuners, CCVTs and bus work at the LaCygne terminal. The line and terminal are to be rated for at least 1210 MVA. UID 172059

Total Cost

The total cost estimate for this Network Upgrade is:

$	7,056,000	Transmission Line
$	979,485	Substation
$	22,247	AFUDC
$	86,070	Contingency
$	8,143,803	Total

This estimate is accurate to +/- twenty (20) percent, based on current prices, in accordance with Attachment A of Appendix 4 of the Interconnection Facilities Study Agreement. However, recent cost fluctuations in materials are very significant and the accuracy of this estimate at the time of actual settings cannot be assured.

Time Estimate

Time estimates are based on current version of the project schedule and some processes of each category run concurrently.

Engineering Time	48	Months
Procurement Time	48	Months
Construction Time	48	Months
Total Project Length	48	Months

Figure 1 – LaCygne 345/69kV Substation