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

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

Figure 1 – Nashua-Smithville 161kV Line