Interconnection Facilities Study

Costs associated with
DISIS-2022-001
GEN-2022-144

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	158078	Blue Mills BESS 161kV Substation GEN-2022-144 Interconnection (TOIF) (EM)	$ 1,066,195.00	48 Months
Interconnection	158079	Blue Mills BESS 161kV Substation GEN-2022-144 Interconnection (Non-Shared NU) (EM)	$ 15,013,945.00	56 Months

Blue Mills BESS 161kV Substation GEN-2022-144 Interconnection (TOIF) (EM)

161kV Substation

TOIF for connecting to one of the 161kV terminals to accommodate Peregrine Energy GEN-2022-144 (200MW of Battery/Storage) at Blue Mills 161kV Substation. This estimate is the cost associated with the Transmission Owner Interconnection Facilities for a terminal at the Blue Mills 161kV substation for GEN-2022-144. UID 158078

Total Cost

The total cost estimate for this TOIF is:

$	0	Transmission Line
$	973,283	Substation
$	3,190	AFUDC
$	89,722	Contingency
$	1,066,195	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	12-18	Months
Procurement Time	36-48	Months
Construction Time	36-48	Months
Total Project Length	36-48	Months

Blue Mills BESS 161kV Substation GEN-2022-144 Interconnection (Non-Shared NU) (EM)

161kV Substation

Non-shared Network Upgrades for connecting to one of the 161kV terminals to accommodate Peregrine Energy GEN-2022-144 (200MW of Battery/Storage). This estimate is the cost associated with rebuilding the current flat bus to a ring bus configuration. This estimate is for the ring bus only and does not include replacing or relocating the two existing 161/12kV transformers. This will require land acquisition and a fence expansion. All line swap costs are not included and should be estimated by Independence Power and Light, as they own the transmission lines into the substation. UID 158079

Total Cost

The total cost estimate for this Network Upgrade is:

$	0	Transmission Line
$	13,708,098	Substation
$	44,908	AFUDC
$	1,260,939	Contingency
$	15,013,945	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	12-18	Months
Procurement Time	36-48	Months

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

Figure 1 – Blue Mills 161kV Substation