

***PJM Generator Interconnection
V1-029 Frackville-Fishbach 6 MW
Feasibility-Impact Study***

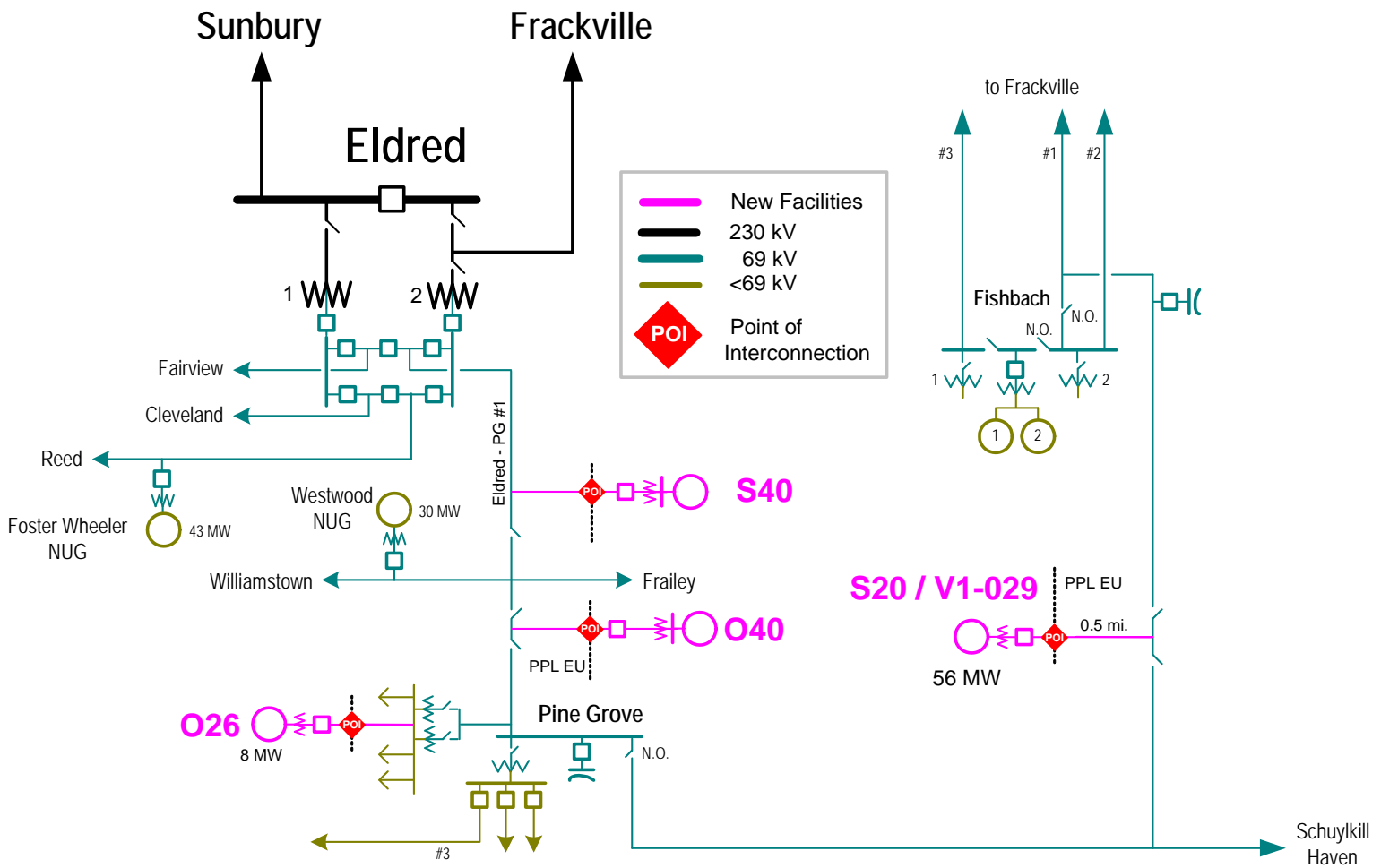
July 2009
DMS# 546461

General

Queue V1-029 is a Pine Grove Wind, LLC 6 MW energy / 0.78 MW Capacity addition to the proposed Queue S20 Wind Farm. Three Gamesa 2.0 MW wind turbine generators will be added for a combined output of 56 MW (10.78 MW Capacity). The V1-029 wind farm location is in the Weiser State Forest, near the borough of Minersville, Schuylkill County, Pennsylvania. Queue V1-029 has requested in-service of July 2013.

Direct Connection Requirements

Queue V1-029 will be connected to the Fishbach – Pine Grove tap section of the Frackville - Fishbach #1 69kV line, as shown on Figure 1 below. No additional interconnection facilities or upgrades are required.



Network Impacts

The Queue V1-029 project was studied as a 6 MW injection into the Fishbach – Pine Grove tap section of the Frackville - Fishbach #1 69kV line. The project was evaluated for compliance with reliability criteria for summer peak conditions in 2014. Potential network impacts were as follows:

NETWORK IMPACTS

Generator Deliverability

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

No problems identified.

Multiple Facility Contingencies

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

No problems identified

Contribution to Previously Identified Overloads

(This project contributes greater than the PJM cost allocation threshold loading to the following contingency overloads, i.e. “Network Impacts”, identified for earlier generation or transmission interconnection projects in the PJM Queue)

No problems identified

Stability Analysis

No requirements identified for 6 additional MWs to Queue S20 generation.

Short Circuit

No new overduty breakers or contribution of >3% to existing overduty breakers.

NETWORK UPGRADE REQUIREMENTS

New System Reinforcements

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

None required.

Contribution to Previously Identified System Reinforcements

(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project will have a % allocation cost responsibility)

None required.