

Combined Feasibility/System Impact Study Report

For

***PJM Generation Interconnection Request
Queue Position AD1-062***

Itasca 12.5Kv

February 2018

General

Queue AD1-062 Itasca 12.5Kv project is a Sun-Mountain Hilltop, LLC (“Interconnection Customer” or “IC”) proposal to connect a 1.0 Energy (0.0 MW Capacity) energy storage facility to be located in DuPage County, IL. The IC has proposed a service date for this project of 8/31/2017.

It is proposed in the AD1-062 Interconnection Request (Attachment N) that the customer is selecting the primary POI on the W0104 12.5kV feeder out of TSS 101 Itasca.

This Generation Interconnection Feasibility Study provides analysis results to aid the IC in assessing the practicality and cost of incorporating the facility into the PJM system.

Attachment Facilities

To be included in the scope of studies by the Transmission Owner under their state tariff.

Direct Connection Network Upgrades

To be included in the scope of studies by the Transmission Owner under their state tariff.

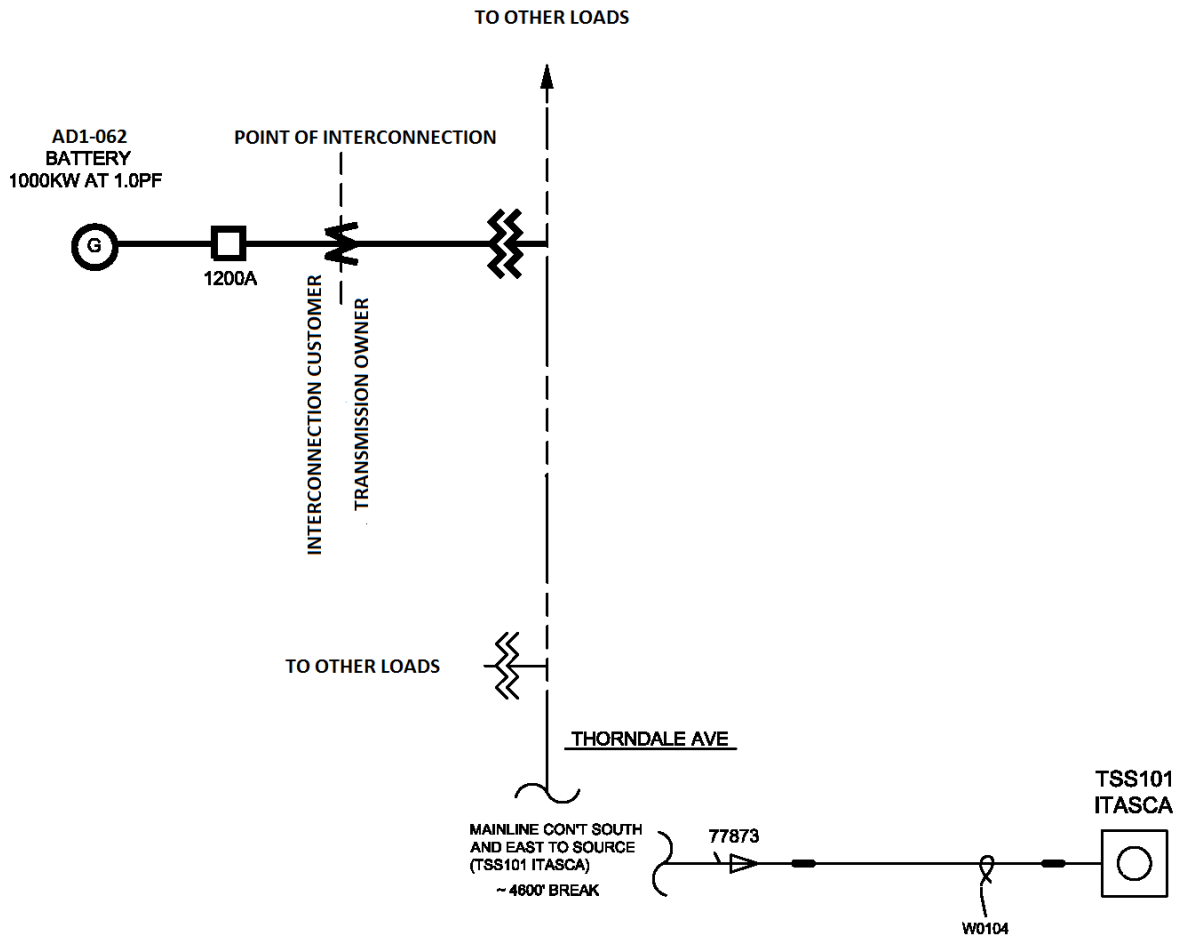


Figure 1. Single Line Diagram for Option 1

Network Impacts

The Queue Project AD1-062 was evaluated as a 1.0 MW (0.0 Capacity) injection at the TSS 101 Itasca Substation in the ComEd area. Project AD1-062 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Potential network impacts were as follows:

Summer Peak Analysis - 2021

Generator Deliverability

(Single or N-1 contingencies for the Capacity portion only of the interconnection)

No issues identified.

Multiple Facility Contingency

(Double Circuit Tower Line, Fault with a Stuck Breaker, and Bus Fault contingencies for the full energy output)

No issues identified.

Contribution to Previously Identified Overloads

(This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue)

No issues identified.

Steady-State Voltage Requirements

(Results of the steady-state voltage studies should be inserted here)

No issues identified.

Short Circuit

(Summary of impacted circuit breakers)

No issues identified.

Delivery of Energy Portion of Interconnection Request

PJM also studied the delivery of the energy portion of this interconnection request. Any problems identified below are likely to result in operational restrictions to the project under study. The developer can proceed with network upgrades to eliminate the operational restriction at their discretion by submitting a Merchant Transmission Interconnection request.

Only the most severely overloaded conditions are listed. There is no guarantee of full delivery of energy for this project by fixing only the conditions listed in this section. With a Transmission

Interconnection Request, a subsequent analysis will be performed, which will study all overload conditions associated with the overloaded element(s) identified.

No issues identified.

Light Load Analysis - 2021

Not required

System Reinforcements

Short Circuit

(Summary form of Cost allocation for breakers will be inserted here if any)

None required.

Stability and Reactive Power Requirement

(Results of the dynamic studies should be inserted here)

None required.

Summer Peak Load Flow Analysis Reinforcements

New System Reinforcements

(Upgrades required to mitigate reliability criteria violations, i.e. Network Impacts, initially caused by the addition of this project generation)

None required.

Contribution to Previously Identified System Reinforcements

(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project may have a % allocation cost responsibility which will be calculated and reported for the Impact Study)

(Summary form of Cost allocation for transmission lines and transformers will be inserted here if any)

None required.