

wfec
western farmers
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A Touchstone Energy® Cooperative 

INTERCONNECTION FACILITY STUDY

for

Generation Interconnection Request ERAS 2025-025

**175MW Solar Generation Interconnection
in Caddo County, OK.**

April 2026

SUMMARY

Pursuant to the tariff and at the request of the Southwest Power Pool (SPP), Western Farmers Electric Cooperative (WFEC) performed the following facility Study to satisfy the Facility Study agreement executed by the requesting customer for SPP Generation Interconnection request ERAS-2025-025. 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 rebuilding the 138kV 6-breaker ring bus Washita Switch Station at the POI with breakers and relaying operating as a breaker and a half configuration. Additionally, Optical Ground Wire (OPGW) will be required from the interconnection requestors facility to WFEC 138kV Washita Switching Station POI. The total cost for WFEC to accommodate the interconnection request at the 138kV POI is \$19,000,018.

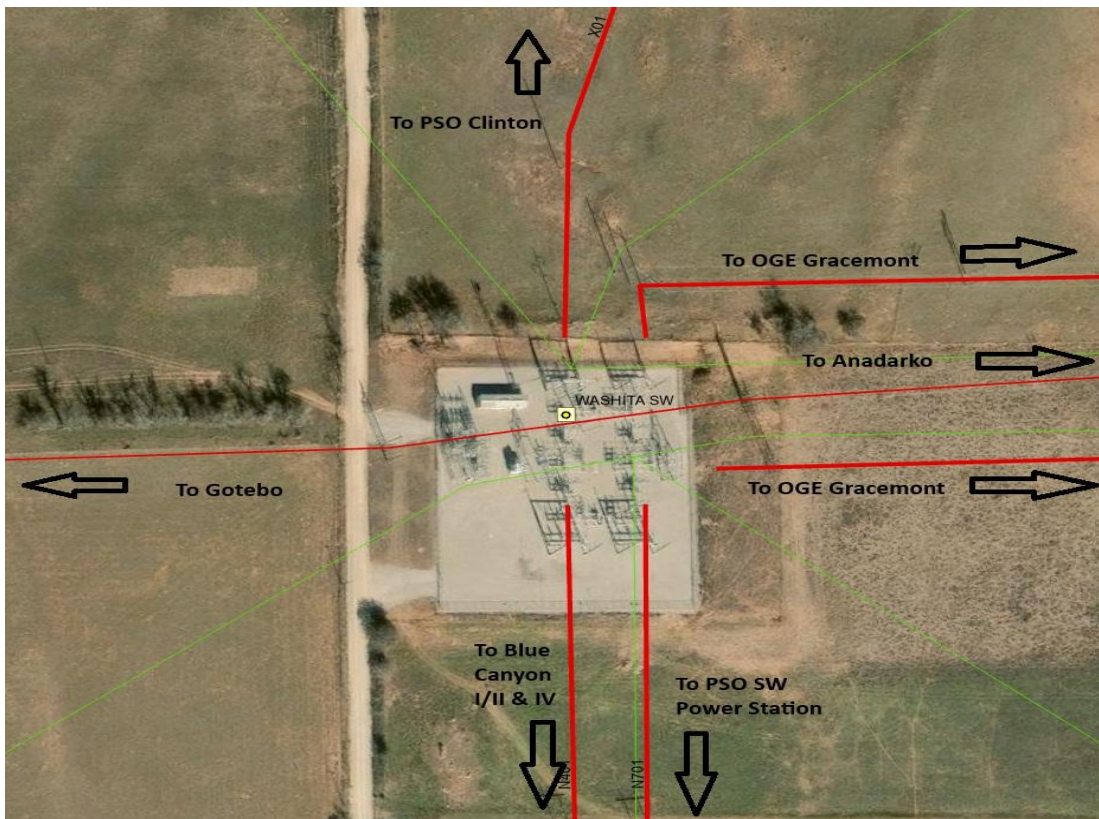


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Introduction

The Southwest Power Pool has requested a facility Study for the purpose of interconnecting 175MW of Solar Generation within the service territory of WFEC in Caddo County, Oklahoma. The 138kV POI at Washita Switch Station (35° 6'33.86"N, 98°22'48.98"W) is located in Caddo County and will require a rebuild of the station to a breaker and a half configuration to accommodate the interconnection of ERAS-2025-025.

The cost for rebuilding the 138kV Washita Switching Station at the POI to operate as a breaker and a half switching station with breakers and relaying is estimated at \$19,000,018.

Network constraints within WFEC may be verified with a transmission service request and associated studies.

Interconnection Facilities

The primary objective of this study is to identify WFEC interconnection facilities. Figure 1 below shows the proposed interconnection of ERAS-2025-025.

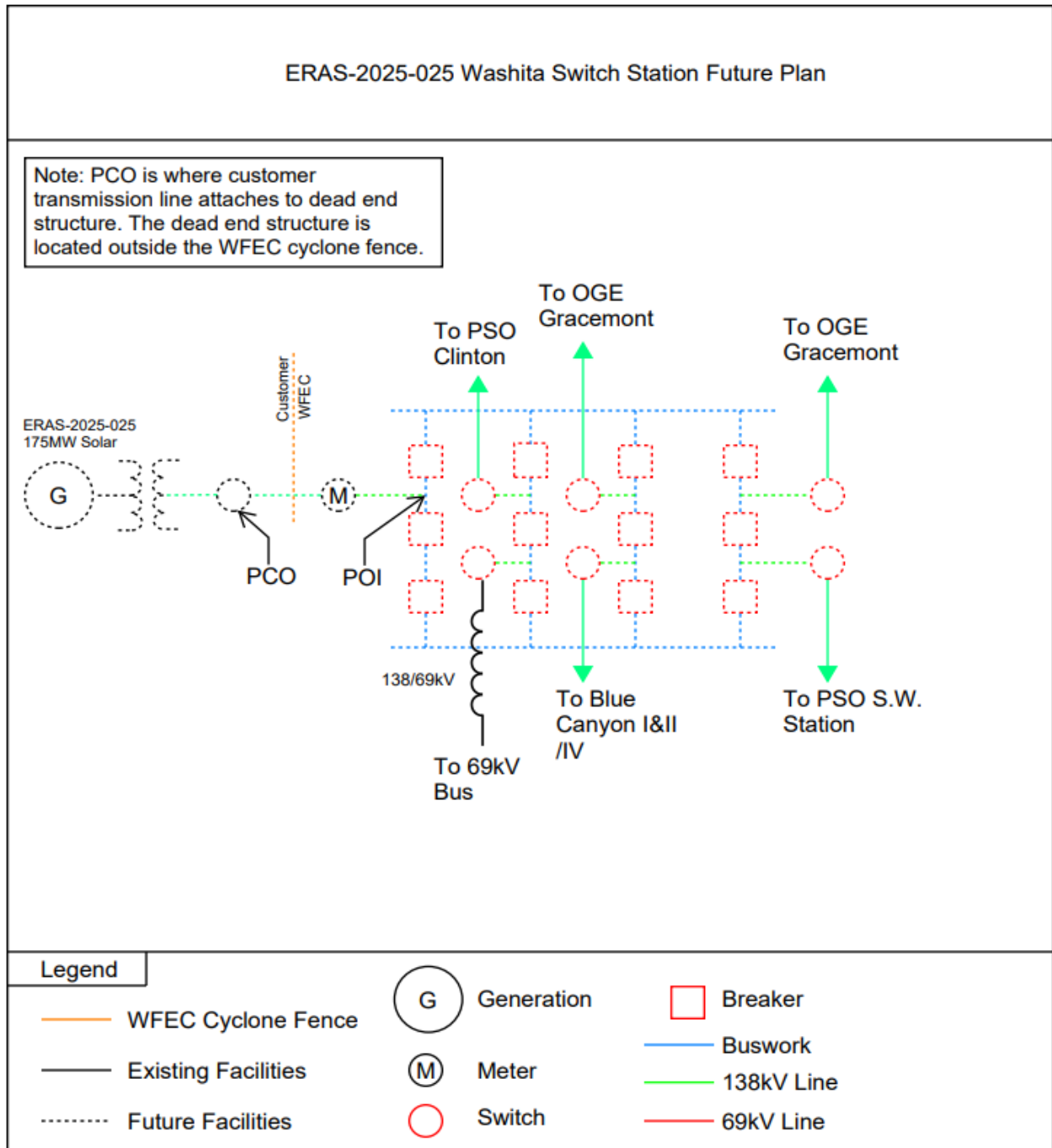


Figure 1: One-line Diagram Facilities for ERAS-2025-025

To accommodate an interconnection for ERAS-2025-025 WFEC will construct a new breaker and a half 138kV Washita Switching Station, equipping a terminal for the following seven lines: Clinton, Gracemont CKT 1, Gracemont CKT 2, Blue Canyon, SW Power Station, 69kV Washita Bus, and the interconnection customer's (ERAS-2025-025) 138kV interconnecting transmission line. The customer will construct a new 138kV transmission line from their collector sub to the point of demarcation. WFEC will require the customer to install OPGW for communications from Customer's collector sub to WFEC's switch station.

The total cost for the interconnection facilities at POI is estimated at \$19,000,018. This cost does not include the construction of the 138kV line or OPGW from the customer substation to the point of demarcation at the edge of WFEC's property. The customer is responsible for this 138kV line and OPGW up to the point of interconnection.

This facility study does not guarantee the availability of transmission service necessary to deliver additional generation to any specific point inside or outside of the SPP transmission system. The transmission network facilities may not be adequate to deliver any additional generation output to the 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.

Short Circuit Fault Duty Evaluation:

It is standard practice for WFEC to recommend replacing a circuit breaker when the current through the breaker for a potential fault exceeds 100% of its interrupting rating, as determined by the ANSI/IEEE standard C37-010-2016 breaker rating methods. Existing levels of available fault current at the nearby Meeker and Wewoka 138kV station are shown below. As an inverter-based resource (IBR) the maximum fault current contribution is estimated at 1.4 times peak load current of the Inverter during the subtransient period. This equates to an increase in available fault current of approximately 1167A at the POI, so no existing breakers are expected to exceed capacity with the proposed interconnection.

WFEC has evaluated the potential maximum fault current in this area and no issues with short circuit duty ratings are expected on existing WFEC breakers with the proposed interconnection of 175MW of solar generation at the 138kV Washita Switch Station.

Table 1: WFEC Washita 138kV & 69kV Breaker Capacity

BUS	BREAKER	DUTY %	DUTY (A)	BKR CAPACITY (A)
Washita Switch Station 138kV	138kV Breakers (x6)	78%	31,074 (3PH)	40000
Washita Switch Station 69kV	69kV Breakers (x3)	27%	10,812 (2LG)	40000

Interconnection Cost

Table 2: Transmission Owner Interconnection Facilities

Transmission Owner Interconnection Facilities (TOIF)	Cost Estimate (\$)	Estimated Lead Time
UID: 170800		
<u>WFEC Washita Switch Interconnection Substation:</u> Construct one 138kV line terminal, line switches, dead end structures, line relaying, communications, revenue metering, line arrestors, and all associated equipment and facilities necessary to accept transmission line from Interconnection Customer's Generating Facility.	Engineering: \$ 100,001 ROW: \$ 100,001 Material: \$ 900,008 <u>Construction: \$ 900,008</u> TOTAL: \$ 2,000,018	60 Months

Table 3: Non-Shared Network Upgrades

Non-Shared Network Upgrades Description	Cost Estimate (\$)	Estimated Lead Time
UID: 170801		
<u>WFEC Washita Switch Interconnection Substation:</u> Construct 138kV breaker and a half bus configuration, 40kA short circuit & 2000A continuous rating breakers(11), switches, foundations, overhead static, ground grid, gravel, grading, fence, line relaying and communications, and terminate WFEC transmission line(s).	Engineering: \$ 850,000 ROW: \$ 850,000 Material: \$ 7,650,000 <u>Construction: \$ 7,650,000</u> TOTAL: \$ 17,000,000	60 Months