



Interconnection Facilities Study

**Costs associated with
DISIS-2022-001
GEN-2022-073**

October 2025

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-2022-001 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	158240	Nashua-Smithville 161 kV Line Tap GEN-2022-073 Interconnection (TOIF) (EM)	\$ 1,043,206.00	48 Months
Interconnection	158241	Nashua-Smithville 161 kV Line Tap GEN-2022-073 Interconnection (Non-Shared NU) (EM)	\$ 17,051,775.00	48 Months

Nashua-Smithville 161 kV Line tap GEN-2022-073 Interconnection (TOIF) (EM)

161kV Substation

TOIF for accommodating NextEra GEN-2022-073 (300MW of Battery/Storage) at a greenfield 161kV Substation on the Nashua-Smithville 161kV line. This estimate is the cost associated with the Transmission Owner Interconnection Facilities for a terminal at a new substation on the Nashua-Smithville 161kV line for GEN-2022-073. UID 158240

Total Cost

The total cost estimate for this TOIF is:

\$	0	Transmission Line
\$	953,326	Substation
\$	3,120	AFUDC
\$	86,760	Contingency
\$	1,043,206	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	36-48	Months
Procurement Time	36-48	Months
Construction Time	36-48	Months
Total Project Length	36-48	Months

Nashua-Smithville 161 kV Line Tap GEN-2022-073 Interconnection (Non-Shared NU) (EM)

161kV Substation

Network Upgrades to construct a greenfield 161kV ring bus substation on the Nashua-Smithville 161kV line to accommodate NextEra GEN-2022-073 (300MW of Battery/Storage). The transmission line estimates assume that the substation will be located directly adjacent to the existing line, with no additional easements required. South of the new substation to Nashua SS 161kV line will be rebuilt to current Evergy 161kV standards. UID 158241

Total Cost

The total cost estimate for this Network Upgrade is:

\$	2,072,000	Transmission Line
\$	13,625,041	Substation
\$	50,382	AFUDC
\$	1,304,352	Contingency
\$	17,051,775	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

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Engineering Time	36-48	Months
Procurement Time	36-48	Months
Construction Time	36-48	Months
Total Project Length	36-48	Months

Figure 1 – Nashua-Smithville 161kV Line





Interconnection Facilities Study

**Costs associated with
DISIS-2022-001 Restudy #2
Rebuild the NASHUA 5 to G22-073-TAP
161kV Line 1**

June 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-2022-001 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.

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Upgrade Type	UID	Upgrade Name	DISIS Cost Estimate	DISIS Lead Time
Current Study	172090	Rebuild the NASHUA 5 to G22-073-TAP 161kV Line 1	\$ 3,881,155.00	36 Months

Rebuild the NASHUA 5 to G22-073-TAP 161kV Line 1

161kV Substation

Network Upgrades for G22-073-TAP 161kV line terminal at Nashua substation, including removing wavetrap/tuner, upgrading jumpers and 161 kV switches, replacing the 161 kV deadend, adding fiber to the control enclosure, and replacing the line/breaker panel. UID:172090

161kV Transmission

Network Upgrades to rebuild 0.4 miles of 161kV single-circuit transmission. Existing easements are assumed to be adequate. UID:172090

Total Cost

The total cost estimate for this Network Upgrade is:

\$	3,166,335	Transmission Line
\$	645,864	Substation
\$	9,083	AFUDC
\$	59,871	Contingency
\$	3,881,155	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

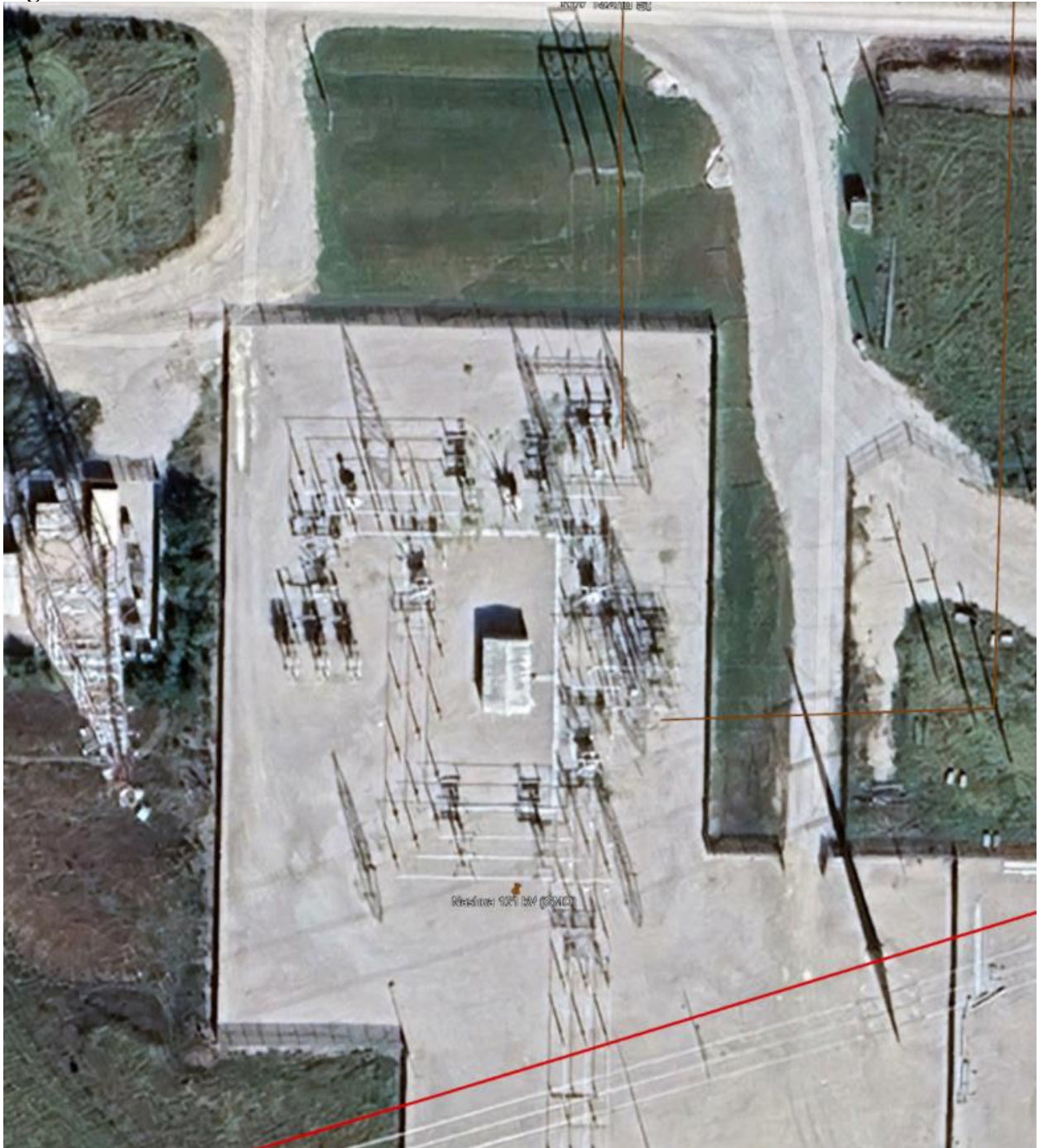
Agreement. However, recent cost fluctuations in materials are very significant and the accuracy of this estimate at the time of actual settings cannot be assured.

Time Estimate

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Engineering Time	36	Months
Procurement Time	36	Months
Construction Time	36	Months
Total Project Length	36	Months

Figure 1 – Nashua 161kV Substation





Interconnection Facilities Study

**Costs associated with
DISIS-2022-001 Restudy #2
Rebuild the Smithville to Platte City
161kV Line**

June 2026

Introduction

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Upgrade Type	UID	Upgrade Name	DISIS Cost Estimate	DISIS Lead Time
Current Study	172091	Rebuild the SMTHVL 5 to PLTCTY 5 161kV Line 1	\$19,548,860.00	36 Months

Rebuild the Smithville to Platte City 161kV Line 1

161kV Substation

Network Upgrades for Smithville 161kV line terminal at Platte City substation, including removing wavetrap/tuner, upgrading jumpers and 161 kV switches, replacing the 161 kV deadend, adding fiber to the control enclosure, and replacing the line/breaker panel.

UID:172091

Network Upgrades for Platte City 161kV line terminal at Smithville substation, including removing wavetrap/tuner, upgrading jumpers and 161 kV switches, replacing the 161 kV deadend, adding fiber to the control enclosure, and replacing the line/breaker panel.

161kV Transmission

Network Upgrades to rebuild 7.5 miles of 161kV single-circuit transmission. 2.4mi of this existing transmission line is double-circuit with KCI-Platte City 161kV. 50ft additional easement for 2.4mi near Platte City SS due to L7 configuration allowing new line to build adjacent to. This estimate also accounts to rebuild 2.4mi of the KCI-Platte City 161kV transmission line in the area of L7. Final configuration of the L7 area will be two parallel single circuit transmission lines. UID:172091

Total Cost

The total cost estimate for this Network Upgrade is:

\$	18,093,348	Transmission Line
\$	1,291,729	Substation
\$	44,039	AFUDC
\$	119,742	Contingency
\$	19,548,860	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
Total Project Length	36	Months

Figure 1 – Smithville-Platte City 161kV Transmission Line





Interconnection Facilities Study

**Costs associated with
DISIS-2022-001 Restudy #2
Rebuild the Smithville to G22-073-TAP
161kV Line 1**

June 2026

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Upgrade Type	UID	Upgrade Name	DISIS Cost Estimate	DISIS Lead Time
Current Study	172092	Rebuild the SMTHVL 5 to G22-073-TAP 161kV Line 1	\$5,744,840.00	36 Months

Rebuild the Smithville to G22-073-TAP 161kV Line 1

161kV Substation

Network Upgrades for G22-073-TAP 161kV line terminal at Smithville substation, including removing wavetrap/tuner, upgrading jumpers and 161 kV switches, replacing the 161 kV deadend, adding fiber to the control enclosure, and replacing the line/breaker panel. UID:172092

161kV Transmission

Network Upgrades to rebuild 1.9 miles of 161kV single-circuit transmission. New transmission easements are included for 0.6mi of the project. UID:172092

Total Cost

The total cost estimate for this Network Upgrade is:

\$	5,025,930	Transmission Line
\$	645,864	Substation
\$	13,174	AFUDC
\$	59,871	Contingency
\$	5,744,840	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

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Engineering Time	36	Months
Procurement Time	36	Months
Construction Time	36	Months
Total Project Length	36	Months

Figure 1 – Smithville 161kV Substation

