



# **Interconnection Facilities Study**

**Costs associated with  
ERAS-2025-031**

**April 2026**

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## Introduction

Kansas City Board of Public Utilities (KBPU) performed the following study at the request of the Southwest Power Pool (SPP) for SPP Generation Interconnection request ERAS-2025-031. The scope of the Facilities Study is to determine the cost estimates of equipment, engineering, procurement, and construction as well as the associated lead times. The cost estimates and interconnect information supplied are based on current system configuration. In the case of multiple GI's requesting POIs at the same substation, the provided estimates and information are subject to change. Ongoing changes in KBPU'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 KBPU 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
Interconnection	170814	Quindaro 161kV Substation ERAS-2025-031 Interconnection ( <b>Non-shared NU</b> ) (KC BPU)	\$2,548,040.00	31 months
Interconnection	170813	Quindaro 161kV Substation ERAS-2025-031 Interconnection ( <b>TOIF</b> ) (KC BPU)	\$720,844.00	24 months

## Quindaro 161 kV Substation – ERAS-2025-031 (Non-Shared NU)

### **161 kV Substation**

Design and construct two (2) new 161 kV terminals onto the existing ring bus at Quindaro substation. Included in this estimate is two new 161 kV breakers, line switches, concrete foundations, line differential relaying, communications/SCADA equipment, tie-line metering, instrument transformers, line arrestors, and all the below or above ground facilities necessary for the ring bus expansion to accept the incoming terminals from interconnection customer's generation facility.

### **Total Cost**

The total cost estimate for this Network Upgrade is:

\$	350,000	Engineering Labor
\$	868,980	Construction Labor
\$	1,097,420	Material
\$	231,640	Contingency

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\$ 2,548,040 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. Other factors associated with clearances, equipment procurement delays and work schedules could cause additional delays. This time estimate applicable after all required agreements have been signed and internal approvals are granted.

Engineering Time	12	Months
Procurement Time	24	Months
Construction Time	6	Months
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Total Project Length	31	Months

## **Quindaro 161 kV Substation – ERAS-2025-031 (TOIF)**

### **161 kV Transmission Facilities**

The interconnect point will be a KBPU-owned disconnect switches located inside the Quindaro 161 kV substation on KBPU property. KCBPU will own and maintain all overhead bus equipment and ownership will transfer at disconnect switches located in the generator facility.

### **Total Cost**

Design and construct two 161 kV bus terminals from the Quindaro substation to the generator facility. Included in this estimate is two overhead 5” bus terminals with all associated structures, foundations, and hardware.

\$	100,000	Engineering Labor
\$	308,850	Construction Labor
\$	246,463	Material
\$	65,531	Contingency
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\$	720,844	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.

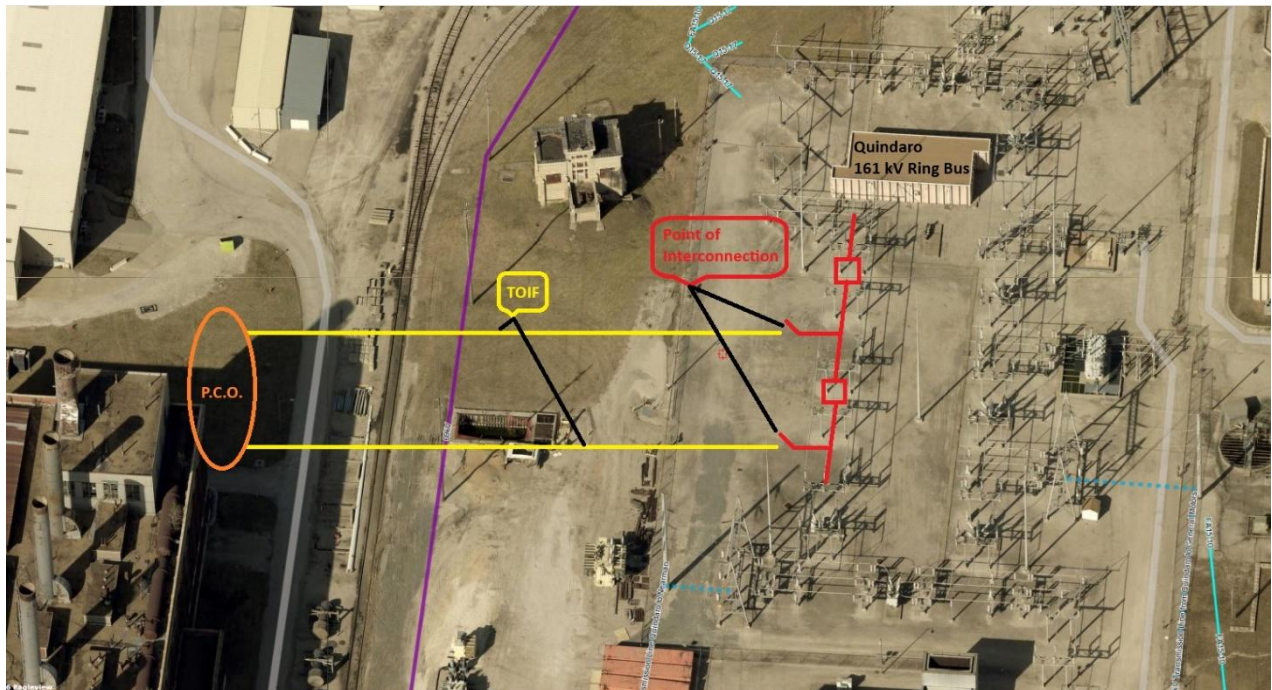
### Time Estimate

Time estimates are based on current version of the project schedule and some processes of each category run concurrently. Other factors associated with clearances, equipment procurement delays and work schedules could cause additional delays. This time estimate applicable after all required agreements have been signed and internal approvals are granted.

Engineering Time	12	Months
Procurement Time	18	Months
Construction Time	6	Months
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Total Project Length	24	Months

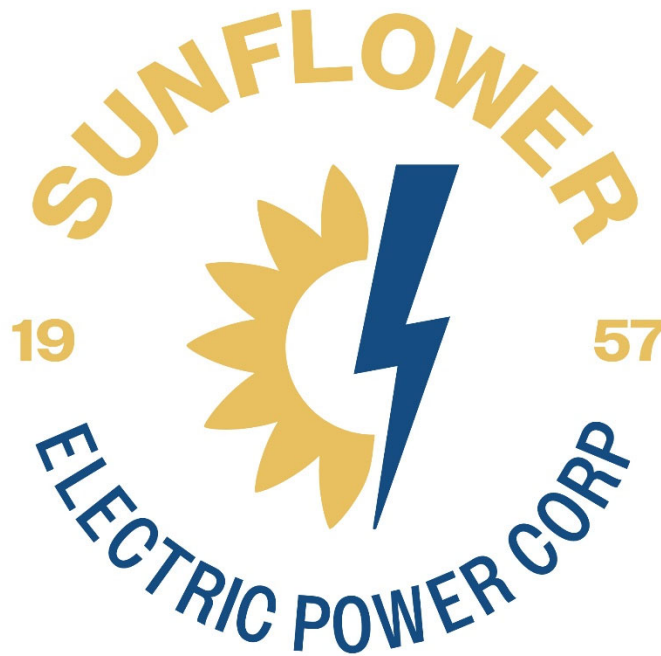
### Supporting Content

Figure 2 – Quindaro 161 kV Substation (NU, POI, TIOF, PCO)





**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.

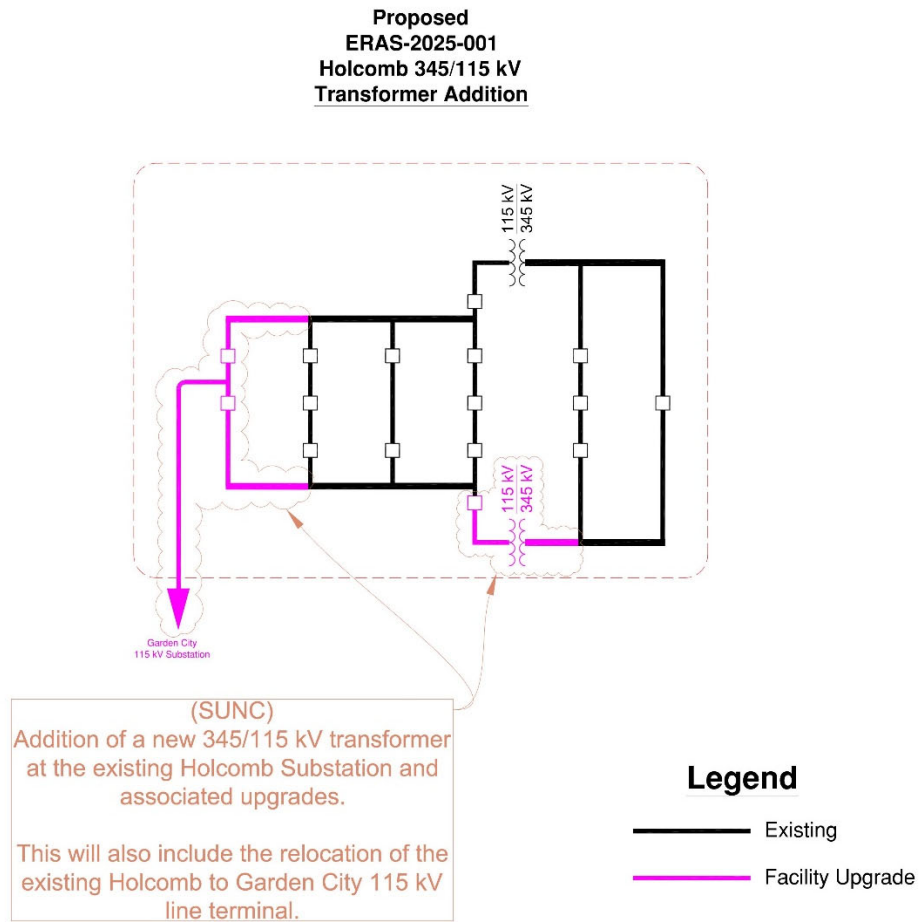
### **SHARED NETWORK UPGRADES:**

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.