PJM Generator Interconnection
W1-033 Pumphrey 115 kV
25 MW Capacity
Combined Feasibility
And
System Impact Study Report

July 2010
DMS #600304v1

Introduction

This combined Feasibility and System Impact Study has been prepared in accordance with the PJM Open Access Transmission Tariff, §36.2, 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 Baltimore Gas & Electric Company.

Preface

The intent of this Combined Feasibility and System Impact 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 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 W1-033 is an IC 25 MW Capacity resource interconnection addition to its existing V1-033 waste to energy queue request. W1-033 generation is adding 25 MW Capacity. Output from the generation will be connected to the 115 kV substation at Pumphrey.

Potential PJM Network Impacts

The queue W1-033 project was studied as a 25.0MW capacity injection into BGE's system at the Pumphrey 115.0kV substation. The project was studied on a combined feasibility-impact basis which utilizes an AC analysis, and incorporates all contingency types. Project W1-033 was evaluated for compliance with reliability criteria for summer peak conditions in 2014.

Potential network impacts were as follows:

Generator Deliverability

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

No problems identified.

Multiple Facility Contingency

(Double Circuit Tower Line contingencies only for the full energy output. Stuck breaker and bus fault contingencies will be performed for the Impact Study)

No problems identified.

Contribution to Previously Identified Overloads

(This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue)

None.

Short Circuit

No problems identified.

System Stability Analysis

Dynamic studies will be part of the Facilities Study.

W1-033 will be incorporated into the V1-033 Facilities Study.