# FACILITY STUDY

# for

# Generation Interconnect Request GEN-2022-143

200MW Battery/Storage Generating Facility
Carter County
Oklahoma

November 3, 2025

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**OG&E Electric Services**

## 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 Generation Interconnection request GEN-2022-143. The request for interconnection was placed with SPP in accordance with SPP's Open Access Transmission Tariff, which covers new generation interconnections on SPP's transmission system. The requirements for interconnection consist of installing a new 138kV terminal, metering, and associated equipment at Caney Creek Substation. In addition, meters will be installed at the Interconnection Customer's collector substation for the purpose of revenue metering of the battery/storage generation. Network upgrades at Caney Creek Substation consists of expanding the bus, relocating the capacitor bank, installing switches, breakers, and associated equipment. The total cost of OKGE is estimated at **$6,003,432.**

## Table of Contents

## Introduction

The Southwest Power Pool has requested a Facility Study for the purpose of interconnecting a Battery/Storage generating facility within the service territory of OG&E Electric Services (OKGE) in Carter County, Oklahoma. The proposed 138kV point of interconnection is at Caney Creek Substation in Carter County. This substation is owned by OKGE. The cost for installing a new 138kV terminal, expanding the bus, breakers, switches, and other associated equipment, is estimated at **$6,003,432**.

**Interconnection Facilities**

The primary objective of this study is to identify attachment facilities. The requirements for interconnection consist of installing a new 138kV terminal, metering, and associated equipment at Caney Creek Substation. Network upgrades consisting of expanding the bus, relocating the capacitor bank, installing two new breaker, switches, and associated equipment are also required for interconnection. This 138kV upgrade shall be constructed and maintained by OKGE. It is assumed that obtaining all necessary right-of-way for the line to the perimeter of the existing OKGE 138kV substation will be performed by the interconnection customer.

The total cost for OKGE to add a new 138kV terminal and network upgrades at Caney Creek substation is estimated at **$6,003,432**. This cost does not include the building of the 138kV line from the customer substation to the transmission dead-end structure at the perimeter into Caney Creek substation. This does not include the Customer's 138-34.5kV substation and the cost estimate should be determined by the Customer.

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 200 MW generation and related facilities. OG&E found no breakers that exceeded their interrupting capabilities on their system. Therefore, there is no short circuit upgrade costs associated with the GEN-2022-143 interconnection.

**Table 1: Required Interconnection Network Upgrade Facilities**

| Facility | ESTIMATED COST (2025 DOLLARS) |
|---|---|
| Lead time | 36 Months |
| OKGE – **Interconnection Facilities (UID 158091)**- New 138kV terminal, metering equipment consisting of CT/PTs, and associated equipment | $1,968,425 |
| OKGE – **Network Upgrades (UID 158092)-** Expand the substation, relocate the capacitor bank, two breakers, switches, and associated equipment | $4,035,007 |
| OKGE – **Land or ROW** | $0 |
| **Total** | **$6,003,432** |

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November 3, 2025

Reviewed by:
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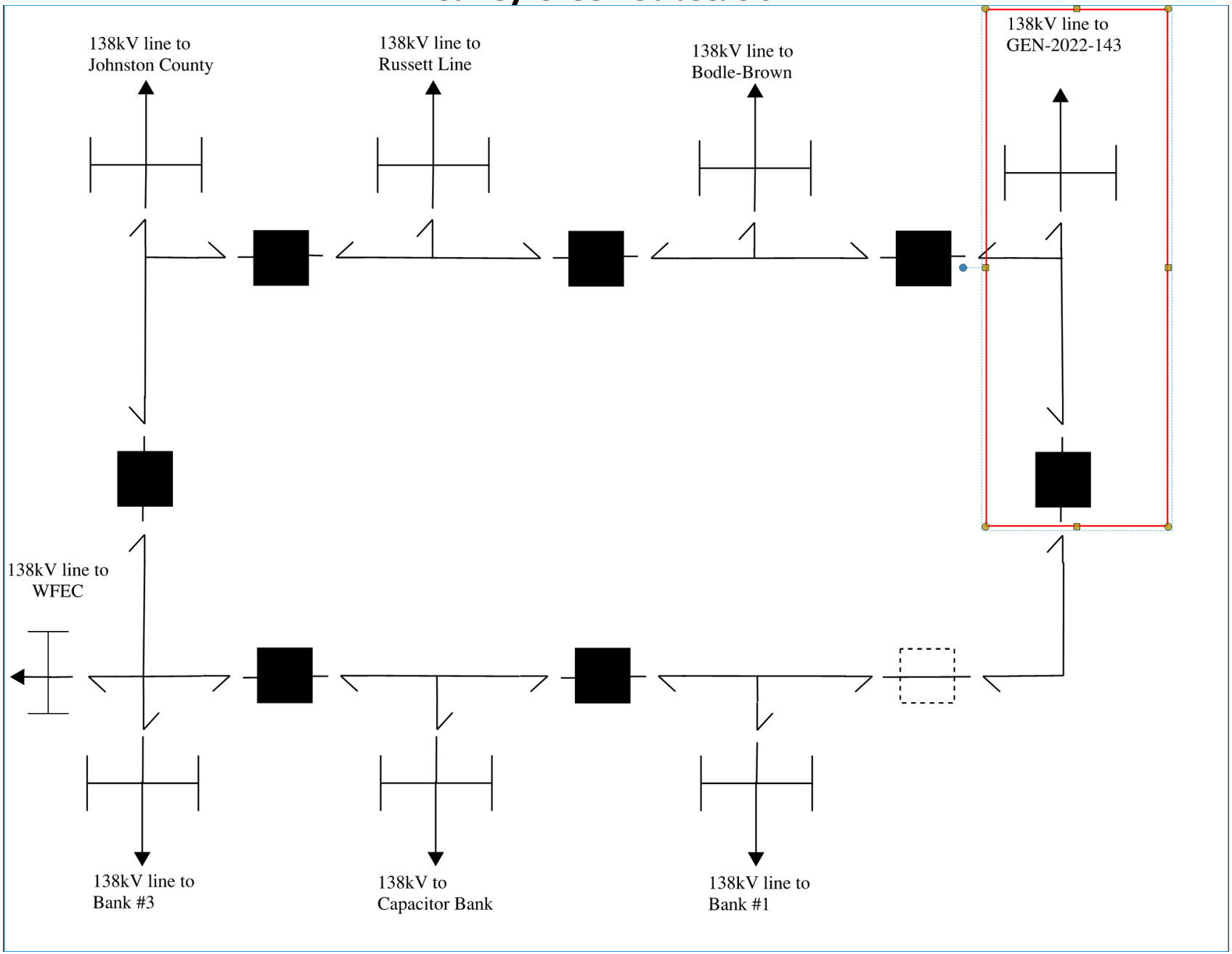
Manager, Transmission Planning

# Caney Creek Substation



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# FACILITY STUDY FOR NETWORK UPGRADES

# as Requested by Southwest Power Pool (SPP)

# DISIS-2022-001

**November 2025**

# Summary

The Southwest Power Pool (SPP or Transmission Provider) evaluated the generation facilities requesting to interconnect to Western Farmers Electric Cooperative (WFEC or Transmission Owner) transmission system in the Definitive Interconnection System Impact Study (DISIS-2022-001). The requests for interconnection were placed with SPP 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.

To accommodate the Interconnection Customer's (IC) requests, SPP identified multiple network upgrades required as part of the DISIS study results. WFEC performed this Facility Study for the Network Upgrades. The table below identifies the specific transmission elements impacted and addressed in this Facility Study along with the projected project duration for completing the specific upgrade.

*Table 1: Cost Estimate for Network Upgrades*

| Upgrade Name | SCERT UID | TO Estimated Cost | Project Time Estimate (months) |
|---|---|---|---|
| Twin Lakes Junction to Twin Lakes Switch Station 138kV Line Rebuild | 170699 | $6,795,000 | 36 |
| Caney Creek to Texoma Junction 138kV Line Rebuild | 170700 | $500,000 | 36 |
| Jensen to El Reno Switch Station 138kV Line Rebuild | 170703 | $1,863,000 | 36 |
| Crescent to Twin Lakes Switch Station 138kV Line Rebuild | 170706 | $2,826,000 | 36 |
| Kiersey to Colbert 138kV Line Rebuild | 170708 | $8,001,000 | 36 |

# Table of Contents

## Description of Network Upgrades

*Table 2: Twin Lakes Switch Station – Twin Lakes Junction & Twin Lakes Switch Station – OG&E Crescent Cost Estimate*

| Shared Network Upgrades Description<br><br>UID: 170699 | Cost Estimate ($) | Estimated Lead Time |
|---|---|---|
| **Twin Lakes Switch – Twin Lakes Junction 138kV Line**<br>**Rebuild:** Rebuild 7.55 miles of 138kV transmission from Twin Lakes Switch to Twin Lakes Junction. | Engineering: $ 339,750.00<br>ROW: $ 339,750.00<br>Material: $ 3,057,750.00<br>Construction: $ 3,057,750.00<br>**TOTAL: $ 6,795,000.00** | **36 Months** |

| Shared Network Upgrades Description<br><br>UID: 170706 | Cost Estimate ($) | Estimated Lead Time |
|---|---|---|
| **WFEC Twin Lakes SW – OG&E Cresent 138kV Line**<br>**Rebuild:** Rebuild 3.14 miles of 138kV transmission from WFEC Twin Lakes Switch to OG&E Cresent. | Engineering: $ 141,300.00<br>ROW: $ 141,300.00<br>Material: $ 1,271,700.00<br>Construction: $ 1,271,700.00<br>**TOTAL: $ 2,826,000.00** | **36 Months** |

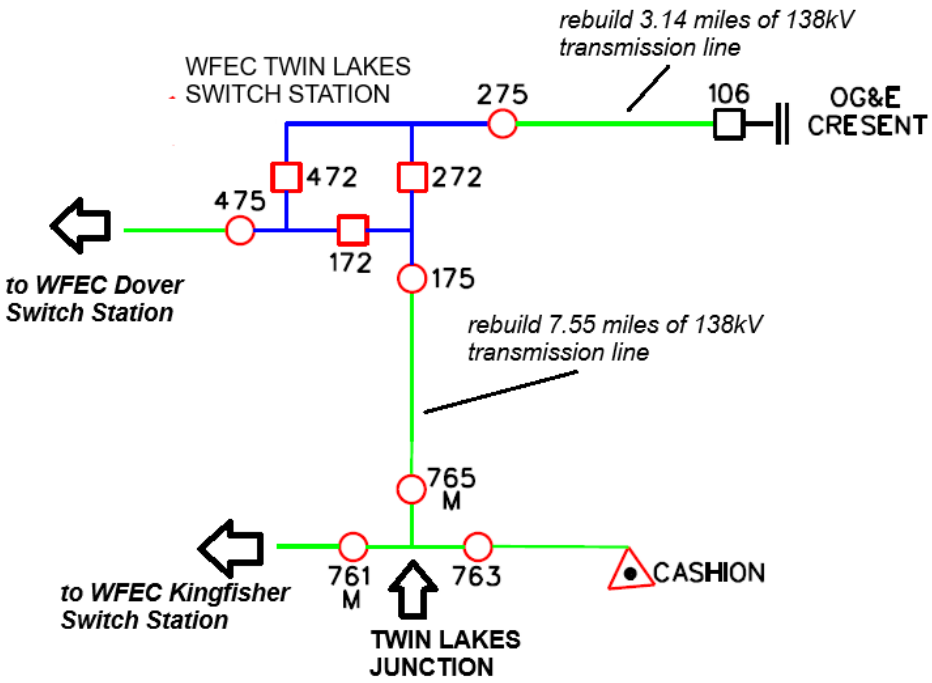


*Figure 1: One-line Diagram: Twin Lakes Switch Station – OG&E Crescent 138kV & Twin Lakes Switch Station to Twin Lakes Junction*

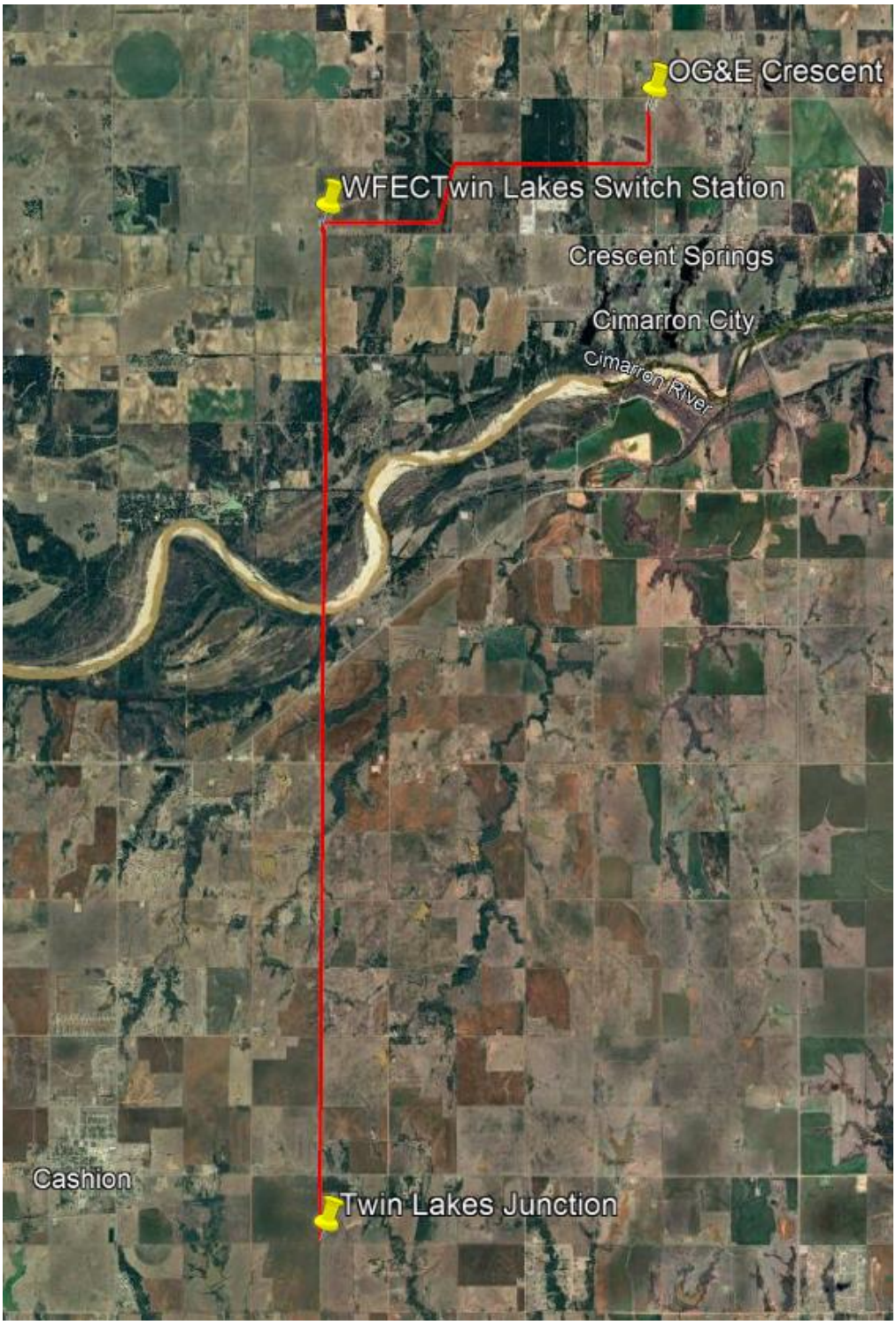


*Figure 2: Geographic: Twin Lakes Switch Station – OG&E Crescent 138kV & Twin Lakes Switch Station to Twin Lakes Junction*

*Table 3: Texoma Junction – OG&E Caney Creek Cost Estimate*

| Shared Network Upgrades Description<br><br>UID: 170703 | Cost Estimate ($) | Estimated Lead Time |
|---|---|---|
| **WFEC Texoma Junction – OG&E Caney Creek 138kV Line Rebuild:** Rebuild 0.17 miles of 138kV transmission from WFEC Texoma Junction to OG&E Caney Creek. | Engineering: $ 25,000<br>ROW: $ 25,000<br>Material: $ 225,000<br>Construction: $ 225,000<br>**TOTAL: $ 500,000** | **36 Months** |

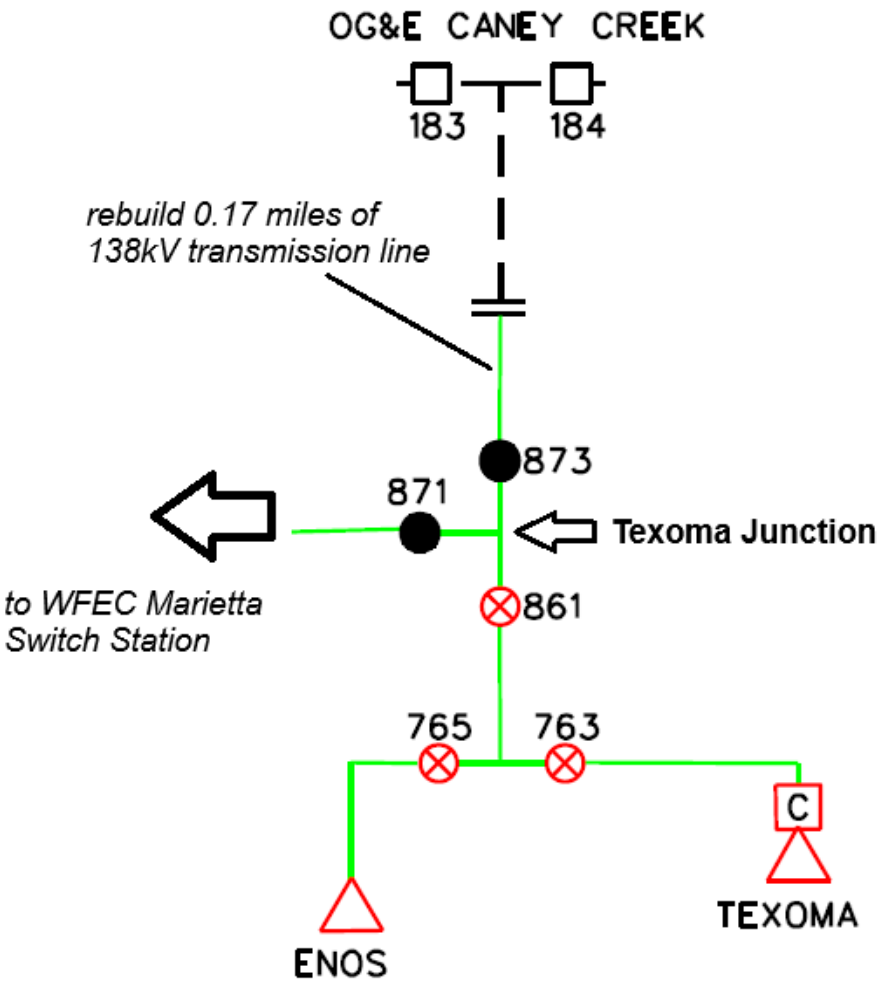


*Figure 3: One-line Diagram: Texoma Junction – OG&E Caney Creek 138kV*


*Figure 4: Geographic: Texoma Junction – OG&E Caney Creek 138kV*

*Table 4: El Reno Switch Station – OG&E Jensen Cost Estimate*

| Shared Network Upgrades Description<br><br>UID: 170703 | Cost Estimate ($) | Estimated Lead Time |
|---|---|---|
| **WFEC El Reno SW – OG&E Jensen 138kV Line Rebuild:**<br>Rebuild 2.07 miles of 138kV transmission from WFEC El Reno Switch to OG&E Jensen. | Engineering: $ 93,150.00<br>ROW: $ 93,150.00<br>Material: $ 838,350.00<br>Construction: $ 838,350.00<br>**TOTAL: $1,863,000.00** | **36 Months** |

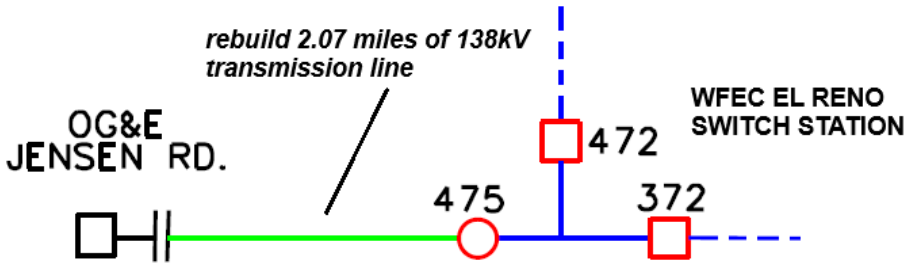


*Figure 5: One-line Diagram: El Reno Switch Station – OG&E Jensen 138kV*


*Figure 6: Geographic: El Reno Switch Station – OG&E Jensen 138kV*

*Table 5: Texoma Junction – OG&E Caney Creek Cost Estimate*

| Shared Network Upgrades Description<br><br>UID: 170708 | Cost Estimate ($) | Estimated Lead Time |
|---|---|---|
| **Kersey Substation – Colbert Substation 138kV Line Rebuild:** Rebuild 8.89 miles of 138kV transmission from Kersey Substation to Colbert Substation. | Engineering: $ 400,050.00<br>ROW: $ 400,050.00<br>Material: $ 3,600,450.00<br>Construction: $ 3,600,450.00<br>**TOTAL: $ 8,001,000.00** | **36 Months** |

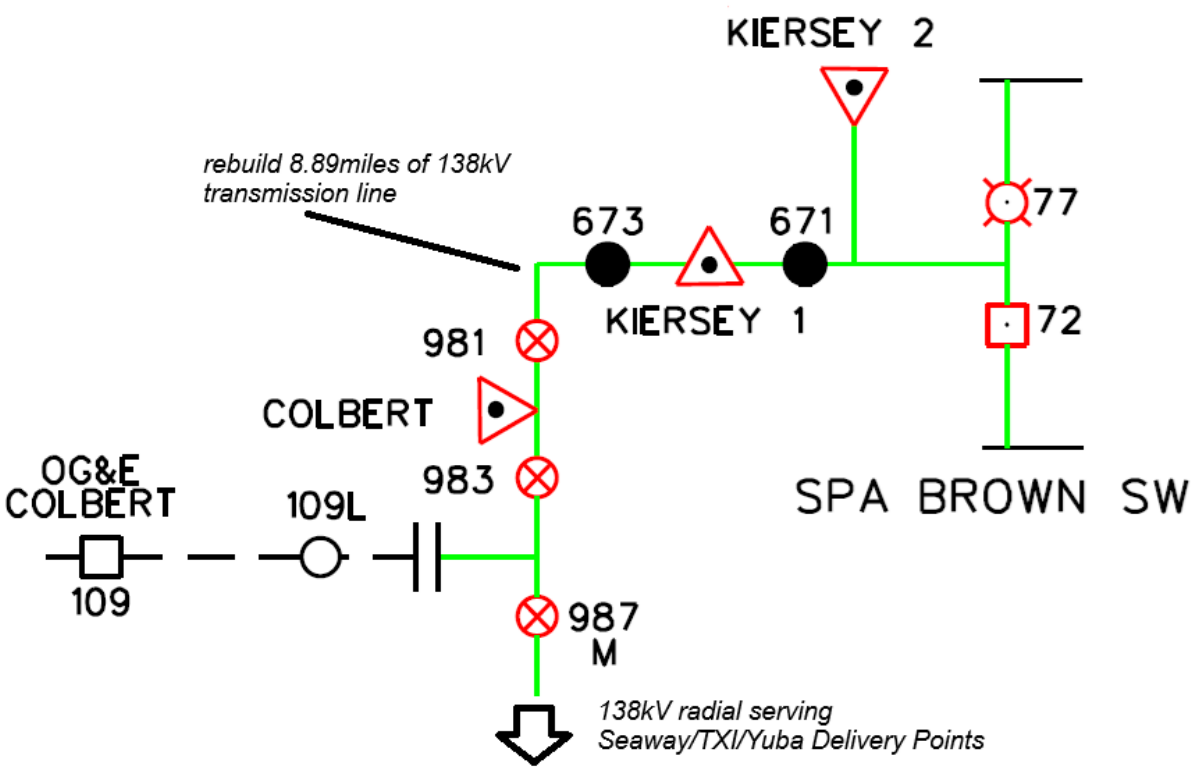


*Figure 7: One-line Diagram: Kiersey Substation – Colbert Substation 138kV*

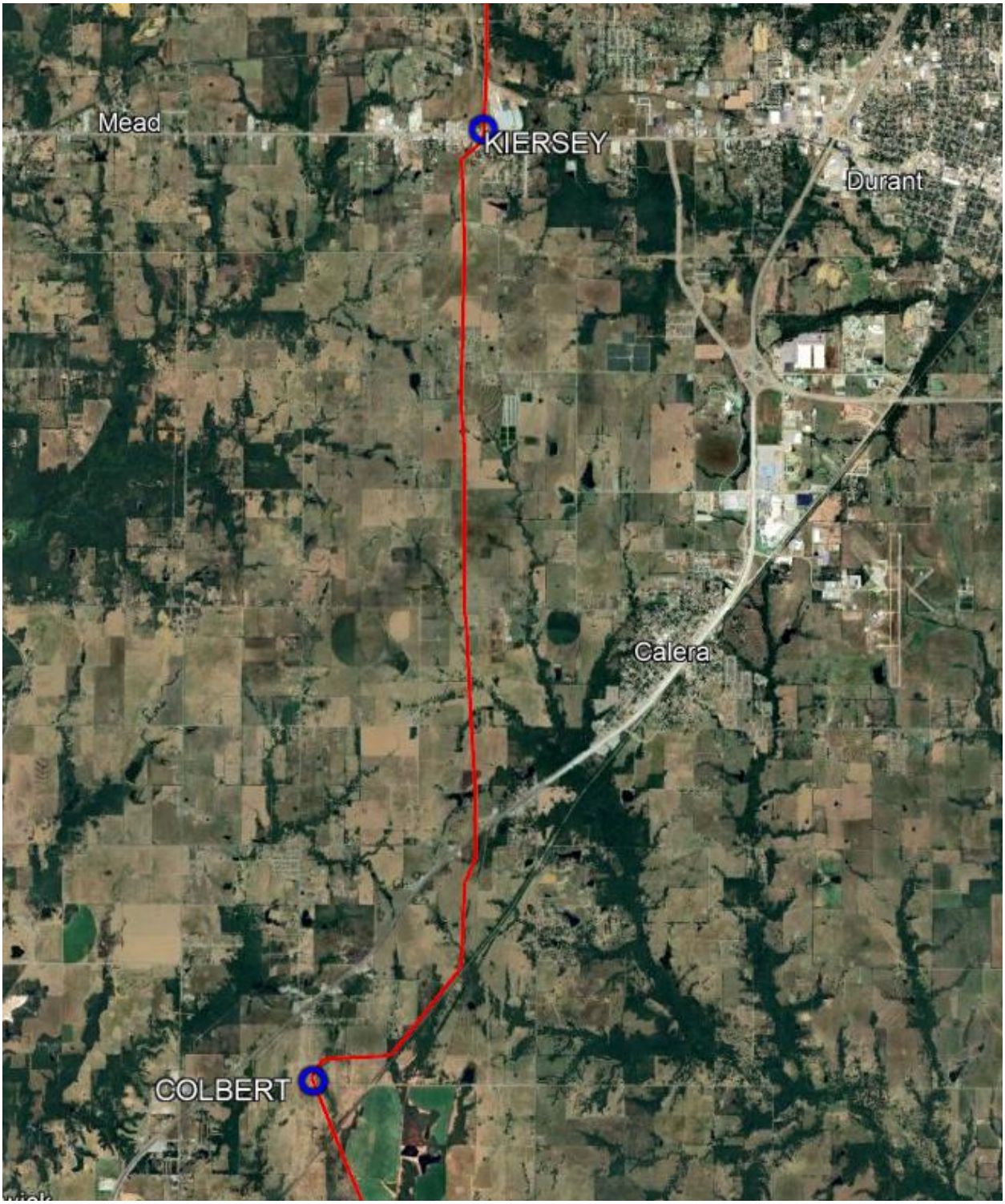


*Figure 8: Geographic: Kiersey Substation – Colbert Substation 138kV*