PJM Generator Interconnection Request
Queue W3-010
Hans Meadow 12.47kV
Feasibility/Impact Study Report

January 2011
#627087

W3-010 Hans Meadow 12.47kV Feasibility/Impact Study

General

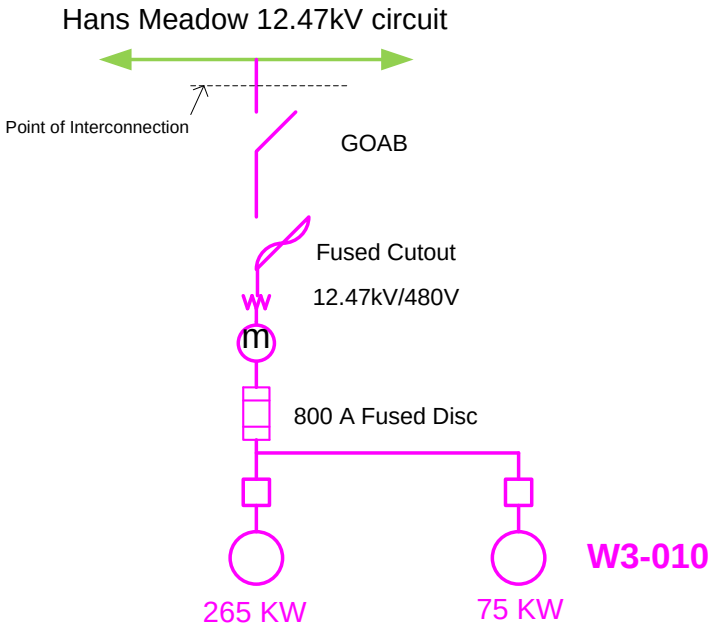
Green kW Energy, Inc. has proposed installing a 0.34 MW landfill gas project, consisting of a 265 kW generator and a 75 kW generator, on property at 555 Authority Drive, Christiansburg, Montgomery County, Virginia. The commisioning of the project began on September 1, 2010.

The intent of the Feasibility/Impact study is to determine system reinforcements and associated costs and construction time estimates required to facilitate the addition of the new generating plant to the transmission system. The reinforcements include the direct connection of the generator to the system and any network upgrades necessary to maintain the reliability of the transmission system.

Direct Connection

The project has been connected to the Hans Meadow 12.47kV circuit. The project has an Interconnection Request Form dated June 21, 2010 that has been signed by both Green kw Energy and Appalachian Power Company.

W3-010 Hans Meadow 12.47kV



Network Impacts

Queue project W3-010 was studied as a(n) 0.34 MW energy injection into AEP's system at the Hans Meadow 12.47kV substation. The project was studied on a combined feasibility-impact basis which utilizes an AC analysis, and incorporates all contingency types. Project W3-010 was evaluated for compliance with reliability criteria for summer peak conditions in 2015. Potential network impacts were as follows:

Generator Deliverability

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

No problems identified

Multiple Facility Contingency

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

No problems identified.

Short Circuit

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

No problems identified

Stability

Not required because the project is less than 30 MW.

System Reinforcements

None

Energy Portion of Interconnection Request

(PJM also studied the delivery of the energy portion of the surrounding generation. Any potential 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 Transmission Interconnection request.
Note: 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 analyzes all overload conditions associated with the overloaded element(s) identified. As a result of the aggregate energy resources in the area, the following violations were identified.)

No problems identified.