Generation Interconnection

This analysis was completed to assess the reliability impact for a new generator interconnecting to the PJM system as a Capacity resource.

Network Impacts - 560 MW Capacity Injection

Capacity injection of 560 MW into the Richmond 230kV substation was evaluated to determine Network Impacts. The following is a summary of the results:

Generator Deliverability (Single Contingency)

1. The proposed 2nd Richmond – Waneeta 230kV circuit is overloaded at 103% of the anticipated emergency rating (1200mva) for the outage of the existing Richmond – Waneeta 230kV circuit, and vice-versa.
2. The Ridley (Morton Tap) – Morton 230kV circuit is overloaded at 102% of the emergency rating (613mva) for the outage of the Chichester – Eddystone 230kV circuit.

Multiple Facility Contingency – Tower Line Outages (MAAC Criteria IIC)
No identified problems.

Short Circuit
Short circuit analysis was not performed due to the magnitude of reinforcements for which this project will have cost allocation. Any required breaker replacements are not expected to materially alter the total allocated network reinforcement costs.

New System Reinforcements

1. Overload #1 can be relieved by installing a 2nd Richmond 230-69kV transformer, connected to the expanded 230kV ring bus at Richmond with a new 230kV breaker. The estimated cost of this project is $2,600,000, and construction time is estimated to be 24 months.

2. Overload #2 can be relieved by installing a second Ridley (MortonTp) – Morton 230kV underground cable. The estimated cost of this project is $7,500,000 and construction time is estimated to be 36 months.

   Right-of-way for the underground cable is not included in the cost or time estimate.

The estimated cost of new System Reinforcements is **$10,100,000**. If CIAC Tax Gross-up (estimated at 40%) is applicable, the total estimated cost will increase to $14,140,000.

Contribution to Previously Identified System Reinforcements

The H08 project will contribute to the cost of the following previously identified network reinforcements:

1. Install a second 230 kV circuit from Richmond – Waneeta. The project contributes approximately **200** MW. The cost is estimated at $45 million and is expected to take 4 years to complete.
2. Reconductor the existing 230 kV circuit from Richmond – Waneeta. The project contributes approximately **200** MW. The cost is estimated at $9 million and is expected to take 4 years to complete.

Cost allocation percentages are not provided as part of the Feasibility Study analysis, however, cost allocation will be provided during the Impact Study evaluations.