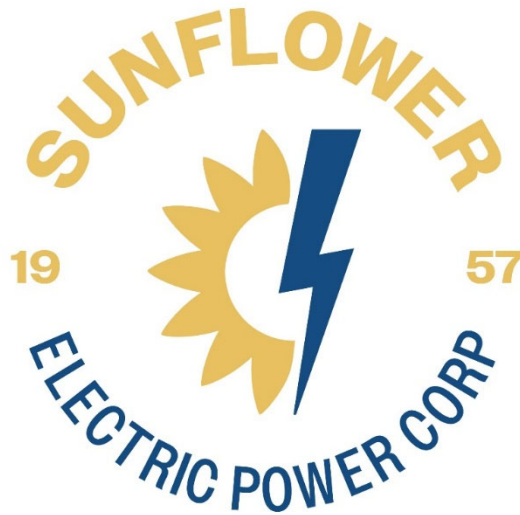




**Interconnection Facilities Study  
for ERAS-2025-015 & ERAS-2025-017 Network Upgrades  
and TOIF upgrades at Holcomb Extension 345 kV  
Substation**



**April 20, 2026**

*Interconnection Facilities Study – Holcomb Extension 345 kV Network Upgrades  
and TOIF*

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## ***Interconnection Facilities Study – Holcomb Extension 345 kV Network Upgrades and TOIF***

### **STUDY OVERVIEW:**

The Southwest Power Pool has requested a Facility Study for Interconnection Facilities and Network Upgrades from Sunflower Electric Power Corporation (Sunflower) at the Holcomb Extension 345 kV Substation for request ERAS-2025-015 and ERAS-2025-017. The ERAS-2025-015 and ERAS-2025-017 request consists of a total of 400 MW hybrid and 600 MW thermal generation interconnecting at the Holcomb Extension 345 kV Substation.

The Non-Shared Network Upgrades (NU) identified to accept two new generator leads includes terminal equipment to accept two new lines at the existing Holcomb Extension 345 kV Substation. The cost for these Network Upgrades is estimated at \$38,522,200.

The Transmission Owner Interconnection Facility (TOIF) addition identified is two new 345 kV generator leads connection at the Holcomb Extension 345 kV Substation. The cost for adding the new 345 kV generator leads is estimated at \$10,477,800.

The purpose of this study is to provide estimated costs of facilities required for interconnection of the proposed generation to Sunflower's transmission system and to identify scope and estimated costs for network upgrades required on Sunflower's transmission system to allow the generation to run at the full requested capacity.

Sunflower can accommodate the "Point of Interconnection" (POI) at this time. However, the ability to accommodate this interconnection is subject to change due to engineering considerations, environmental assessments, permitting requirements, and other factors. Sunflower reserves the right to re-evaluate the interconnection and update the interconnection facility study based on such change and cannot reserve the interconnecting customer's interconnection at this POI until an interconnection agreement is fully executed.

Additional network upgrades required for facilities of other transmission owners are not included in this study and will be identified by SPP.

### **INTERCONNECTION FACILITIES AND NON-SHARED NETWORK UPGRADES:**

Non-shared Network Upgrades (NU) additions required by Sunflower consist of the addition of two 345 kV line terminals with circuit breakers, CCVTs, disconnect switches, structures, foundations, conductors, insulators, and all other associated work and materials.

Transmission Owner Interconnection Facility (TOIF) additions required by Sunflower consist of revenue metering CTs and PTs, disconnect switches, protective relays, and terminal equipment needed to interconnect the customer's generator lead lines to Sunflower's Holcomb Extension 345 kV Substation.

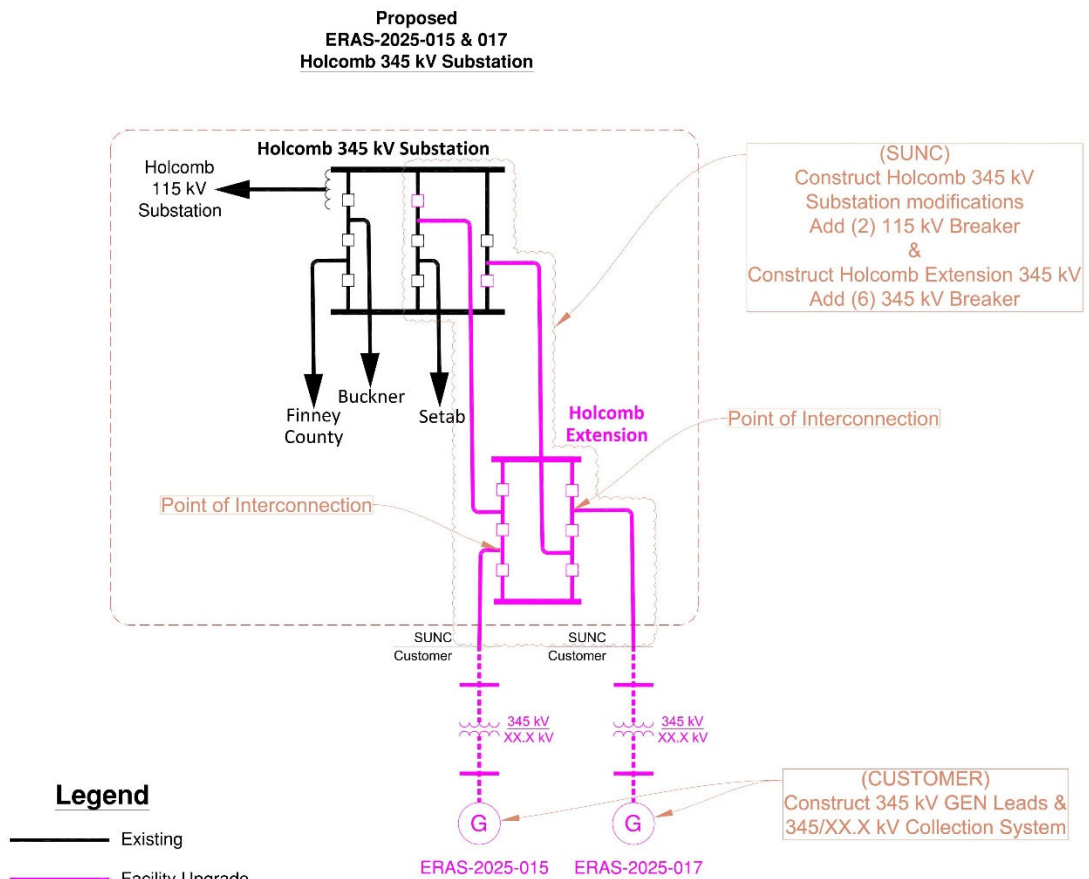
This 345 kV addition at Holcomb Extension 345 kV Substation shall be constructed and maintained by Sunflower. It is assumed that obtaining all necessary right-of-way for the line into the Sunflower 345 kV substation facilities will be performed by the interconnection customer. The addition of the generator 345 kV lead lines from the

## **Interconnection Facilities Study – Holcomb Extension 345 kV Network Upgrades and TOIF**

customer substation into the Sunflower Holcomb Extension Substation and the step-up transformer that connects to the customer’s collector substation is not included and is the responsibility of the interconnection customer.

The proposed arrangement for interconnection of ERAS-2025-015 and ERAS-2025-017 is shown in Figure 1.

**Figure 1: One-line Diagram Facilities for ERAS-2025-015 and ERAS-2025-017**



**Interconnection Facilities Study – Holcomb Extension 345 kV Network Upgrades and TOIF**

**INTERCONNECTION COSTS:**

Summary of interconnection costs for both Interconnection Facilities and Sunflower identified Network Upgrades can be found in the following table.

<b>Upgrade Type</b>	<b>UID</b>	<b>Upgrade Name/Description</b>	<b>ERAS Cost Estimate</b>	<b>ERAS Lead Time</b>
Interconnection	170806	<b>Holcomb 345 kV Substation ERAS-2025-015/ERAS-2025-017 Interconnection (Shared NU) (SEPC)</b> Construct the addition of a single 345 kV line terminal with circuit breakers, CCVTs, disconnect switches, structures, foundations, conductors, insulators, and all other associated work and materials.	\$38,521,947	46
Interconnection	170772	<b>Holcomb 345 kV Substation ERAS-2025-015 Interconnection (TOIF) (SEPC)</b> Construct one (1) line terminal addition in the new 345 kV substation with revenue metering CTs and PTs, disconnect switch, protective relays, and terminal equipment needed to interconnect the customer’s generator lead line.	\$5,238,900	46
Interconnection	170773	<b>Holcomb 345 kV Substation ERAS-2025-017 Interconnection (TOIF) (SEPC)</b> Construct one (1) line terminal addition in the new 345 kV substation with revenue metering CTs and PTs, disconnect switch, protective relays, and terminal equipment needed to interconnect the customer’s generator lead line.	\$5,238,900	46
<b>Total Interconnection Cost:</b>			<b>\$48,999,747</b>	

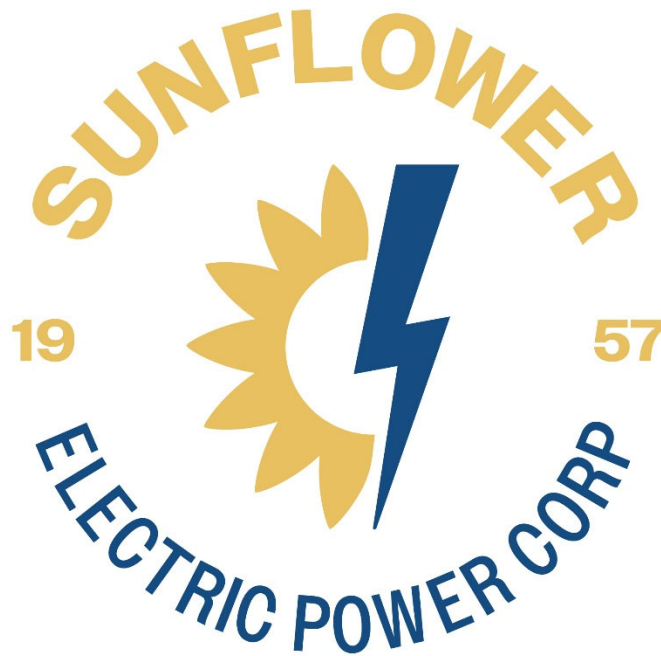
***Interconnection Facilities Study – Holcomb Extension 345 kV Network Upgrades  
and TOIF***

**PROJECT TIMELINE:**

Specific construction schedule and milestones will be determined during the Generator Interconnection Agreement negotiations. Sunflower is estimating an engineering and construction schedule for this project as approximately 46 months. Other factors associated with clearances, equipment procurement delays and work schedules could cause additional delays. This is applicable after all required agreements are signed and internal approvals are granted.



**Interconnection Facilities Study  
for ERAS-2025-001 Network Upgrade:  
Build the HOLCOMB7 to HOLCOMB3 345 kV Transformer 2**



**April 20, 2026**

*Interconnection Facilities Study – Build the HOLCOMB7 to HOLCOMB3 345 kV  
Transformer 2*

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## ***Interconnection Facilities Study – Build the HOLCOMB7 to HOLCOMB3 345 kV Transformer 2***

### **STUDY OVERVIEW:**

The Southwest Power Pool has requested a Facility Study for a Network Upgrade from Sunflower Electric Power Corporation (Sunflower). The Network Upgrade identified includes a new 345/115 kV transformer at the existing Holcomb Substation.

The cost of Sunflower's portion of building a new 345/115 kV transformer at the existing Holcomb Substation and associated upgrades is estimated at \$26,301,311 (UID: 172046).

SPP's ERAS-2025-001 identified Network Upgrades included with this Facilities Study are associated with the following:

- ERAS-2025-015
  - \$13,150,655.50
- ERAS-2025-017
  - \$13,150,655.50

The purpose of this study is to provide estimated costs of facilities required for interconnection of the proposed generation to Sunflower's transmission system and to identify scope and estimated costs for network upgrades required on Sunflower's transmission system to allow the generation to run at the full requested capacity.

Additional network upgrades required for facilities of other transmission owners are not included in this study and will be identified by SPP.

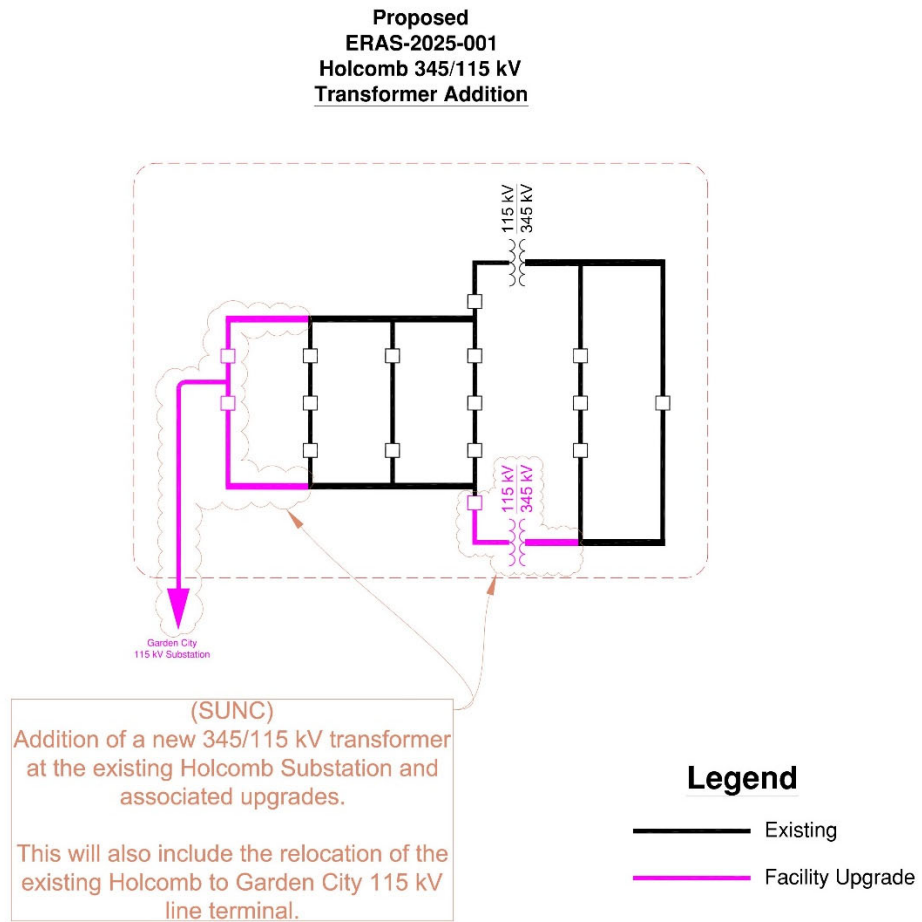
### **SHARED NETWORK UPGRADES:**

Network Upgrades included in this study consist of adding a new 345/115 kV transformer at the existing Holcomb Substation required by SPP. The new 345/115 kV transformer and associated upgrades shall be constructed and maintained by Sunflower.

The proposed arrangement for upgrades for ERAS-2025-001 is shown in Figure 1.

# Interconnection Facilities Study – Build the HOLCOMB7 to HOLCOMB3 345 kV Transformer 2

Figure 1: One-line Diagram Facilities for ERAS-2025-001



**Interconnection Facilities Study – Build the HOLCOMB7 to HOLCOMB3 345 kV Transformer 2**

**INTERCONNECTION COSTS:**

Summary of interconnection costs for both Interconnection Facilities and Sunflower identified Network Upgrades can be found in the following table.

<b>Upgrade Type</b>	<b>UID</b>	<b>Upgrade Name/Description</b>	<b>DISIS Cost Estimate</b>	<b>DISIS Lead Time</b>
Current Study	172046	<b>Build the HOLCOMB7 to HOLCOMB3 345 kV Transformer 2</b> Construct the addition of a new 345/115 kV transformer at the existing Holcomb Substation required for <b>ERAS-2025-015</b>	\$13,150,655.50	40
Current Study	172046	<b>Build the HOLCOMB7 to HOLCOMB3 345 kV Transformer 2</b> Construct the addition of a new 345/115 kV transformer at the existing Holcomb Substation required for <b>ERAS-2025-017</b>	\$13,150,655.50	40
<b>Total Interconnection Cost:</b>			<b>\$26,301,311</b>	

**PROJECT TIMELINE:**

Specific construction schedule and milestones will be determined during the Generator Interconnection Agreement negotiations. Sunflower is estimating an engineering and construction schedule for this project as approximately 40 months. Other factors associated with clearances; equipment procurement delays and work schedules could cause additional delays. This is applicable after all required agreements are signed and internal approvals are granted.



## **Interconnection Facilities Study**

**Costs associated with  
ERAS-2025-001  
Replace the existing SIBLEY 345/161kV  
transformer**

**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	DISIS Cost Estimate	DISIS Lead Time
Current Study	172063	Replace the SIBLEY 7 to SIBLEY 5 345kV Transformer 1	\$ 13,571,142.00	48 months

### **Replace Sibley 345/161 kV Transformer (Current Study) (Evergy)**

#### 345/161kV Substation

Network Upgrades to replace the Sibley 345/161 kV Transformer 1. This estimate includes the replacement of the existing transformer with the standard MVA size accommodating the 510 MVA minimum rating. UID 172063

#### Total Cost

The total cost estimate for this Network Upgrade is:

\$	0	Transmission Line
\$	12,391,128	Substation
\$	40,591	AFUDC
\$	1,139,421	Contingency
\$	13,571,142	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
<hr/>		
Total Project Length	48	Months

**Figure 1 – Sibley 345/161kV Substation**

