



Generation Interconnection

Combined Feasibility / System Impact Study Report

for

Queue Project AF2-247

BUSTLETON 13.2 KV

2.1 MW Capacity / 5 MW Energy

Revised December 2020

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1 Introduction

This Feasibility Study has been prepared in accordance with the PJM Open Access Transmission Tariff, 36.2, as well as the Feasibility Study Agreement between the Interconnection Customer (IC), and PJM Interconnection, LLC (PJM), Transmission Provider (TP). The Interconnected Transmission Owner (ITO) is PSEG.

2 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 uses, e.g. another generation interconnection, may also contribute to the need for the same network reinforcement. Cost allocation rules for network upgrades can be found in PJM Manual 14A, Attachment B. 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.

3 Revision History

This December 2020 revision updates Section 6 – Transmission Owner Scope of Work.

4 General

The Interconnection Customer (IC), **BC Landfill Energy, LLC**, has proposed a Solar generating facility located in Burlington County, New Jersey. AF2-247 will claim Capacity Injection Rights from the deactivated BC Landfill methane gas generating facility (Deactivation date: June 1, 2020). The installed facilities will have a total capability of 5 MW with 2.1 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is June 01, 2021. This study does not imply a TO commitment to this in-service date.

Queue Number	AF2-247
Project Name	BUSTLETON 13.2 KV
State	New Jersey
County	Burlington
Transmission Owner	PSEG
MFO	5
MWE	5
MWC	2.1
Fuel	Solar
Basecase Study Year	2023

Any new service customers who can feasibly be commercially operable prior to June 1st of the basecase study year are required to request interim deliverability analysis.

5 Point of Interconnection

AF2-247 will interconnect with the PSEG distribution system via the BUSTLETON 13.2 KV circuit BUS8024.

6 Cost Summary

The AF2-247 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	\$ 185,000
Total System Network Upgrade Costs	\$ 0
Total Costs	\$ 185,000

This cost excludes CIAC Tax Gross Up charges. Cost allocations for any System Upgrades will be provided in the System Impact Study Report.

7 Transmission Owner Scope of Work

The total physical interconnection costs is given in the table below:

Description	Total Cost
<ul style="list-style-type: none">• Replacement of some existing poles and relocation of existing distribution transformer and other equipment to facilitate installation of branch recloser.• Installation of revenue grade metering with telemetry.• Installation of branch recloser	\$ 185,000
Total Physical Interconnection Costs	\$ 185,000

8 Revenue Metering and SCADA Requirements

8.1 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 Section 8 of Attachment O.

8.2 Meteorological Data Reporting Requirements

The solar generation facility shall provide the Transmission Provider with site-specific meteorological data including:

- Temperature (degrees Fahrenheit)
- Atmospheric pressure (hectopascals)
- Irradiance
- Forced outage data

8.3 PSEG Requirements

The Interconnection Customer will be required to comply with all PSE&G Revenue Metering Requirements for Generation Interconnection Customers. The Revenue Metering Requirements may be found within the PSE&G Information and Requirements for Electric Service Handbook available at the link below:

<https://www.pjm.com/planning/design-engineering/to-tech-standards/private-pseg.aspx>

9 Summer Peak - Load Flow Analysis

The Queue Project AF2-247 was evaluated as a 5 MW (Capacity 2.1 MW) injection at the BUSTLETON 13.2 KV substation in the PSEG area. Project AF2-247 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF2-247 was studied with a commercial probability of 100.0 %. Potential network impacts were as follows:

9.1 Generation Deliverability

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

None

9.2 Multiple Facility Contingency

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

None

9.3 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

9.4 Potential Congestion due to Local Energy Deliverability

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.

Note: Only the most severely overloaded conditions are listed below. 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 shall study all overload conditions associated with the overloaded element(s) identified.

None

10 Short Circuit Analysis

The following Breakers are over duty:

None

11 Attachment 1: One Line Diagram

