Interconnection Facilities Study

Costs associated with DISIS-2023-001 GEN-2023-220

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	159018	Emporia Energy Center - Swissvale 345 kV Line GEN-2023-220 Interconnection (TOIF) (Evergy)	$ 1,958,092.00	56 months
Interconnection	159019	Emporia Energy Center - Swissvale 345 kV Line GEN-2023-220 Interconnection (Non-Shared NU) (Evergy)	$ 32,882,571.00	56 months

Emporia Energy Center - Swissvale 345 kV Line GEN-2023-220 Interconnection (TOIF) (Evergy)

345kV Substation

TOIF for accommodating GEN-2023-220 (250MW of Solar). This estimate is the cost associated with the Transmission Owner Interconnection Facilities for a greenfield substation on the Emporia Energy Center-Swissvale 345kV line, for the GEN-2023-220 line terminal. The estimate assumes there is an existing 345kV ring bus substation with existing control enclosure. Estimate includes line steel and equipment, which includes three VT's, three CT's and dead end. Cost is for one 345kV line terminal. UID 159018

Total Cost

The total cost estimate for this Network Upgrade is:

$	0	Transmission Line
$	1,787,954	Substation
$	5,856	AFUDC
$	164,281	Contingency
$	1,958,092	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	56	Months
Procurement Time	56	Months
Construction Time	56	Months
Total Project Length	56	Months

Emporia Energy Center - Swissvale 345 kV Line GEN-2023-220 Interconnection (Non-Shared NU) (Evergy)

345kV Substation

Network Upgrade to construct a greenfield 345kV ring bus with three line terminals on the Emporia Energy Center (EEC)-Swissvale 345kV line to accommodate GEN-2023-220 (250MW of Solar). The transmission line estimates assume that new substation is adjacent to existing easement and fiber is not required due to POI being approximately 14 miles from EEC. Taps will consist of (2) single spans. UID 159019

Total Cost

The total cost estimate for this Network Upgrade is:

$	4,303,350	Transmission Line
$	25,993,257	Substation
$	98,352	AFUDC
$	2,487,611	Contingency
$	32,882,571	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	56	Months
Procurement Time	56	Months
Construction Time	56	Months
Total Project Length	56	Months

Figure 1 – Emporia Energy Center-Swissvale 345kV