PJM Generator Interconnection

Z1-068 Birdneck 34.5 kV

1.5 MW Capacity / 12 MW Energy

Feasibility Study Report

February 2014
DMS #783570v1

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Introduction

This Feasibility Study has been prepared in accordance with the PJM Open Access Transmission Tariff, §110, as well as the Feasibility Study Agreement between Interconnection Customer (IC), and PJM Interconnection, LLC (PJM), Transmission Provider (TP). The Interconnected Transmission Owner (ITO) is Virginia Electric and Power Company.

Preface

The intent of this Feasibility Study is to determine a plan, with preliminary cost and construction time estimates, to connect the subject generation interconnection project to the PJM network at a location specified by IC. As a requirement for interconnection, IC may be responsible for the cost of constructing Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM and the underlying system. All facilities required for interconnection of a generation interconnection project must be designed to meet ITO technical specifications.

The Feasibility Study estimates do not include the feasibility, cost, or time required to obtain property rights and permits for construction of the required facilities. IC is responsible for its right of way, real estate, and construction permit issues.

General

Queue project Z1-068 was studied as a 12.0 MW of which 1.5 MW is Capacity with injection at Birdneck 230 kV substation in the Dominion area. Project Z1-068 was evaluated for compliance with reliability criteria for summer peak conditions in 2017.

Alternate Queue Process

PJM has verified that there are no impacts to the Transmission System. Therefore, this project qualifies for the alternate queue process per PJM Tariff §112.5. IC and ITO to work towards study completion and final agreement completion prior to the end of September 2014. ITO results to provide to PJM would be in the form of a combined SIS/Facilities Study. Because the interconnection is not jurisdictional to the FERC, PJM will coordinate issuance of a Wholesale Market Participation Agreement with the state Interconnection Agreement.

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Network Impacts:

Impactful Contingencies

(The following contingencies resulted in overloads identified below)

None identified.

Generator Deliverability

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

None identified.

Multiple Facility Contingency

(Double Circuit Tower Line Contingencies only with full energy output. Stuck Breaker and Bus Fault contingencies will be applied during the Impact Study)

None identified.

Contribution to Previously Identified Overloads

(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project may have % allocation of cost responsibility which will be calculated and reported for the Impact Study.)

None identified.

Short Circuit

(Report Overdutied breakers here)

There is no impact to breaker interrupting capabilities as a result of Z1-068.

Delivery of Energy Portion of Interconnection Request

(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.

Only the most severely overloaded conditions are listed. There is no guarantee of full delivery of energy for this project by fixing only the conditions listed in this section. With a Transmission Interconnection Request, a subsequent analysis will be performed, which will study all overload conditions associated with the overloaded element(s) identified.)

None identified.

Stability, Steady-State Voltage and Reactive Power Requirements

None identified.

Light Load

None identified.

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