Back to SCERT Grid

Last Saved/Submitted 2026-04-20T18:14:39.500.

SCERT | Mitigation Plan/Closeout Info

Network Upgrade Name	St. John 115 k	Estimate Creation Date	11/20/2025
High Voltage	115	Estimate Request Date	Select Date
Low Voltage	0	RTO Determined Need Date	Select Date
Board Baseline In-Service Date	Select Date	First Reported In-Service Date	Select Date
Project ID	95129	Estimated In-Service Date	Select Date
Upgrade ID	170804	Network Upgrade Start Date	Select Date
Project Estimate Stage	Study	Mitigation Plan	

Total Network Upgrade Cost Estimate

$3,848,749.00

Estimate Provider (Company) SEPC

Final Cost

Point of Contact Angie Anderson

Network Upgrade Description

Interconnection upgrades and cost estimates needed to interconnect ERAS-2025-032 (150MW/Hybrid), into St. John 115 kV Substation

Network Upgrade Scope

The project will consist of (1) terminal addition, bus work, and associated upgrades to the St. John 115 kV Substation.

Estimate Provider Comments

Type of SCERT Standard

Construction Status

Engineering/Design Phase	○ N/A ○ Not Started ○ In Progress ○ Complete
Siting/Routing Phase	○ N/A ○ Not Started ○ In Progress ○ Complete

	○ Complete
Permits Phase	○ N/A ○ Not Started ○ In Progress ○ Complete
Material Procurement Phase	○ N/A ○ Not Started ○ In Progress ○ Complete
Construction Phase	○ N/A ○ Not Started ○ In Progress ○ Complete
In-Service:	○ Y ○ N

Cost Assumptions | Line Assumptions | Station Assumptions

Line Costs	Current Year $
Engineering Labor	
Construction Labor	
Right-of-Way	
Reactive Compensation (Labor & Materials)	
Material	

Station Costs	
Engineering Labor	$786,730.00
Construction Labor	$1,784,983.00
Site Property Rights	
Reactive Compensation (Labor & Materials)	
Material	$945,096.00
Station Sub-Total	$3,516,809.00
Summary Info	
Line Sub-Total	$0.00
Station Sub-Total	$3,516,809.00
AFUDC	
Contingency	$331,940.00
Total Network Upgrade Cost Estimate	$3,848,749.00
Miscellaneous Cost Info	
CWIP (Y/N)	○ Y ○ N

Expenditure Info	
Expenditures To Date	
Contractually Binding Financial Commitment	

Save

Back to SCERT Grid

Last Saved/Submitted 2026-04-20T18:00:25.153.

SCERT | Mitigation Plan/Closeout Info

Network Upgrade Name	St. John 115 k	Estimate Creation Date	11/20/2025
High Voltage	115	Estimate Request Date	Select Date
Low Voltage	0	RTO Determined Need Date	Select Date
Board Baseline In-Service Date	Select Date	First Reported In-Service Date	Select Date
Project ID	95130	Estimated In-Service Date	Select Date
Upgrade ID	170805	Network Upgrade Start Date	Select Date
Project Estimate Stage	Study	Mitigation Plan	

Total Network Upgrade Cost Estimate

$683,308.00

Estimate Provider (Company) SEPC

Final Cost

Point of Contact Angie Anderson

Network Upgrade Description

Interconnection upgrades and cost estimates needed to interconnect ERAS-2025-032 (150MW/Hybrid), into St. John 115 kV Substation

Network Upgrade Scope

The project will consist of (1) terminal addition, bus work, and associated upgrades to the St. John 115 kV Substation.

Estimate Provider Comments

Type of SCERT Standard

Construction Status

Engineering/Design Phase	○ N/A ○ Not Started ○ In Progress ○ Complete
Siting/Routing Phase	○ N/A ○ Not Started ○ In Progress ○ Complete

	○ Complete
Permits Phase	○ N/A ○ Not Started ○ In Progress ○ Complete
Material Procurement Phase	○ N/A ○ Not Started ○ In Progress ○ Complete
Construction Phase	○ N/A ○ Not Started ○ In Progress ○ Complete
In-Service:	○ Y ○ N

Cost Assumptions | Line Assumptions | Station Assumptions

Line Costs	Current Year $
Engineering Labor	$0.00
Construction Labor	
Right-of-Way	
Reactive Compensation (Labor & Materials)	
Material	

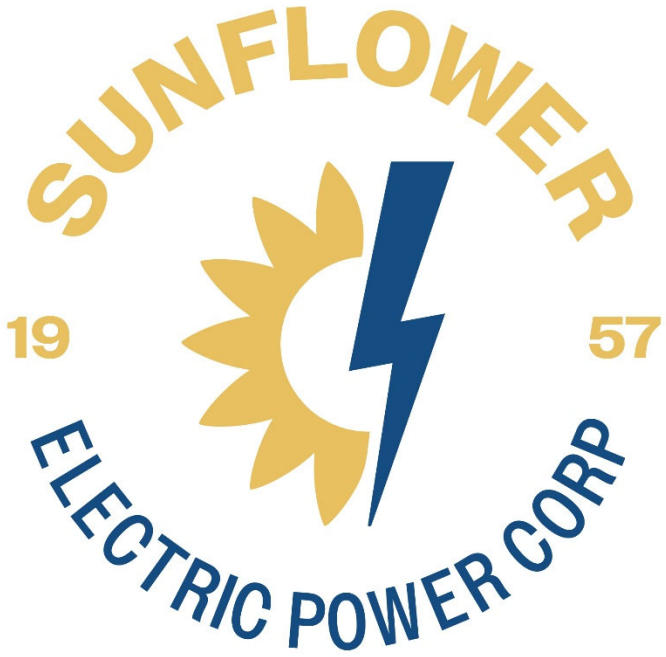
Station Costs	
Engineering Labor	$138,834.00
Construction Labor	$319,114.00
Site Property Rights	
Reactive Compensation (Labor & Materials)	
Material	$166,782.00
Station Sub-Total	$624,730.00
Summary Info	
Line Sub-Total	$0.00
Station Sub-Total	$624,730.00
AFUDC	
Contingency	$58,578.00
Total Network Upgrade Cost Estimate	$683,308.00
Miscellaneous Cost Info	
CWIP (Y/N)	○ Y ○ N

Expenditure Info	
Expenditures To Date	
Contractually Binding Financial Commitment	

Save

Sunflower
ELECTRIC POWER CORP

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



April 20, 2026

TABLE OF CONTENTS

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.

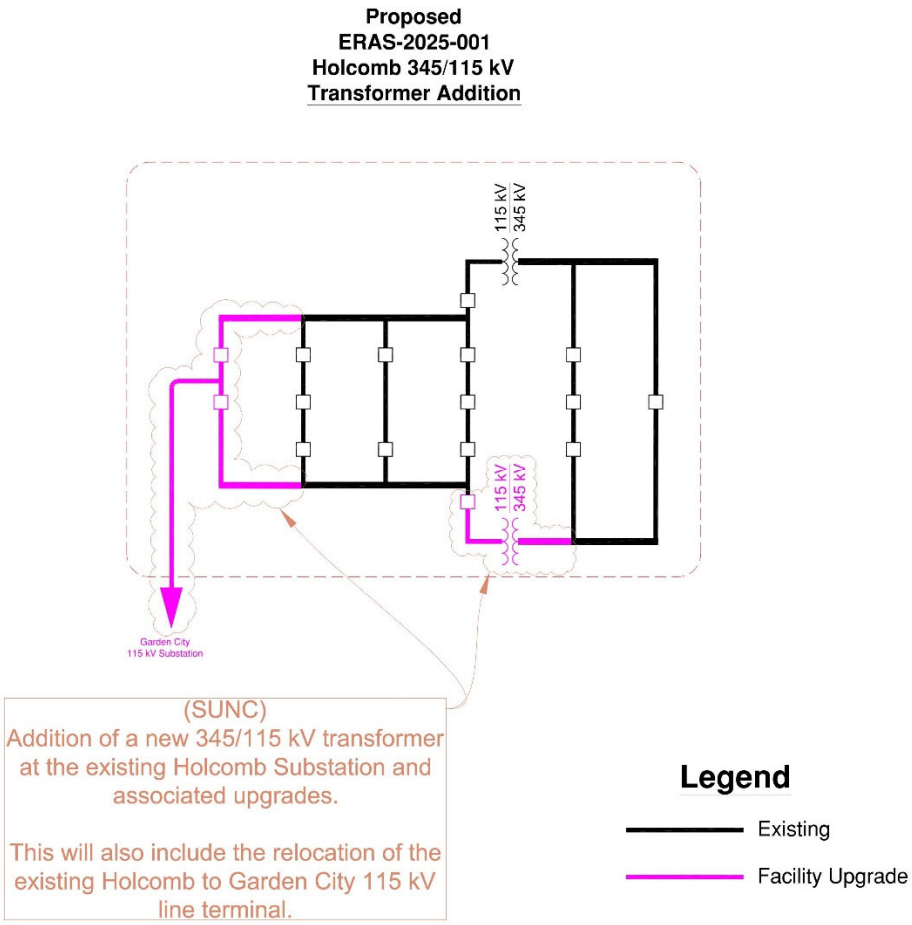
Additional network upgrades required for facilities of other transmission owners are not included in this study and will be identified by SPP.

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.

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



INTERCONNECTION COSTS:

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

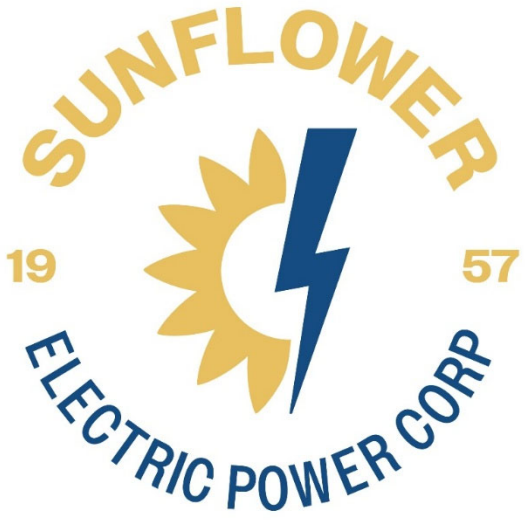
Upgrade Type	UID	Upgrade Name/Description	DISIS Cost Estimate	DISIS Lead Time
Current Study	172046	**Build the HOLCOMB7 to HOLCOMB3 345 kV Transformer 2** Construct the addition of a new 345/115 kV transformer at the existing Holcomb Substation required for **ERAS-2025-015**	$13,150,655.50	40
Current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

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.

Sunflower
ELECTRIC POWER CORP

Interconnection Facilities Study
for ERAS-2025-001 Network Upgrade:
Rebuild the SEWARD 3 to ST-JOHN3 115 kV Line 1



April 20, 2026

TABLE OF CONTENTS

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 rebuild of the St. John to Seward 115 kV transmission line to achieve a minimum rating of 115 MVA.

The cost of Sunflower's portion of rebuilding of the St. John to Seward 115 kV transmission line is estimated at $14,690,000 (UID: 172061).

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

- ERAS-2025-032
    - $14,690,000

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.

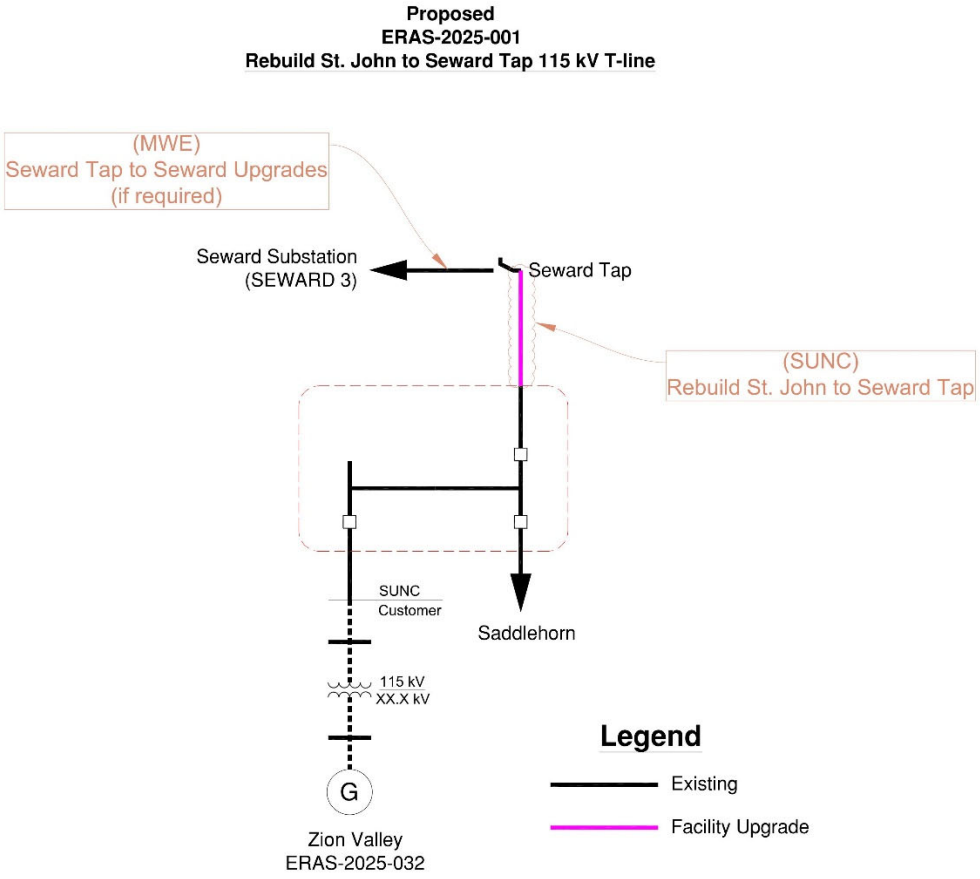
Additional network upgrades required for facilities of other transmission owners are not included in this study and will be identified by SPP.

INTERCONNECTION FACILITIES AND NON-SHARED NETWORK UPGRADES:

Network Upgrades included in this study consist of rebuilding the St. John to Seward 115 kV transmission line required by SPP. The rebuild and associated upgrades shall be constructed and maintained by Sunflower.

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

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



INTERCONNECTION COSTS:

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

Upgrade Type	UID	Upgrade Name/Description	DISIS Cost Estimate	DISIS Lead Time
Interconnection	170805	**Rebuild the SEWARD 3 to ST-JOHN3 115 kV Line 1** Rebuilding of the St. John to Seward 115 kV transmission line to achieve a minimum rating of 115 MVA	$14,690,000	40
		Total Interconnection Cost:	**$14,690,000**	

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.

Midwest Energy Inc.

Network Upgrade Study for ERAS-2025-001

April 20, 2026

Contents

Summary

At the request of the Southwest Power Pool (SPP), Midwest Energy (Midwest) performed a facility study for network upgrades identified in the Expedited Resource Adequacy Study (ERAS-2025-001) in accordance with the SPP Generator Interconnection Procedures (GIP) Section 8.11 for the following Network Upgrades:

- Replace the SEWRDMW3 to SEWARD 2 115kV Transformer 1

Network Upgrade Scope

The study performed by SPP for ERAS-2025-001 showed the Seward 115/69kV Transformer overloaded in a post-contingency state. The most severe contingency for the Seward Transformer as a monitored element is the loss of Sunflower's Great Bend Tap – Seward 115kV line. This is not a valid P1 contingency because it would result in a simultaneous loss of Midwest's 'SEWARD 3 – SEWARDMW3' 115kV line. However, it is a valid P2.1 contingency for which non-consequential load loss is not allowed. The emergency rating of the Seward 115kV/69kV transformer is 45 MVA. The transformer was loaded at 106.62% of its emergency rating in the ERAS-2025-001 study. The provided estimate includes Engineering design and all materials and labor needed to replace the existing transformer with a transformer with higher ratings. See figure 1 on the next page. The substation cable trench runs alongside the existing transformer pad. To install a larger transformer pad, the cable trenches will have to be relocated. These costs are included in the estimate.

Figure 1: Seward 115kV/69kV Transformer and Cable Trench

Upgrade Costs

Network Upgrade	Cost (2026 Dollars)
Replace the SEWRDMW3 to SEWARD 2 115kV Transformer 1 (Estimated Cost includes materials, equipment, labor, engineering, contingency costs, and taxes)	$6,486,381.72

Project Lead Time

Project in-service date is anticipated to be 30 months after the issuance of an NTC from SPP. This is dependent upon the transformer delivery lead time. Manufacturer lead times will be determined and evaluated should this project move forward for construction.

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
Total Project Length	48	Months

Figure 1 – Sibley 345/161kV Substation