

**GENERATOR INTERCONNECTION
MATERIAL MODIFICATION ASSESSMENT**

for integration of the proposed

**59 MW [REDACTED]
(IDAHO POWER QUEUE #753)**

to the

IDAHO POWER COMPANY ELECTRICAL SYSTEM

in

TWIN FALLS COUNTY, IDAHO

for

[REDACTED]

Report v1.0

April 11, 2025

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1.0 INTRODUCTION

On February 8, 2025, ██████ requested a material modification evaluation from Idaho Power Company (Transmission Provider), which consisted of a proposal to add a Battery Storage Energy System (BESS) surplus interconnection to their existing 59 MW ██████ project (the Project).

The Project is Generation Interconnect (GI) queue number 753 (GI #753) located in Twin Falls County, ID at approximately ██████. The specific Point of Interconnection (POI) is on Idaho Power's ██████ 138kV substation.

This report describes the results of an assessment that was conducted to evaluate the potential impacts of the proposed modification in accordance with the Idaho Power Tariff and executed Large Generator Interconnection Agreement (LGIA) for the Project.

2.0 SUMMARY

An assessment was conducted which determined that the modification request is not considered a material modification. The proposed changes do not result in any new reliability concerns, nor do they require new facilities beyond what was already described in the March 9, 2025, LGIA. The proposed changes may be incorporated in the Project's GIA as an amendment.

3.0 DESCRIPTION OF PROPOSED TECHNOLOGICAL CHANGE

The proposed BESS generation will connect onto the ██████ generation gen-tie line going into the ██████ substation and will serve as a supplemental resource to be utilized in conjunction with the existing ██████ generation resource (GIA753). The BESS will consist of a ██████ battery energy storage facility with 59 MW capacity and approximately 236 MWh storage. The facility's inverters & skidded MVT's will generate at 34.5kV. The system can be stepped up to connect as 138kV.

4.0 ASSESSMENT RESULTS

4.1 Power Flow Results (Thermal and Voltage Analysis)

Because there are no changes to the Project's maximum real power output at the POI, the modifications will have no impact on the power flow results already performed in the System Impact Study (SIS).

4.2 Reactive Power Requirements

The Project will be required to operate at 0.95 leading/lagging measured at the high side of the main power transformer to maintain voltage within limits at the POI over the range of real power output.

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Power flow analysis indicates that with the addition of the BESS generation, the Project has sufficient reactive power capability to provide a 0.95 leading/lagging power factor at the POI over the range of real power output based on the data provided by the customer.

4.3 Transient Stability Results

Transient stability data provided by the customer for the changes to the Project was reviewed and deemed usable. A transient stability analysis was performed with the new provided data and the results were acceptable.

4.4 Post-Transient Voltage Stability (Reactive Margin) Results

Because there are no changes to the Project's maximum real power output at the POI, and the reactive power requirements are not changed at the POI, the addition of the BESS generation will have no impact on the voltage stability analysis results already performed in the SIS.

4.5 Short Circuit Results

The proposed changes do not necessitate any changes to the required protection system identified in the SIS.

4.6 Other Operating Requirements

The Project will be required to control voltage in accordance with a voltage schedule as provided by Idaho Power Load Serving Operations. The Project will be required to install a plant controller for managing the real power output at the Project's POI.

The Project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-2014 *IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems*.

The Project will be required to reduce output to levels directed by IPC Load Serving Operations during transmission system contingencies and other reliability events. This will be accomplished with a Generator Output Limit Control (GOLC) setpoint sent from IPC to the Project.

5.0 CONCLUSIONS

An assessment was conducted which determined that the modification request is not considered a material modification. The proposed changes do not result in any new reliability concerns, nor do they require new facilities beyond what was already described in the March 9, 2025, LGIA. The proposed changes may be incorporated in the Project's GIA as an amendment.

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