

## **Generation Interconnection**

**This analysis was completed to assess the reliability impact for a new generator interconnecting to the PJM system as an Energy (56MW) and Capacity resource (11.2MW).**

### ***Network Impacts***

The O40 project was studied as an injection of 44 MW energy (8.8 MW capacity) into the Eldred-Pine Grove 69 kV line. Project O40 was evaluated for compliance with reliability criteria for summer peak conditions in 2009. Potential network impacts were as follows:

**Note: The following Feasibility Study results are based on the assumption that Queue N50 is connected directly to Eldred 69 kV bus via a new dedicated 69 kV circuit with incremental additional Direct Connection costs for N50 attributable to Queue O40. The aforementioned option yields the least cost plan for Queue O40 if Queue N50 remains in the PJM Generator Interconnection Queue.**

#### **Generator Deliverability (Single Contingency)**

No problems were identified

#### **Multiple Facility Contingency – Tower Line Outages**

No problems were identified

#### **Short Circuit**

No problems were identified

#### **Stability Analysis**

Will be performed during the Impact Study for Queue O40.

#### **New System Reinforcements**

None

#### **Contribution to Previously Identified System Reinforcements**

PPL future plans include the upgrade of the Eldred – Pine Grove 69kV line.

PPL's Eldred – Pine Grove 69kV line rebuild from 3/0 CU with SN/SE ratings of 34MVA/51MVA to 556 KCM ACSR with SN/SE ratings of 97MVA/124MVA will be required to be advanced to allow for the O40 generation interconnection. Rebuild part #1 advanced 1 year and rebuild part #2 advanced 5 years. The cost allocation for Queue O40's portion is estimated to be \$1,880,000.