



Colorado Springs Utilities

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INTERCONNECTION FACILITY STUDY

for

Generation Interconnection Request CSUT 2025-8

**100MW Battery Energy Storage System
In Colorado Springs, Colorado**

August 3, 2026

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Colorado Springs Utilities Transmission Planning

Contents

SUMMARY	3
INTRODUCTION	4
INTERCONNECTION CUSTOMER INTERCONNECTION FACILITIES	5
SHORT CIRCUIT EVALUATION	5
STABILITY EVALUATION	5
TRANSMISSION OWNER INTERCONNECTION FACILITIES.....	6
CONCLUSION	7

SUMMARY

Pursuant to the Transitioning Western Entities into SPP's Generator Interconnection Process (GI RTOE Transition) and at the request of the Southwest Power Pool (SPP), Colorado Springs Utilities (Utilities) performed the following facility Study to satisfy the Facility Study agreement executed by the requesting customer for Colorado Springs Utilities Generation Interconnection request CSUT-2025-8. The request for interconnection was placed with Utilities and will transition to SPP per the GI RTOE Transition process. The requirements for interconnection consist of design, procurement, construction, installation, and commissioning of all equipment installed within the existing Horizon Substation extending to the Point of Change of Ownership (PCO) at the line dead-end and the Point of Interconnection (POI) at the main bus tap point. The total cost for Utilities to accommodate the interconnection request at the 230kV POI is approximately \$1,910,000.

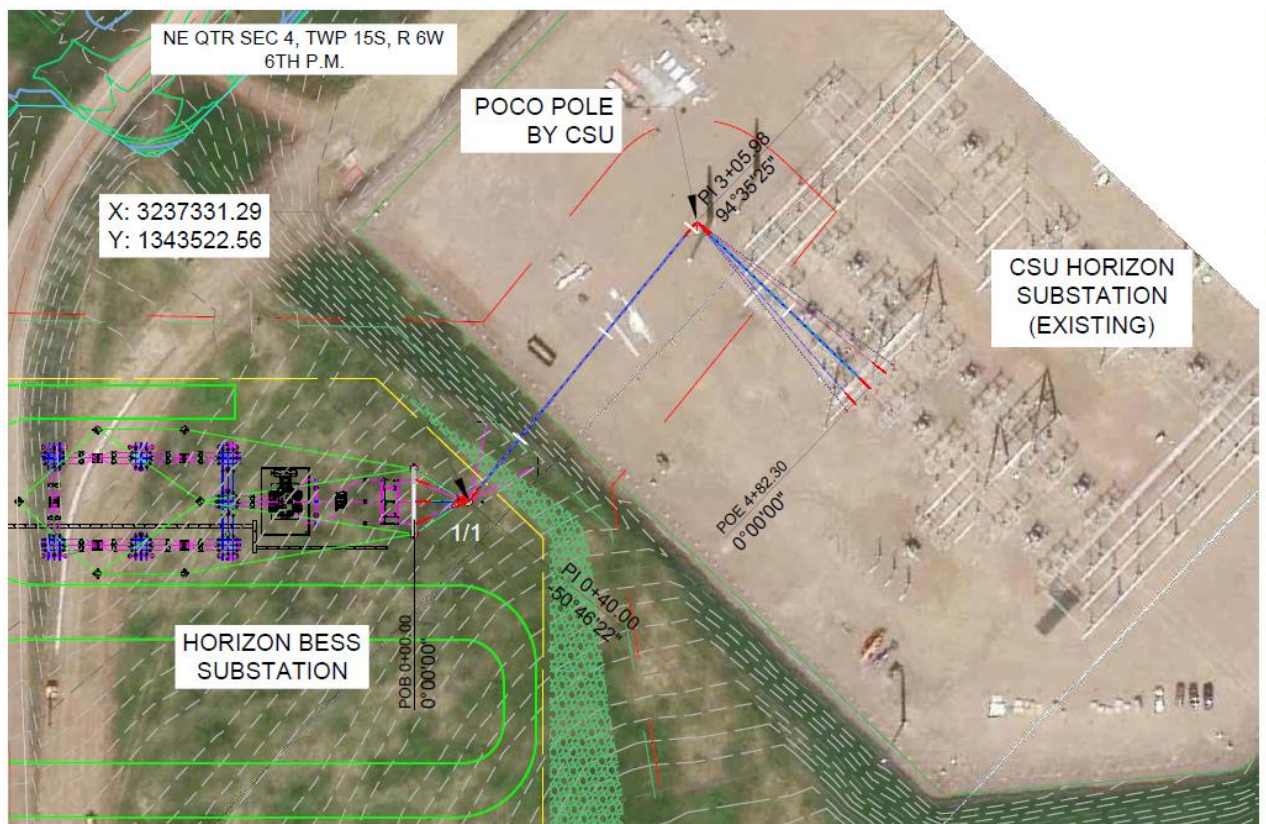


Figure 1: CSUT-2025-8 230 kV Horizon Substation Diagram

INTRODUCTION

This Interconnection Facilities Study (IFS) for Interconnection Request CSUT-2025-8 is for a 100 MW Battery Energy Storage System facility located in Colorado Springs, Colorado. The Interconnection Request was studied in the Colorado Springs Utilities 2025 Transitional Cluster Study. The Interconnection Customer's requested commercial in-service date is 09/01/2027 with a requested interconnection date for testing of 01/10/2027.

The interconnecting Transmission Owner, Colorado Springs Utilities, has determined that full Interconnection Service can be available after the Transmission Owner Interconnection Facilities (TOIF) required for full interconnection service are completed.

The primary objective of the IFS is to identify necessary TOIF, other directly assigned upgrades, estimated costs, and associated upgrade lead times needed to grant the requested Interconnection Service.

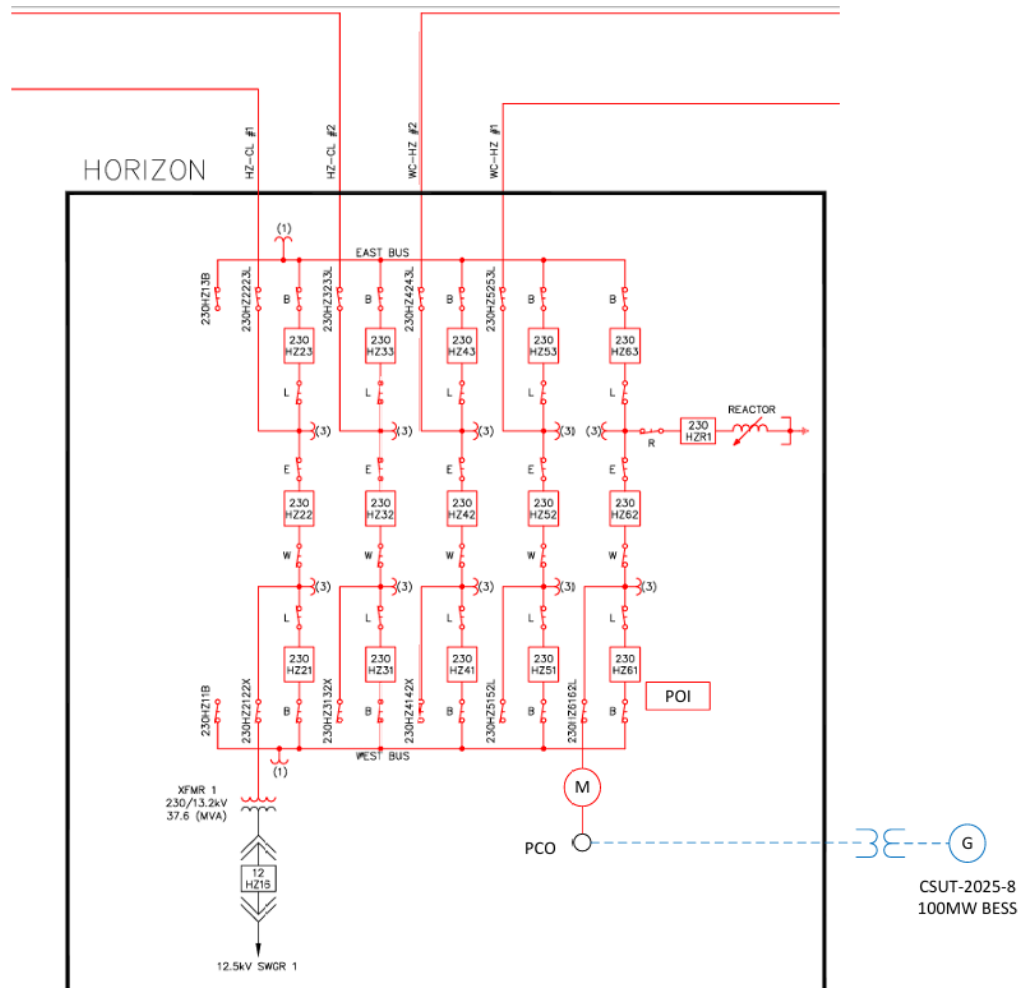


Figure 2: CSUT-2025-8 230 kV Horizon Substation One-Line Diagram

INTERCONNECTION CUSTOMER INTERCONNECTION FACILITIES

This Battery Energy Storage System (BESS) project consists of one –hundred twelve (112) Tesla Megapack 2 XL inverters with a total capacity of 100 MW at POI. A 0.1-mile, 230 kV generator tie line that will interconnect to the Horizon 230 kV substation.

The Interconnection Customer’s Interconnection Facilities to be designed, procured, constructed, installed, commissioned, maintained, and owned by the Interconnection Customer at its sole expense include:

- 34.5 kV underground cable collection circuits;
- The project will connect the existing 34.5 kV collector substation to the Point of Interconnection (POI) at the 230 kV bus at the existing Horizon 230 kV Substation, which is owned and maintained by Utilities;
- All transmission facilities required to connect the Interconnection Customer’s substation to the PCO;
- Equipment at the Interconnection Customer’s substation necessary to maintain continuous rated power output at the high-side of the generator substation at a power factor within the range of 95% lagging and 95% leading, in accordance with Federal Energy Regulatory Commission (FERC) Order No. 827. The Interconnection Customer may use inverter manufacturing options for providing reactive power under no-generation or reduced-generation conditions. The Interconnection Customer will be required to provide documentation and design specifications demonstrating compliance with these requirements; and,
- All necessary relay, protection, control and communication systems required to protect the Interconnection Customer’s Interconnection Facilities and Generating Facilities and to coordinate with the Transmission Owner’s relay, protection, control and communication systems.

SHORT CIRCUIT EVALUATION

It is standard practice for Utilities to recommend replacement of a circuit breaker when the fault current through the breaker exceeds 100% of its interrupting rating, as determined using the breaker rating methodologies specified in the ANSI/IEEE Standards C37.5-1979, C37.010-1979 and C37.04-1979.

In the Utilities system, no breakers were found to exceed their interrupting ratings following the addition of the proposed generation and associated interconnection facilities. Therefore, there are no additional short circuit upgrade costs associated with the CSUT-2025-8 interconnection.

STABILITY EVALUATION

Transient stability results indicate that the project is compliant with the applicable NERC/WECC criteria. No system instability issues were identified.

TRANSMISSION OWNER INTERCONNECTION FACILITIES

To facilitate interconnection, the interconnecting Transmission Owner will perform the work necessary for the acceptance of the Interconnection Customer's Interconnection Facilities, as described below

Table 1 lists the Interconnection Customer's estimated cost responsibility for TOIF and provides an estimated lead time for completion of construction. The estimated lead time commences upon full execution of Generator Interconnection Agreement.

Table 1: Summary Cost Estimate Details - Interconnection Facilities CSUT-2025-8

Element	Description	Cost Est. Millions
Horizon Substation 230 kV line termination equipment Estimated Lead Time 12 months	Design, purchase, construct / install and test all equipment installed inside the existing Station that is located between the PCO (line dead-end) and the POI (main bus tap point), consisting primarily of the following equipment: • One (1) 230 kV slack span from monopole dead-end outside substation fence to new A-frame structure inside the Horizon 230 kV substation. • One (1) 230 kV 3-phase gang line end disconnect switch and associated structure. • Transmission structures based on steel monopoles with a dead-end • CT/VT combination metering units (high accuracy class). • PQ metering panel including SEL-735 Rev/PQ meter (typical) and line meters. • Relaying for radial 230 kV line protection; primary, secondary, and breaker-failure. • Three (3) 230 kV surge arresters (280 kV MCOV or as required). • Line termination SCADA and telecommunication additions to RTU. Other associated substation equipment including, but not limited to, grounding, conduit, cable, foundations, support steel, bus and insulators.	\$1.91 M

CONCLUSION

After all Interconnection Facilities have been placed into service, Interconnection Service for 100 MW can be granted.