

Load Interconnection - Interconnection System Impact Study Scope

Queue #1721: Brookhaven Logistics Center Project

1. Purpose

The purpose of this Interconnection System Impact Study (“SIS” or “Study”) is to evaluate the impact of the proposed interconnection of Brookhaven Logistics Center (“Project”), which is being developed by WF Industrial XII LLC (“Developer”), on the reliability of the New York State Transmission System (“NYSTS”). The Study will be performed in accordance with Section 3.9 of the NYISO Open Access Transmission Tariff (“OATT”) and the NYISO Transmission Expansion and Interconnection Manual.

The Project will be located in Suffolk County, New York. The proposed Point of Interconnection (“POI”) will be at West Bus to Sills Rd.138kV Line (Line #138-873). The POI is located approximately 7.1 miles from the West bus 138kV Substation and 1.0 mile from the Sills Road 138kV Substation. The Connecting Transmission Owner (“CTO”) is Long Island Power Authority (“LIPA”).

The Project proposed is a 176.6 MW load interconnection. The proposed load will utilize 176.6 MW of power on a continuous basis.

The Project proposes an In-Service Date of **January 2027**.

Project Details:

Nature of Load: Data Center

Consumption Pattern: 24/7 approx. 650 full load hours

Proposed Load In-Service Phase(s): 50% year 1, Remainder year 2

Alternate sources of power: Emergency backup diesel generation

The Study will assess the impact of the Project on the base case power system including potentially Affected Systems. As applicable, the Study will evaluate alternatives that would eliminate adverse reliability impacts, if any, resulting from the proposed interconnection.

The Study will be conducted in accordance with the Applicable Reliability Requirements.

2. Interconnection Plan

The Study will include a description of the proposed Project and the conceptual design of the interconnection to the system representation. The description will include a breaker one-line diagram depicting the proposed Project facilities and its integration with existing facilities. LIPA will provide a description and one-line diagram for the proposed 138kV interconnection switchyard, while the Developer will provide and verify the proposed transformer connections into the Developer facilities.

3. Study Period

The Study will be based on NYISO 2025 Quarter 1 Short-Term Assessment of Reliability (STAR) base cases (“Base Cases”) that have the 2024 FERC 715 2029 system representation. The Study will be conducted using the steady state, and stability Base Cases provided by the NYISO.

4. Study Area

The Study will identify and evaluate the impact of the Project on the 138kV and above portions of the NYSTS in the following New York load zones: Zone **K** (Long Island) that are most likely to be affected by the Project. The Study will also evaluate the impact of the Project on the local 138kV and below system in the electrical proximity to the POI.

5. Base Case Conditions

The impact of the proposed Project will be evaluated for **summer peak and light** load cases for the following base case conditions, and as specified under the subsequent sections of this Scope:

Case 1- Base Case without the Project. The Base Cases will include the baseline system, and generation will be dispatched in accordance with the NYISO Minimum Interconnection Standard.

Case 2- Case 1 with the Project modeled as in-service at the rated load. Generation will be re-dispatched in the steady state case, as needed, in accordance with the NYISO Minimum Interconnection Standard.

6. Analysis

Thermal, voltage, and stability analyses will be conducted to assess the performance of the base system conditions within the Study Area, with and without the Project, in accordance with

Applicable Reliability Requirements, guidelines and study practices. Modifications to Base Cases, during analyses, will be documented in the Study Report.

6.1 Steady State Analyses: N-0 and N-1

Thermal and voltage steady state analyses, using PSS/E v35 and PowerGEM's TARA or a comparable load flow program, will be conducted for **summer peak and light** load cases, pre-contingency and also for relevant Design Criteria Contingencies conditions, and will be limited to the Study Area.

Thermal limits will be assessed under both Normal Criteria and Emergency Criteria, using normal ratings pre-contingency and applicable post-contingency ratings (*e.g.*, Long-Term-Emergency, LTE, ratings or Short-Term-Emergency, STE, ratings).

Voltage limits will be assessed, pre- and post-contingency, using the applicable voltage limits.

6.2 Steady State Analyses: N-1-1

The Study will evaluate a limited selection of N-1-1 contingencies around the POI. Steady state analyses (**summer peak**) will be performed based on the N-1-1 contingency descriptions provided by the CTO(s) and/or the NYISO.

6.3 Transfer Assessments

The transfer assessment will determine the incremental impact of the Project on the Normal and Emergency transfer limits of the LIPA Import interface in accordance with Applicable Reliability Requirements. The transfer limits will be evaluated in the predominant north-to-south direction, unless otherwise specified. Sufficient analyses will be conducted to determine the most limiting of the thermal, voltage, or stability limits under **summer peak** load conditions, as applicable.

6.4 Stability Analysis

Stability analysis, using PSS/E v34, will be performed for **summer peak** and **light load** conditions to determine the impact of the Project on system performance within the Study Area, as applicable. This analysis will evaluate the performance of the system for Design Criteria Contingencies and will address issues including, but not limited to, transient stability, dynamic stability (*i.e.*, damping), transient voltage recovery, grid frequency oscillations, critical clearing time, coordination of protection and control systems, and performance of any Special Protection Systems that may be affected. These analyses will explicitly consider the voltage and frequency ride-through capabilities of the facility.

7. Modeling Assumptions

7.1 Phase angle regulators (PARs”), switched shunts, and LTC transformers will be modeled as regulating pre-contingency and non-regulating post-contingency. The Study will use PAR schedules established by the NYISO in coordination with the neighboring ISOs through the NERC and NPCC base case development processes. PARs may be adjusted as necessary to relieve pre-contingency overloads.

7.2 SVC and FACTS devices will be set to zero pre-contingency and allowed to operate to full range post-contingency.

7.3 For evaluating projects located in Long Island (Zone K), the dynamic devices within Long Island area will be offline in both pre- and post- contingency conditions in steady state analysis, while set to zero at dynamic initialization.

8. Evaluation and Identification of Upgrades

If the Study results indicate that the Project, as proposed, would result in violations of Applicable Reliability Requirements, analyses will be performed to identify potential Network Upgrades that may mitigate violations of Applicable Reliability Requirements under the NYISO Minimum Interconnection Standard. If such upgrades are identified, re-assessments will be performed, as applicable, to ensure that the upgrades do not cause any adverse reliability impacts on the Study Area.

9. Report

The Study Report will document the summary of the results relevant to the project impacts, project description, project modeling, study assumptions, criteria and methodology, mitigation solutions and their impact assessment, and conclusions, for each of the analyses identified in this scope.