

Cluster 1

Mona Cluster Area Study Report

November 14, 2025

Report v1.0

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1. Study Overview

1.1 Introduction

The Mona Cluster Area is described as the Mona 345kV substation in Utah. Mona substation is presently owned and operated by PacifiCorp. However, Idaho Power has executed an agreement with PacifiCorp to obtain an ownership interest in the Mona 345kV substation as well as an ownership interest in transmission capacity from Mona to Idaho Power's existing Transmission System. These ownership interests are subject to energization of the Boardman to Hemingway (B2H) 500kV transmission line project and associated transmission improvement projects included in the agreement, which are presently scheduled for late 2027. Therefore, Idaho Power may act as a Transmission Provider for the Mona Cluster Area. The Mona Cluster Area includes the following Interconnection Requests: GI #785. Interconnection Requests within the Mona Cluster Area have a proposed a total of 199 megawatts (MW) of new generation.

While Idaho Power may act as a Transmission Provider for the Mona Cluster Area, PacifiCorp will continue to be the operator of Mona 345kV substation and the transmission system surrounding Mona substation. Therefore, PacifiCorp is an Affected System, and the impacts of the proposed Interconnection Request on the reliability of the bulk power system will be identified in PacifiCorp's Affected System Study.

1.2 Study Assumptions

- There are no higher-queued Interconnection Requests in the affected area of Idaho Power's Transmission System. Changes to higher-queued Interconnection Requests in PacifiCorp's queue, including in-service date and withdrawal from PacifiCorp's queue, may trigger an Affected System restudy of this Cluster Area.
- Generation Interconnection Requests GI #758, GI #759, GI #760, GI #761, GI #762, GI #763, GI #764, GI #765, GI #767, GI #768, GI #769, GI #770, GI #771, GI #772, GI #773, GI #774, GI #775, GI #776, GI #777, GI #778, GI #779, GI #781, GI #782, GI #785, GI #786, GI #787, GI #788, GI #789, GI #790, GI #791, GI #792, and GI #793 are equally queued Interconnection Requests in Idaho Power's Cluster Study. Changes to equally queued Interconnection Requests within the Cluster Study, including in-service date and withdrawal from the queue, may trigger a restudy of this Cluster Area, and the results and conclusions could significantly change.
- Neither Network Resource Interconnection Service (NRIS) nor Energy Resource Interconnection Service (ERIS) convey transmission service.
- Idaho Power will not mitigate thermal or voltage violations with remedial action schemes (RAS) in the GI process.

- Telecommunication requirements are not fully contemplated in this study and could require significant upgrades, up to and including line rebuilds to accommodate optical ground wire (OPGW), for example. Telecommunication requirements identified during the Interconnection Facilities Study could impact the estimated cost of the project.
- The following Idaho Power planned system improvements were assumed in service. Any facility that has been determined to be contingent will be listed in Section 5 of this report.
 - 50% series capacitance compensation on the Kinport to Midpoint 345kV transmission line (2026)
 - Midpoint Substation T502 500:345kV transformer (2026)
 - Boardman to Hemingway (B2H) 500kV transmission line (2027)

2. Cluster Area

Idaho Power has determined that the Interconnection Request described below is in a geographically and/or electrically relevant area on Idaho Power's Transmission System and thus was assigned the Mona Cluster Area in this Cluster Study.

The Mona Cluster Area is described as the Mona substation (operated by PacifiCorp) in Utah. This Cluster Area consists of the Interconnection Request described below.

2.1 GI #785 Description

Interconnection Customer has proposed to interconnect 199 MW of hybrid solar and battery storage generation to PacifiCorp's jointly owned Mona 345kV substation (to be jointly owned by Idaho Power and PacifiCorp in the future) located in Juab County, Utah. The requested Commercial Operation Date (COD) for GI #785 is December 1, 2029.

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

The Interconnection Request will be studied for NRIS.

3. Interconnection Facilities and Upgrades

3.1 Transmission Provider's Interconnection Facilities

Transmission Provider's Interconnection Facilities (hereinafter referred to as Idaho Power's Interconnection Facilities) are defined in Section 1 of Idaho Power's LGIP as all facilities and equipment owned, controlled, or operated by Idaho Power from the Point of Change of Ownership (POCO) to the POI, including any modifications, additions, or upgrades to such facilities or equipment. In accordance with Section 4.2.1 of Idaho Power's LGIP, costs for Idaho Power's Interconnection Facilities are directly assigned to Interconnection Customer.

Listed below are the Interconnection Facilities required to interconnect the generation Interconnection Requests at their respective requested POIs.

3.1.1 GI #785 Interconnection Facilities

- Communication infrastructure required for telemetry to Idaho Power’s control center
- Additional facilities to be identified by PacifiCorp

3.2 Substation Network Upgrades

Substation Network Upgrades are defined in Section 1 of Idaho Power’s LGIP as Network Upgrades that are required at the substation located at the POI; this includes all switching stations. In accordance with Section 4.2.1(a) of Idaho Power’s LGIP, costs for Substation Network Upgrades are allocated per capita to each Generating Facility interconnecting at the same substation.

Listed below are the required Substation Network Upgrades required to interconnect the Project at its POI.

3.2.1 GI #785 Substation Network Upgrades

- To be identified by PacifiCorp

3.3 System Network Upgrades

System Network Upgrades are defined in Section 1 of Idaho Power’s LGIP as Network Upgrades that are required beyond the substation located at the POI. In accordance with Section 4.2.1(b) of Idaho Power’s LGIP, costs for each specific System Network Upgrades are allocated based on proportional impact of each individual Generating Facility in the Cluster Study.

Listed below are the required System Network Upgrades.

- To be identified by PacifiCorp

Table 1 NRIS System Network Upgrades

Facility Description	Outage	Cost Allocation	Cost Estimate
TBD		TBD	\$TBD

3.4 Battery Charging

If Interconnection Customer does not intend to charge the ESS portion of the project from the grid, Interconnection Customer must notify Idaho Power of this election in writing prior to the closure of the thirty (30) Calendar Day comment period on the Cluster Study Report, if not previously requested, and the results of the charging study will not be included in the scope of the Interconnection Facilities Study. Interconnection Customer will be required to demonstrate operating procedures and control measures that prevent the ESS from grid charging. Additionally, Idaho Power shall request that PacifiCorp enable a relay setting at the POI to trip the ESS if grid-charging is detected.

PacifiCorp will identify any upgrades that are required to support charging the ESS from the grid for the Mona Cluster Area Interconnection Request.

3.5 Cost Estimates

GI #785

Interconnection Facilities	\$TBD
Substation Network Upgrades	\$TBD
System Network Upgrades	\$TBD
Total:	\$TBD

3.6 Estimated Time to Construct

As the operator of Mona substation, PacifiCorp will be responsible for identification of scope of work, cost estimates, design, construction, and estimated time to construct for this Mona Cluster Area.

4. Contingent Facilities and Affected Systems

Contingent Facilities are defined in Section 1 of Idaho Power's LGIP as those unbuilt Interconnection Facilities and Network Upgrades upon which the Interconnection Request's costs, timing, and study findings are dependent, and if delayed or not built, could cause a need for restudies of the Interconnection Request or a reassessment of the Interconnection Facilities and/or Network Upgrades and/or costs and timing. PacifiCorp will be responsible for identification of additional Contingent Facilities.

Table 2 Contingent Facilities

Service	Assigned To	Facility Description	Outage	Planned ISD
NRIS	Idaho Power	Kinport-Midpoint 345kV Series Capacitor	N/A ¹	2026
NRIS	Idaho Power	Midpoint 500/345kV transformer T502	N/A ¹	2026
NRIS	Idaho Power	Build B2H	N/A ¹	2027

Idaho Power has identified PacifiCorp as an Affected System for the Mona Cluster Area. A copy of this report will be shared with the Affected System, and an Affected System Study will be required. Interconnection Customer will work directly with the Affected System to complete the necessary study.

¹ The requested POI of Mona 345kV is valid only upon Idaho Power obtaining the necessary ownership interests following energization of the B2H 500kV transmission line project and associated transmission improvement projects.

5. Protection and Control

5.1 GI #785 Protection and Control

As operator of Mona substation, PacifiCorp will be responsible for identification of any required upgrades or requirements associated with protection and control.

6. Description of Operating Requirements

Generating Facilities will be required to control voltage in accordance with a voltage schedule as provided by Idaho Power's Load Serving Operations. Interconnection Customers will be required to manage the real power output of their Generating Facilities at the POI. Projects will be required to provide reactive power versus real power capability measured at the high side of the main power transformer that complies with IEEE Standard 2800 *IEEE Standard for Interconnection and Interoperability of Inverter-Based Resources (IBRs) Interconnecting with Associated Transmission Electric Power Systems*, or any subsequent standards as they may be updated from time to time.

Projects are required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 2800 or any subsequent standards as they may be updated from time to time.

Installation of phasor measurement unit devices at the POI and maintenance costs associated with communication circuits needed to stream PMU data will also be required to be provided to interconnect the Generating Facilities. The specific costs associated with the Idaho Power requirements for Interconnection Customers with aggregate facilities larger than 20 MW to provide PMU data to Idaho Power will be identified in the Interconnection Facilities Study should Interconnection Customer choose to proceed to that phase of the GI process. Also, it may be beneficial for Interconnection Customers, for their own modeling compliance requirements, to install additional PMU devices at their facilities to monitor the generation sources separately.

As operator of Mona substation, PacifiCorp will be responsible for additional applicable operating requirements.

7. Total Cost Summary

The cost estimates below are allocated in accordance with Section 4.2.1 of Idaho Power's LGIP. The total NRIS cost estimate includes the costs associated with Idaho Power's Interconnection Facilities, Substation Network Upgrades, and System Network Upgrades required for Network Resource Interconnection Service, including those facilities identified as necessary for grid-charging any ESS components.

GI #785

Total Cost: \$TBD

Revision History

Date	Author	Revisions
11/14/2025	Trevor Schultz	Cluster 1 Mona Cluster Area Study Report version 1.0 issued.