R50 – Liberty – Blue Jacket 69 kV
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
The #R50 project proposes a total of 48 MW (9.8 MWC) at a tap of the Liberty-Blue Jacket 69 kV line. Project #R50 was evaluated for compliance with reliability criteria for summer peak conditions in 2011. Potential network impacts were as follows:

Generator Deliverability
No problems were identified

Multiple Facility Contingency
No problems were identified

Contribution to Previously Identified Overloads
No problems were identified

New System Reinforcements
None

Contribution to Previously Identified System Reinforcements
To be determined at the System Impact Study

Short Circuit
No breaker is overdutied as a result of R50.

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.

As a result of the aggregate energy resources in the area, the following violations were identified:

1. Contribution of 6 MW further congests the 765/500 kV Kammer transformer within 132% of its emergency rating (2094 MVA) for the outage of the Harrison-Belmont 500 kV line. The monitored facility was first congested by project P37.
2. Contribution of 5 MW further congests the Belmont - Harrison 500 kV line within 124% of its emergency rating (2285 MVA) for the outage of the 502 Junction-Kammer 500 kV line. The monitored facility was first congested by project Q75.

3. Contribution of 6 MW further congests the Cabot - Keystone 500 kV line within 122% of its emergency rating (2598 MVA) for the outage of the Keystone-South Bend kV line. The monitored facility was first congested by project Q75.
4. Contribution of 5 MW further congests the South Bend - Keystone 500 kV line from 115% to 116% of its emergency rating (3013 MVA) for the outage of the Keystone-Cabot 500 kV line. The monitored facility was first congested by project Q75.
5. Contribution of 5 MW further congests the Harrison - Prunty Town 500 kV line from 111% to 112% of its emergency rating (3502 MVA) for the outage of the 500 kV three-terminal line 502 J.-Kammer-Harrison-G30_W51. The monitored facility was first congested by project Q75.