

Large Generator Interconnection Facilities Study Report

FINAL

Completed for ("Interconnection Customer") C1-11

Proposed Point of Interconnection **Huntington-Spanish Fork 345 kV transmission line**

January 31, 2025



TABLE OF CONTENTS

1.0	.0 DESCRIPTION OF THE PROJECT				
2.0	STUDY SCOPE AND OBJECTIVES	.]			
3.0	STUDY ASSUMPTIONS	. 1			
4.0					
5.0					
6.0	SCOPE OF WORK				
6.1	Generating Facility Requirements				
6.	1.1 Interconnection Customer to be Responsible For				
6.	1.2 TRANSMISSION PROVIDER TO BE RESPONSIBLE FOR	9			
6.2	Point of Interconnection.				
6.	2.1 Interconnection Customer to be Responsible For	1(
6.	2.2 TRANSMISSION PROVIDER TO BE RESPONSIBLE FOR	1			
6.3	Other	1			
6.	3.1 TRANSMISSION PROVIDER TO BE RESPONSIBLE FOR	12			
7.0	Cost Estimate (+/- 20%)	13			
8.0	Milestone Schedule				
9.0	PARTICIPATION BY AFFECTED SYSTEMS	15			
10.0	APPENDICES	15			
10.1	APPENDIX 1: HIGHER PRIORITY REQUESTS	16			
10.2	Appendix 2: Contingent Facilities	17			
10.3	APPENDIX 2: PROPERTY REQUIREMENTS	15			



1.0 DESCRIPTION OF THE PROJECT

The Interconnection Customer has proposed to interconnect 450 megawatts ("MW") of new solar and battery storage generation to PacifiCorp's ("Transmission Provider") Huntington-Spanish Fork 345 kV transmission line located in Emery County, Utah. The Interconnection Request is proposed to consist of six hundred ten (610) TMEIC PVU-L0840GR solar inverters for a total output of 450 MW at the POI. The Interconnection Request also consists of three hundred ten (310) AC-coupled TMEIC BSU-L0840GR battery storage inverters The requested commercial operation date is November 30, 2024.

Interconnection Customer will <u>NOT</u> operate this generator as a Qualified Facility as defined by the Public Utility Regulatory Policies Act of 1978 (PURPA).

The Transmission Provider has assigned the Project "C1-11."

2.0 STUDY SCOPE AND OBJECTIVES

The objective of the facilities study is to:

- complete a facilities analysis, which shall specify and estimate the cost of equipment, engineering, procurement, and construction required to address issues as outlined in the system impact study, and
- provide a scope of work and an estimated cost and schedule for completing the scope of work.

The information contained in this study report is based on preliminary information and not to be used for construction.

3.0 STUDY ASSUMPTIONS

- All active higher priority transmission service and/or generator interconnection requests will be considered in this study and are listed in Appendix 1. If any of these requests are withdrawn, the Transmission Provider reserves the right to restudy this request, as the results and conclusions contained within this study could significantly change.
- For study purposes there are two separate queues:
 - Transmission Service Queue: to the extent practical, all network upgrades that are required to accommodate active transmission service requests will be modeled in this study.
 - o Generation Interconnection Queue: Interconnection Facilities associated with higher queue interconnection requests will be modeled in this study.
- The Interconnection Customer's request for energy or network resource interconnection service in and of itself does not convey transmission service. Only a Network Customer may make a request to designate a generating resource as a Network Resource. Because the queue of higher priority transmission service requests may be different when a Network Customer requests network resource designation for this Generating Facility, the available capacity or transmission modifications, if any, necessary to provide network resource interconnection service may be significantly



different. Therefore, the Interconnection Customer should regard the results of this study as informational rather than final.

- This study assumes the Project will be integrated into Transmission Provider's system at the agreed upon and/or proposed Point of Interconnection.
- The Interconnection Customer will construct and own any facilities required between the Point of Interconnection and the Project.
- Line reconductor or fiber underbuild required on existing poles will be assumed to follow the most direct path on the Transmission Provider's system. If during detailed design the path must be modified it may result in additional cost and timing delays for the Interconnection Customer's Project.
- Generator tripping may be required for certain outages.
- All facilities will meet or exceed the minimum Western Electricity Coordinating Council ("WECC"), North American Electric Reliability Corporation ("NERC"), and Transmission Provider performance and design standards.
- The following Transmission Provider planned system improvements were assumed in service:
 - o Gateway South Aeolus-Clover 500 kV transmission line (Q4 2024)
 - o Camp Williams bus improvements (Q4 2024)
 - o Spanish Fork–Mercer 345 kV line (Q4 2027)
- The following system improvements assigned to higher priority Interconnection and/or Transmission Service Requests were assumed in service:
 - o Q0792 added to Mathington remedial action scheme ("RAS") (Q0792 Q4 2025)
 - Rebuild Carbon–Helper Tap–Heys–Mathington 138 kV line to 795 ACSR (Q0792 Date Q4 2025)
 - o Upgrade of the Emery 345-138 kV transformers (Q0823 Q1 2027)
 - o Replace jumpers on the Huntington end of the Emery-Huntington 345 kV transmission line. (Transition Cluster Date TBD)
 - o Reconductor 5.5 miles of the Clover Tap Nebo 138 kV line (TSR Q3278).
 - Spanish Fork Emery clearance improvement (TSR Q3163). Planned in-service is O4 2025.
 - o Rebuild 146 miles of Q815 POI Sigurd 230 kV line to 1272 ACSR (TSR Q3376)
 - o New Sigurd 230 kV Phase Shifting Transformer #2 (TSR Q3376)
 - o Two new 100 MVAr 230 kV cap banks at line side of Sigurd Phase Shifting transformers (TSR Q3376).
- This report is based on information available at the time of the study. It is the Interconnection Customer's responsibility to check the Transmission Provider's web site regularly for Transmission system updates at (https://www.oasis.oati.com/ppw)

4.0 Type of Interconnection Service

The Interconnection Customer has selected Energy Resource Interconnection Service ("ERIS").

5.0 Proposed Point of Interconnection

The Interconnection Customer's proposed Generating Facility is to be interconnected to the Transmission Provider's Huntington-Spanish Fork 345 kV transmission line via a new Point of



Interconnection substation. Figure 1 below, is a one-line diagram that illustrates the interconnection of the proposed Generating Facility to the Transmission Provider's system.

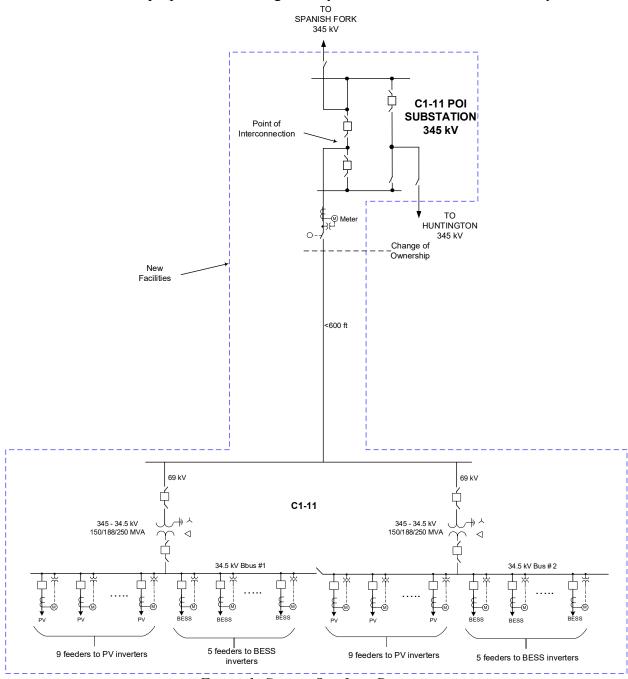


Figure 1: System One Line Diagram

January 31, 2025 C1-11 Page 3



6.0 SCOPE OF WORK

6.1 Generating Facility Requirements

The following outlines the design, procurement, construction, installation, and ownership of equipment at the Interconnection Customer's Generation Facility.

6.1.1 Interconnection Customer to be Responsible For

- Procure all necessary permits, lands, rights of way and easements required for the construction and continued maintenance of the Interconnection Customer's Generating Facility and collector substation.
- Design, procure, construct, own and maintain the Interconnection Customer's Generating Facility and associated collector substation.
- Design the Generating Facility with reactive power capabilities necessary to operate within the full power factor range of 0.95 leading to 0.95 lagging as measured at the high side of the Interconnection Customer's GSU transformer. This power factor range shall be dynamic and can be met using a combination of the inherent dynamic reactive power capability of the generator or inverter, dynamic reactive power devices and static reactive power devices to make up for losses.
- Design the generating facility such that it can provide positive reactive support (i.e., supply reactive power to the system) immediately following the removal of a fault or other transient low voltage perturbations or install dynamic voltage support equipment. These additional dynamic reactive devices shall have correct protection settings such that the devices will remain on line and active during and immediately following a fault event.
- Operate the Generating Facility to the voltage set point to be provided by the Transmission Provider.
- Equip the Generating Facility with automatic voltage-control equipment and operate with the voltage regulation control mode enabled unless explicitly authorized to operate another control mode by the Transmission Provider.
- Install, maintain, and operate a functioning governor or equivalent controls to ensure primary frequency capability as required under FERC Order 842.
- Install a Phasor Measurement Unit to collect data from the Project. The data must be collected, held for a minimum of 90 days and be able to stream to the Planning Coordinator for each of the Generator Facility's step-up transformers measured on the low side of the GSU at a sample rate of at least 60 samples per second and synchronized within +/- 2 milliseconds of the Coordinated Universal Time (UTC). Initially, the following data must be collected:
 - o Three phase voltage and voltage angle (analog)
 - Three phase current (analog)





- Data requirements are subject to change as deemed necessary to comply with local and federal regulations.
- Operate the Generating Facility so as to maintain the voltage at the Point of Interconnection, or other designated point as deemed appropriate by Transmission Provider, at a voltage schedule to be provided by the Transmission Provider following testing. Voltage will typically be required to operate between 1.00 and 1.04 per unit.
- Operate the Generating Facility with a voltage droop.
- Have any Transmission Provider required studies, such as a voltage coordination study, performed and provide results to Transmission Provider. Any additional requirements identified in these studies will be the responsibility of the Interconnection Customer.
- Meet the Federal Energy Regulatory Commission (FERC) and WECC low voltage ride-through requirements as specified in the interconnection agreement.
- Provide test results to the Transmission Provider verifying that the inverters for this Project have been programmed to meet all PRC-024 requirements rather than manufacturer IEEE distribution standards.
- Provide the Transmission Provider the manufacturer Electromagnetic Transient Modeling ("EMT") model a minimum of 180 days prior to Commercial Operation.
- Provide the Transmission Provider a standard model from the WECC Approved Dynamic Model Library.
- Design the Generating Facility control system such that it can receive an analog output from the Transmission Provider for setpoint control and provide an analog input back to the Transmission Provider on the status of the setpoint.
- Design and construct the collector substation such that the ground grid can be connected to the POI substation ground grid to support the installation of a Transmission Provider owned and maintained bus differential scheme. The Interconnection Customer is responsible to ensure the ground grid design supports safe step and touch potentials.
- Design, provide and install conduits between the Interconnection Customer collector substation and the marshalling cabinet to be installed just inside the fence of the POI substation to support copper circuits installed between the facilities.
- Provide and install two sets of current transformers to be fed into the
 bus differential relays with a maximum current transformer ratio
 matching the maximum CT ratio of the breakers at the POI substation.
 Provide and install conduit and cabling to the POI substation
 marshalling cabinet with these outputs.
- Provide a separate graded, grounded, and fenced area along the perimeter of the Interconnection Customer's collector substation for the Transmission Provider to install a control building. The site will share a fence and ground grid with the Interconnection Customer





collector substation and have separate, unencumbered access for the Transmission Provider. Fencing, gates, and road access shall meet Transmission Provider standards. The Interconnection Customer shall provide a Transmission Provider approved easement for its control building.

- Perform a CDEGS grounding analysis for both the collector substation site and the Transmission Provider control building and provide the results to the Transmission Provider.
- Provide permanent AC power to the Transmission Provider's control building.
- Design the collector substation such that the ground grid can be connected to the POI substation ground grid to support the installation of a Transmission Provider owned and maintained bus differential scheme. The Interconnection Customer will be responsible to ensure the ground grid design supports safe step and touch potentials.
- Provide and install conduit and control cabling (number and size TBD)
 and hard wire the Interconnection Customer's source devices to the
 Transmission Provider's marshalling cabinet located just outside the
 POI substation (replicated values are not allowed).
- Provide and install conductor, shield wire and line hardware in sufficient quantities to allow the Transmission Provider to terminate the line/bus connection from the collector substation deadend structure to the POI substation dead end structure.
- Provide the following points which are based on the Interconnection Customer's most recent design information. Please note that this list of points could change if the Interconnection Customer's final design changes:

Analogs:

- o Real power flowing through the #1 345 34.5 kV transformer
- Reactive power flowing through the #1 345 34.5 kV transformer
- o 34.5 kV Real power PV Breaker 1
- o 34.5 kV Reactive power PV Breaker 1
- o 34.5 kV Real power PV Breaker 2
- o 34.5 kV Reactive power PV Breaker 2
- o 34.5 kV Real power PV Breaker 3
- o 34.5 kV Reactive power PV Breaker 3
- o 34.5 kV Real power PV Breaker 4
- o 34.5 kV Reactive power PV Breaker 5
- o 34.5 kV Real power PV Breaker 5
- o 34.5 kV Reactive power PV Breaker 5
- o 34.5 kV Real power PV Breaker 6
- o 34.5 kV Reactive power PV Breaker 6
- o 34.5 kV Real power PV Breaker 7
- o 34.5 kV Reactive power PV Breaker 7
- 34.5 kV Real power PV Breaker 8





- o 34.5 kV Reactive power PV Breaker 8
- o 34.5 kV Real power PV Breaker 9
- o 34.5 kV Reactive power PV Breaker 9
- o 34.5 kV Real power BES Breaker 1
- o 34.5 kV Reactive power BES Breaker 1
- 34.5 kV Real power BES Breaker 2
- o 34.5 kV Reactive power BES Breaker 2
- o 34.5 kV Real power BES Breaker 3
- 34.5 kV Reactive power BES Breaker 3
- 34.5 kV Real power BES Breaker 4
- o 34.5 kV Reactive power BES Breaker 4
- o 34.5 kV Real power BES Breaker 5
- o 34.5 kV Reactive power BES Breaker 5
- o Real power flowing through the #2 345 34.5 kV transformer
- Reactive power flowing through the #2 345 34.5 kV transformer
- o 34.5 kV Real power PV Breaker 10
- o 34.5 kV Reactive power PV Breaker 10
- o 34.5 kV Real power PV Breaker 11
- o 34.5 kV Reactive power PV Breaker 11
- o 34.5 kV Real power PV Breaker 12
- 34.5 kV Reactive power PV Breaker 12
- o 34.5 kV Real power PV Breaker 13
- 34.5 kV Reactive power PV Breaker 13
- o 34.5 kV Real power PV Breaker 14
- 34.5 kV Reactive power PV Breaker 14
- o 34.5 kV Real power PV Breaker 15
- 34.5 kV Reactive power PV Breaker 15
- o 34.5 kV Real power PV Breaker 16
- o 34.5 kV Reactive power PV Breaker 16
- o 34.5 kV Real power PV Breaker 17
- o 34.5 kV Reactive power PV Breaker 17
- o 34.5 kV Real power PV Breaker 18
- o 34.5 kV Reactive power PV Breaker 18
- 34.5 kV Real power BES Breaker 6
- o 34.5 kV Reactive power BES Breaker 6
- 34.5 kV Real power BES Breaker 7
- 34.5 kV Reactive power BES Breaker 7
- o 34.5 kV Real power BES Breaker 8
- o 34.5 kV Reactive power BES Breaker 8
- 34.5 kV Real power BES Breaker 9
- o 34.5 kV Reactive power BES Breaker 9
- o 34.5 kV Real power BES Breaker 10
- o 34.5 kV Reactive power BES Breaker 10
- Global Horizontal Irradiance (GHI)
- Average Plant Atmospheric Pressure (Bar)





- Average Plant Temperature (Celsius)
- o BESS current energy capacity (MWh)
- o BESS current energy capacity (%)
- o BESS cycles or health (cycle count or % health)
- Max Gen Limit MW Set Point Feed Back
- Potential Power MW
- o 345 kV A phase voltage
- o 345 kV B phase voltage
- 345 kV C phase voltage

Analog Written to the RTU:

o Max Gen Limit MW Set Point

Status:

- o 345 kV transformer 1 high side breaker
- o 345 kV transformer 1 low side breaker
- o 34.5 kV PV breaker 1
- o 34.5 kV PV breaker 2
- o 34.5 kV PV breaker 3
- o 34.5 kV PV breaker 4
- o 34.5 kV PV breaker 5
- o 34.5 kV PV breaker 6
- o 34.5 kV PV breaker 7
- o 34.5 kV PV breaker 8
- o 34.5 kV PV breaker 9
- 34.5 kV BES breaker 1
- o 34.5 kV BES breaker 2
- o 34.5 kV BES breaker 3
- 34.5 kV BES breaker 4
- o 34.5 kV BES breaker 5
- o 345 kV transformer 2 high side breaker
- 345 kV transformer 2 low side breaker
- 34.5 kV PV breaker 10
- o 34.5 kV PV breaker 11
- o 34.5 kV PV breaker 12
- o 34.5 kV PV breaker 13
- o 34.5 kV PV breaker 14
- o 34.5 kV PV breaker 15
- 34.5 kV PV breaker 16
- o 34.5 kV PV breaker 17
- 34.5 kV PV breaker 18
- 34.5 kV BES breaker 6
- o 34.5 kV BES breaker 7
- 34.5 kV BES breaker 8
- o 34.5 kV BES breaker 9
- o 34.5 kV BES breaker 10
- Procure and install Transmission Provider approved H-Frame structures for the Transmission Provider's instrument transformers.





The installation locations shall be coordinated with the Transmission Provider.

- Install complete conduit and control cable provided by the
 Transmission Provider from each of the Transmission Provider's
 instrument transformers to the Transmission Provider's collector
 substation control building. Leave sufficient quantities of control cable
 to allow the Transmission Provider to terminate the cable inside its
 control building.
- Install the Transmission Provider provided instrument transformers.
- Procure and install disconnect switches on each side of each of the instrument transformers.
- Provide Transmission Provider unfettered and maintained access to the Transmission Provider's instrument transformers.
- Procure and install Transmission Provider approved fiber optic cable in conduit from Transmission Provider's collector substation control building to the fence line of the POI substation. Leave a sufficient quantity of cable to allow the Transmission Provider to terminate the cable onto its communications equipment.
- Provide Transmission Provider approved easements for all Transmission Provider Interconnection Facilities to be installed in the Interconnection Customer's collector substation.
- Arrange for and provide permanent retail service for power that will
 flow from the Transmission Provider's system when the Project is not
 generating with the retail service provider in this area. If the retail
 provides is not Rocky Mountain Power this will require the retail
 service provider to obtain transmission service from the Transmission
 Provider. These arrangements must be in place prior to approval for
 backfeed.
- Provide any construction or backup retail service necessary for the Project.
- Provide a professional engineer ("PE") stamped maintenance plan package for all Interconnection Customer protective equipment prior to energization.

6.1.2 Transmission Provider to be Responsible For

- Provide the Interconnection Customer the designated point at which the voltage is to be maintained and the associated voltage schedule.
- Identify any necessary studies that the Interconnection Customer must have performed.
- Install a control building on the property prepared by the Interconnection Customer.
- Procure and install a backup DC battery system for the Transmission Provider control building.



- Procure and install a communications panels and associated communications equipment in the Transmission Provider's control building.
- Coordinate with the Interconnection Customer on the location of the Transmission Provider's instrument transformers.
- Provide the Interconnection Customer the specifications for the instrument transmission installation structures.
- Design, procure and install two sets of 345 kV revenue metering equipment including metering panels, primary and secondary revenue quality meters, test switches, junction boxes and secondary metering wire.
- Procure and provide to the Interconnection Customer two sets of 345 kV instrument transformers to be on installed on the high side of each of the main step-up transformers.
- Design, procure and install twenty-eight (28) sets of 34.5 kV revenue metering equipment including metering panels, primary and secondary revenue quality meters, test switches, junction boxes and secondary metering wire.
- Procure and provide to the Interconnection Customer 34.5 kV instrument transformers to be on installed on each of the collector system strings.
- Provide the control cable to be installed by the Interconnection Customer from the instrument transformers to the Transmission Provider's control building and coordinate on the location of the cable.
- Terminate the fiber optic cable provided by the Interconnection Customer in the control building communications panel.
- Establish an Ethernet connection for retail sales and generation accounting via the MV-90 translation system.

6.2 Point of Interconnection

The following outlines the design, procurement, construction, installation, and ownership of equipment at the Point of Interconnection.

6.2.1 Interconnection Customer to be Responsible For

- Coordinate the testing and commissioning of the communication path from the collector substation to the POI substation.
- If the Interconnection Customer controls a sufficient amount of property near the Transmission Provider's transmission line and wishes the Transmission Provider to construct the new POI substation on that property; coordinate with the Transmission Provider to provide real property rights.

6.2.2 TRANSMISSION PROVIDER TO BE RESPONSIBLE FOR

• Procure the necessary permits and/or property rights to allow for the construction of a new POI substation.





- Design, procure and construct, own and maintain the equipment to construct a new 345 kV substation to service as the Point of Interconnection which will include the following major pieces of equipment:
 - o (3)- 345kV, 3000A Circuit Breakers
 - o (9)- 345kV, 3000A, Group Operated Switches
 - (3)- 345kV, 3000A, Group Operated Switches with motor operators
 - o (6)- 345kV CCVT's
 - o (3)- 345kV CT/VT Combined Metering Units
 - o (9)- 345kV Arrestors
 - o 200KW (3) Phase Backup Generator
 - Marshalling Cabinets
 - Control building
- Terminate the lines running from Spanish Fork and Huntington substations.
- Terminate the last line segment running from the Interconnection Customer's collector substation into the POI substation deadend structure using Interconnection Customer provided and installed conductor, shield wire and line hardware.
- Design, procure and install line current differential relays for the protection of the lines to Spanish Fork and Huntington substations.
- Design, procure and install a bus differential relay system for the connection to the Interconnection Customer's collector substation.
- Procure and install a relay for under/over voltage and over/under frequency protection of the system.
- Include the following data points into the substation RTU: Analogs:
 - Net Generation MW
 - Net Generator MVAr
 - o Energy Register kWh
- Procure and install the necessary communications equipment for protection and data provision to the Transmission Provider's existing communications network.
- Design, procure and install 345 kV revenue metering equipment for the Project including two (2) revenue quality meters, test switch, instrument transformers, metering panels, junction box and secondary metering wire.
- Provide and install an Ethernet connection for retail sales and generation accounting via the MV-90 translation system.

6.3 Other

The following outlines the design, procurement, construction, installation, and ownership of equipment past the Point of Interconnection.



6.3.1 Transmission Provider to be Responsible For

- Huntington-Spanish Fork Transmission Line
 - Loop the transmission line in/out of the new POI substation which will require the installation of a minimum of four new transmission structures.
 - o Procure and install approximately 70 miles of fiber optic cable between the substations.

• Emery-Sigurd Transmission Line

 Procure and install approximately 75 miles of fiber optic cable from the C1-14 POI substation to the Emery and Q0787 POI substations.

• Spanish Fork Substation

- Upgrade/update relays to ensure compatibility with the relays to be installed in the C1-11 POI substation.
- o Install the required communications equipment and terminate the fiber to be installed from the C1-11 POI substation.

• Emery Substation

- Revise relays settings as necessary to support the clearance modifications of the transmission line to Sigurd substation.
- o Install the required communications equipment and terminate the fiber to be installed from the C1-14 POI substation.

• Sigurd Substation

- Revise relays settings as necessary to support the clearance modifications of the transmission line to Emery substation.
- o Install the required communications equipment and terminate the fiber to be installed from the C1-14 POI substation.

• Huntington Substation

- Upgrade/update relays to ensure compatibility with the relays to be installed in the C1-11 POI substation.
- o Install the required communications equipment and terminate the fiber to be installed from the C1-11 POI substation.

• System Operations Centers

 Update databases to include the Interconnection Customer's Generating Facility along with Interconnection Facilities and Network Upgrades.



7.0 COST ESTIMATE (+/- 20%)

The following estimate represents only scopes of work that will be performed by the Transmission Provider. Costs for any work being performed by the Interconnection Customer are not included.

Direct Assigned Interconnection Facilities Costs

C1-11 Collector substation	\$3,850,000

Install metering points

C1-11 POI substation \$1,530,000

Line termination and metering

Total: \$5,380,000

Station Equipment Network Upgrades

C1-11 POI substation \$19,050,000

Build new three breaker substation

Huntington – Spanish Fork 345kV Transmission line \$3,980,000

Loop in/out to C1-11 POI substation

Total: \$23,030,000

Shared Network Upgrades

The following estimated costs are the Interconnection Customer's proportional share of the overall estimated costs for the entire cluster area in which this Interconnection Request resides.

Huntington substation Communications and relaying equipment	\$212,000
Spanish Fork substation Communications and relaying equipment	\$410,000
Emery substation	\$212,000

Communications and relaying equipment

Sigurd substation \$410,000

Communications and relaying equipment

Emery-Sigurd transmission line \$5,385,000

Install approximately ~75 miles of fiber

Huntington-Spanish Fork transmission line \$5,605,000

Install approximately ~79 miles of fiber

Total Shared Network Upgrades: \$12,235,000



Total Network Upgrades: \$35,264,000

Grand Total: \$40,644,000

*Any distribution line modifications identified in this report will require a field visit analysis in order to obtain a more thorough understanding of the specific requirements. The estimate provided above for this work could change substantially based on the results of this analysis. Until this field analysis is performed the Transmission Provider must develop the Project schedule using conservative assumptions. The Interconnection Customer may request that the Transmission Provider perform this field analysis, at the Interconnection Customer's expense, prior to the execution of an Interconnection Agreement in order to obtain more cost and schedule certainty.

This estimate is as accurate as possibly given the level of detailed study that has been completed to date and approximates the costs incurred by Transmission Provider to interconnect this Generator Facility to Transmission Provider's electrical distribution or transmission system. The Interconnection Customer will be responsible for all actual costs, regardless of the estimated costs communicated to or approved by the Interconnection Customer.

8.0 Milestone Schedule

April 30, 2025
April 30, 2025
April 30, 2025
June 30, 2025
November 5, 2025
November 5, 2025
October 2, 2026
November 13, 2026
January 15, 2027
March 1, 2027
April 30, 2027
July 16, 2027



Interconnection Customer Commences Voltage Coordination Study	October 18, 2027
Interconnection Customer Submits Request for Voltage Schedule	January 14, 2028
Interconnection Customer Maintenance and Commissioning Plans Provided	May 19, 2028
Interconnection Customer and Transmission Provider Construction Complete	June 2, 2028
Transmission Provider Commissioning Activities Complete	September 14, 2028
Contingent Facilities Complete	September 15, 2028
Transmission Provider Commissioning Document Review Complete	September 22, 2028
Interconnection Customer's Facilities Receive Backfeed Power	September 25, 2028
Initial Synchronization/Generation Testing	September 28, 2028
Commercial Operation	October 27, 2028

^{*}Interconnection Customer initial design package shall include final generating facility location, inverter/turbine selection, basic protection package, tie line route and collector system locations and data as applicable. Interconnection Customer final design package shall include PE stamped issued for construction ("IFC") drawings for generating facility, collector substation, tie line as well as an updated PSS/e model and updated WECC approved model, electromagnetic transient ("EMT") model and a detailed short circuit model of its generation system using the ASPEN OneLine short circuit simulation program as applicable. The WECC model parameters must be adjusted to reflect the plant's actual anticipated performance. The plant controller must be included in the model. If there is to be coordination between facilities or a master VAR controller, this must be included in the detailed WECC dynamic model, as well as in the PSS/e user-written model.

Please note, the time required to perform the scope of work identified in this report does not support the Interconnection Customer's requested Commercial Operation date of November 30, 2024.

9.0 PARTICIPATION BY AFFECTED SYSTEMS

Transmission Provider has identified the following affected systems: Deseret Power, Tri State and WAPA LM

A copy of this report will be shared with each Affected System.

10.0 APPENDICES

Appendix 1: Higher Priority Requests Appendix 2: Contingent Facilities Appendix 3: Property Requirements



10.1 APPENDIX 1: HIGHER PRIORITY REQUESTS

All active higher priority Transmission Provider projects, and transmission service and/or generator interconnection requests will be considered in this study and are identified below. If any of these requests are withdrawn, the Transmission Provider reserves the right to restudy this request, as the results and conclusions contained within this study could significantly change.

Transmission/Generation Interconnection Queue Requests considered:

•		
LGI Q#	MW	TSR Q#
634	99	
636	99	
752	40	2867/2939
763	200	2872/2873
777	100	
778	200	2879
787	200	
788	200	
792	80	
799	67	
805	95	
815	20	
821	87	
822	30	
823	178	
838	525	
TCS-09	300	
TCS-41	31.1	



10.2 Appendix 2: Contingent Facilities

The following Interconnection Facilities and/or upgrades to the Transmission Provider's system are Contingent Facilities for the Interconnection Customer's Interconnection Request and must be in service prior to the commencement of generation activities:

The following Transmission Provider planned projects:

• Construction of a new Mercer-Spanish Fork 345 kV transmission line (Q4 2028)

The following upgrades assigned to the higher priority Transmission Service Request TSR 3163:

• Improve clearance on Spanish Fork-Emery transmission line (Q4 2025)

The following upgrades assigned to the higher priority Interconnection Request Q0792:

- Development and implementation of a new remedial action scheme.
- Rebuild of the Helper-Mathington 138 kV transmission line

These upgrades are currently assumed to be completed Q1 2025 and are estimated to cost \$3.5M. Additional details regarding these upgrades can be found on the Transmission Provider's OASIS page.

The following upgrades assigned to the higher priority Interconnection Request Q0823:

• Replacement of the two Emery substation 345/138 kV transformers.

These upgrades are currently assumed to be completed Q4 2026 and are estimated to cost \$28M. Additional details regarding these upgrades can be found on the Transmission Provider's OASIS page.



10.3 APPENDIX 2: PROPERTY REQUIREMENTS

Property Requirements for Point of Interconnection Substation

Requirements for rights of way easements

Rights of way easements will be acquired by the Interconnection Customer in the Transmission Provider's name for the construction, reconstruction, operation, maintenance, repair, replacement, and removal of Transmission Provider's Interconnection Facilities that will be owned and operated by PacifiCorp. Interconnection Customer will acquire all necessary permits for the Project and will obtain rights of way easements for the Project on Transmission Provider's easement form.

Real Property Requirements for Point of Interconnection Substation

Real property for a point of interconnection substation will be acquired by an Interconnection Customer to accommodate the Interconnection Customer's Project. The real property must be acceptable to Transmission Provider. Interconnection Customer will acquire fee ownership for interconnection substation unless Transmission Provider determines that other than fee ownership is acceptable; however, the form and instrument of such rights will be at Transmission Provider's sole discretion. Any land rights that Interconnection Customer is planning to retain as part of a fee property conveyance will be identified in advance to Transmission Provider and are subject to the Transmission Provider's approval.

The Interconnection Customer must obtain all permits required by all relevant jurisdictions for the planned use including but not limited to conditional use permits, Certificates of Public Convenience and Necessity, California Environmental Quality Act, as well as all construction permits for the Project.

Interconnection Customer will not be reimbursed through network upgrades for more than the market value of the property.

As a minimum, real property must be environmentally, physically, and operationally acceptable to Transmission Provider. The real property shall be a permitted or able to be permitted use in all zoning districts. The Interconnection Customer shall provide Transmission Provider with a title report and shall transfer property without any material defects of title or other encumbrances that are not acceptable to Transmission Provider. Property lines shall be surveyed and show all encumbrances, encroachments, and roads.

Examples of potentially unacceptable environmental, physical, or operational conditions could include but are not limited to:

1. Environmental: known contamination of site; evidence of environmental contamination by any dangerous, hazardous or toxic materials as defined by any governmental agency; violation of building, health, safety, environmental, fire, land use, zoning or other such regulation; violation of ordinances or statutes of any governmental entities having jurisdiction over the property; underground or above ground storage tanks in area; known remediation sites on property; ongoing mitigation activities or monitoring activities; asbestos; lead-based paint, etc. A



phase I environmental study is required for land being acquired in fee by the Transmission Provider unless waived by Transmission Provider.

2. Physical: inadequate site drainage; proximity to flood zone; erosion issues; wetland overlays; threatened and endangered species; archeological or culturally sensitive areas; inadequate sub-surface elements, etc. Transmission Provider may require Interconnection Customer to procure various studies and surveys as determined necessary by Transmission Provider.

Operational: inadequate access for Transmission Provider's equipment and vehicles; existing structures on land that require removal prior to building of substation; ongoing maintenance for landscaping or extensive landscape requirements; ongoing homeowner's or other requirements or restrictions (e.g., Covenants, Codes and Restrictions, deed restrictions, etc.) on property which are not acceptable to the Transmission Provider.