#S70 - Willow Island Hydro Generation Project
Generation Interconnection

This analysis was completed to assess the reliability impact for the increase in generation interconnecting to the PJM system as a capacity resource.

The developer has proposed a 36.4MW hydroelectric generating facility.

Attachment Facilities

Point of Interconnection: New generator plant will connect to AP's Belmont Substation.

- Belmont Substation. Relocate existing poles. Removal of current wood pole structures and installation of new guyed wood pole structures.

  Estimated Cost: $300,000 in 2010 dollars

- Belmont Substation. Extend the two main 138kV buses and install a 138kV cross bus. Install one 138kV deadend structure, line trap, and CVT. Install two 138kV breakers in the new cross bus. Install 138kV metering on the line terminal.

  Estimated Cost: $1,300,000 in 2010 dollars

Required reinforcements

- NONE

Network Impacts

The **#S70 project was studied as a total injection of 36.4 MW** into the Belmont Substation. Project #S70, was evaluated for compliance with reliability criteria for summer peak conditions in 2012 Potential network impacts were as follows:

Generator Deliverability*

(No contingencies, Single or N-1 contingencies for the full energy output)

None

Multiple Facility Contingency

(Double Circuit Tower Line contingencies only for the full energy output. Stuck breaker and bus fault contingencies will be performed for the Impact Study)

No Problems were 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)

None

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New System Reinforcements

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

None

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)

None

Short Circuit

No breakers were identified for replacement.