



Interconnection Facilities Study

**Costs associated with
DISIS-2023-001
GEN-2023-033**

January 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 DISIS-2023-001 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
Interconnection	158734	Liberty South 161 kV Substation GEN-2023-033 Interconnection (TOIF) (Evergy)	\$ 940,805.00	36 months
Interconnection	158735	Liberty South 161 kV Substation GEN-2023-033 Interconnection (Non-Shared NU) (Evergy)	\$ 1,265,761.00	36 months

Liberty South 161 kV Substation GEN-2023-033 Interconnection (TOIF) (Evergy)

161kV Substation

TOIF for accommodating GridStor GEN-2023-033 (200MW/Battery/Storage) at Liberty South 161 kV Substation. This estimate is the cost associated with the Transmission Owner Interconnection Facilities for a terminal at the Liberty South 161 kV substation for GEN-2022-004. UID 158734

Total Cost

The total cost estimate for this Network Upgrade is:

\$	0	Transmission Line
\$	859,577	Substation
\$	2,813	AFUDC
\$	78,414	Contingency
\$	940,805	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	36	Months
Procurement Time	36	Months
Construction Time	36	Months
<hr/>		
Total Project Length	36	Months

Liberty South 161 kV Substation GEN-2023-033 Interconnection (Non-Shared NU) (Evergy)

161kV Substation

Network Upgrades required at Liberty South 138kV substation to accommodate GridStor GEN-2023-033 (200MW/Battery/Storage). This estimate includes installing a new 161kV breaker and switches in the existing ring bus to serve the GEN-2023-033 Line Terminal. UID 158735

Total Cost

The total cost estimate for this Network Upgrade is:

\$	0	Transmission Line
\$	1,153,572	Substation
\$	3,785	AFUDC
\$	108,402	Contingency
	<hr/>	
\$	1,265,761	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	36	Months
Procurement Time	36	Months
Construction Time	36	Months
<hr/>		
Total Project Length	36	Months

Figure 1 – Liberty South 161/69kV Substation





Facilities Study For Southwest Power Pool (SPP)

Group 5
DISIS-2023-Network Upgrades

Xcel Energy Services, Inc.
Southwestern Public Service Co.
Transmission Planning South
Updated 3/12/2026

Executive Summary

The Southwest Power Pool (SPP or Transmission Provider [TP]) requested a Facility Study for certain Network Upgrades that were identified in the DISIS-2023-001 Phase 2 Restudy. The results were posted in December 2025.

This report is for the identified Network Upgrade – “Switch Out Carpenter Line Reactor.”

SPP assigned UID 171463 to this project.

It is anticipated that the entire process of this project will require approximately 36 - 42 months to complete after an agreement is signed and an authorization to proceed is received. The estimated costs for the work needed for this project are shown below in Table 1.

Table 1: Cost Summary¹

Switch Out Carpenter Line Reactor to Finney UID 171463	\$ 2,739,899
Switch Out Carpenter Line Reactor to Hitchland UID 171463	\$ 2,002,275
Total:	\$ 4,742,174

¹ The cost estimates are 2026 dollars with an accuracy level of ±20%.

General Description of SPS² Facilities

1. **SPS Carpenter Substation:** See Appendix A, Figure A-1 for general vicinity location map of the SPS facility.
2. **Estimated Construction Costs and Schedule**
 - a. **Schedule:** An engineering and construction schedule for this project is estimated at approximately 36 - 42 months. Other factors associated with clearances, equipment delays, and work schedules could cause additional delays. This is applicable after all required agreements are signed and internal approvals are granted.
 - b. All additional costs for work not identified in this study are the sole responsibility of the IC unless other arrangements are made.

² All modifications to SPS facilities will be owned, maintained, and operated by SPS.

Appendix A

Figure A-1: General vicinity location map of the Carpenter Substation



SPS 345 kV transmission lines are shown in red.

– END OF REPORT –



Facilities Study For Southwest Power Pool (SPP)

Group 5
DISIS-2023-Network Upgrades

Xcel Energy Services, Inc.
Southwestern Public Service Co.
Transmission Planning South
Updated 3/12/2026

Executive Summary

The Southwest Power Pool (SPP or Transmission Provider [TP]) requested a Facility Study for certain Network Upgrades that were identified in the DISIS-2023-001 Phase 2 Restudy. The results were posted in December 2025.

This report is for the identified Network Upgrade – “Switch Out Finney Line Reactors.”

SPP assigned UID 171464 to this project.

It is anticipated that the entire process of this project will require approximately 36 - 42 months to complete after an agreement is signed and an authorization to proceed is received. The estimated costs for the work needed for this project are shown below in Table 1.

Table 1: Cost Summary¹

Switch Out Finney Line Reactor to Carpenter UID 171464	\$ 1,788,278
Total:	\$ 1,788,278

¹ The cost estimates are 2026 dollars with an accuracy level of ±20%.

General Description of SPS² Facilities

1. **SPS Finney Substation:** See Appendix A, Figure A-1 for general vicinity location map of the SPS facility.
2. **Estimated Construction Costs and Schedule**
 - a. **Schedule:** An engineering and construction schedule for this project is estimated at approximately 36 - 42 months. Other factors associated with clearances, equipment delays, and work schedules could cause additional delays. This is applicable after all required agreements are signed and internal approvals are granted.
 - b. All additional costs for work not identified in this study are the sole responsibility of the IC unless other arrangements are made.

² All modifications to SPS facilities will be owned, maintained, and operated by SPS.

Appendix A

Figure A-1: General vicinity location map of the Finney Substation



SPS 345 kV transmission lines shown in red, earlier customer's gen-tie line shown in white.

– END OF REPORT –