Generation Interconnection Feasibility Study Report

For

PJM Generation Interconnection Request Queue Position AD2-104

“Crane CT 2-3-4 115 kV”

144.6 MW Capacity / 144.6 MW Energy

July 2018

Preface

The intent of the feasibility study is to determine a plan, with ballpark cost and construction time estimates, to connect the subject generation to the PJM network at a location specified by the Interconnection Customer. The Interconnection Customer may request the interconnection of generation as a capacity resource or as an energy-only resource. As a requirement for interconnection, the Interconnection Customer may be responsible for the cost of constructing: (1) Direct Connections, which are new facilities and/or facilities upgrades needed to connect the generator to the PJM network, and (2) Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM system.

In some instances a generator interconnection may not be responsible for 100% of the identified network upgrade cost because other transmission network users, e.g. another generation interconnection, may also contribute to the need for the same network reinforcement. The possibility of sharing the reinforcement costs with other projects may be identified in the feasibility study, but the actual allocation will be deferred until the impact study is performed.

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. The project developer is responsible for the right of way, real estate, and construction permit issues. For properties currently owned by Transmission Owners, the costs may be included in the study.

General

The Interconnection Customer (IC), has proposed to claim the rights of the old Crane Unit 2 and install a new gas-fired combustion turbine generating facility located at 1001 Carroll Island Road, Baltimore, Maryland 21220. The installed facilities will have a total capability of **144.6 MW** with **144.6 MW** of this output being recognized by PJM as Capacity. The proposed in-service date for this project is **October 31, 2019**. **This study does not imply a Baltimore Gas and Electric Company (BGE) commitment to this in-service date.**

Point of Interconnection

AD2-104 "Crane CT2-3-4 115 kV" will utilize the existing Crane Unit 2 connection to the 115 kV transmission system via the Windy Edge[1] - C.P. Crane 115 kV line No. 110592. The physical Point of Interconnection will be the first deadend structure outside the generator substation fence.

See one line in **Attachment 1.**

[1] RTEP baseline project b2816 will reterminate Line No. 110592 from the Windy Edge Substation to the Northeast Substation. The scheduled in-service date for the b2816 project is 6/1/2019. In the System Impact Study phase, a sensitivity analysis will be completed for any network impacts when terminated into the Northeast Substation.

Cost Summary: Crane CT1 115 kV

The **AD2-104** project will be responsible for the following costs:

Description	Total Cost
Attachment Facilities	$ 0
Direct Connection Network Upgrades	$ 0
Non Direct Connection Network Upgrades	$ 0
Total Costs	**$ 0**

In addition to the costs for the physical interconnection point above, the **AD2-104** project may be responsible for a contribution to the following costs:

Description	Total Cost
New System Upgrades	$ 0
Previously Identified Upgrades	$ 0
Total Costs	**$ 0**

Crane CT1 230 kV

Attachment Facilities

This report assumes that the Interconnection Customer will utilize the existing Crane Unit 2 connection to the 115 kV transmission system via the Windy Edge - C.P. Crane 115 kV line No. 110592. No Attachment Facilities costs have been identified.

Direct Connection Cost Estimate

This report assumes that the Interconnection Customer will utilize the existing Crane Unit 2 connection to the 115 kV transmission system via the Windy Edge - C.P. Crane 115 kV line No. 110592. No Attachment Facilities costs have been identified.

Non-Direct Connection Cost Estimate

This report assumes that the Interconnection Customer will utilize the existing Crane Unit 2 connection to the 115 kV transmission system via the Windy Edge - C.P. Crane 115 kV line No. 110592. No Attachment Facilities costs have been identified.

Schedule

No physical construction work that has been identified for BGE in order to accommodate the interconnection of AD2-104.

BGE Interconnection Requirements

The proposed interconnection facilities must be designed in accordance with the BGE "Exelon Utilities Transmission Facility Interconnection Requirements" document:

http://www.pjm.com/-/media/planning/plan-standards/private-ce/exelon-utilities-transmission-facility-interconnection-requirements.ashx?la=en

Revenue Metering and SCADA Requirements

PJM Requirements

The Interconnection Customer will be required to install equipment necessary to provide Revenue Metering (KWH, KVARH) and real time data (KW, KVAR) for IC's generating Resource. See PJM Manuals M-01 and M-14D, and PJM Tariff Sections 24.1 and 24.2.

BGE Metering Requirements

The Interconnection Customer will be required to comply with all BGE Revenue Metering Requirements for Generation Interconnection Customers as outlined in the link below. The Revenue Metering Requirements may be found within the BGE "Exelon Utilities Transmission Facility Interconnection Requirements" document located at the following link:

http://www.pjm.com/-/media/planning/plan-standards/private-ce/exelon-utilities-transmission-facility-interconnection-requirements.ashx?la=en

Network Impacts

The Queue Project AD2-104 was evaluated as a 144.6 MW (Capacity 144.6 MW) injection to the Windy Edge- Crane 115 Line 110592 in the BGE area. Project AD2-104 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AD2-104 was studied with a commercial probability of 53%. Potential network impacts were as follows:

Load Flow

As AD2-104 is reclaiming the Capacity rights from the existing Crane Unit 2, no load flow analysis was performed.

Short Circuit

There were no Network Impacts identified for this AD2-104 project from the short circuit analysis.

Attachment 1. AD2-104 “Crane CT 2-3-4 115 kV”
One Line Diagram